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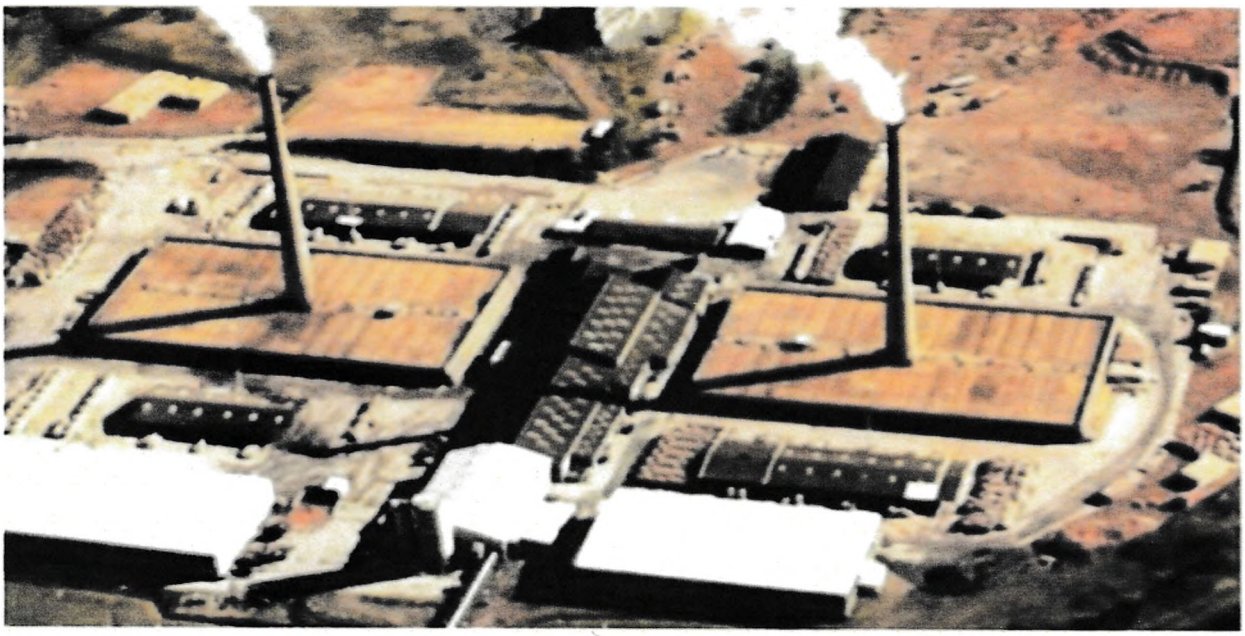

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British Brick Society web site:

http://britishbricksoc.co.uk

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Editorial:
Brick, Social Housing, and the Stirling Prize

On the evening of 8 October 2019, the Royal Institute of British Architects announced the winner of the 2019 Stirling Prize for the best building or scheme completed in 2018-2019. Two months before, just as members were receiving their copies of *British Brick Society Information,* **142,** August 2019, the six nominees for the prestigious Stirling Prize 2019 were announced. Amongst the nominees was an innovative piece of social housing, Goldsmith Street, Norwich (fig.1).

The prize was awarded to Mikhail Riches with Christine Hawley for Goldsmiths Street, Norwich, a group of 105 homes built in a cream-coloured brick with high levels of insulation. The scheme has two-storey terraced houses with gardens and front doors facing their neighbours combined with three-storey maisonettes at the end of each terrace. Each flat has its own front door to the street. The dwellings were designed to the strict Passivhaus environmental standards, reducing energy costs to around thirty percent of what is customarily expected.

The scheme had previously won the 2019 RIBA Neave Brown Housing Award. Neave Brown was a housing architect responsible for several developments in the London Borough of Camden, including the flats at Alexandra Road, Hampstead, designed by Neave Brown in 1969 but not realised until 1972-78. The eight-storey stacks of flats, with a sloping frontage, are partially built over the London Overground south-west of South Hampstead station. These long terraces are meant to house 1,664 people; cars and other vehicles are, of course, banished from the interaction between facing ranges but are relegated to underground parking with a separate point of ingress and egress. Goldsmiths Street picks up on these two ideas: seeing your opposite neighbours' front doors and putting the overnight and long-term storage of cars where they belong, out of sight below or behind dwellings. The same idea permeates the residential areas of north Chicago. At Alexandra Road, there is high-density housing without resorting to tower blocks and a parade of faceless, and ill-clad, slabs: the obscenity of the Grenfell Tower disaster should haunt every planner, housing architect, local councillor, and member of parliament.

Prior to the Alexandra Road development, Neave Brown had designed the Dunboyne Road Estate in 1966, completed in 1969. No building in the three paired blocks is over four storeys; again, every dwelling with some external green space. Neave Brown lived with his family in a terraced house elsewhere in Camden, on Winscombe Street, in a three-storeyed dwelling with an unusual plan: children and utility room on the lower round floor, kitchen and dining room on the upper ground floor with the latter having a terrace overlooking the garden, and living room and main bedroom on the top floor.

In the light of this most welcome development in the RIBA Stirling Prize, the first time it has been awarded to a social housing scheme, the writer has been collecting material about recent buildings for social housing including the prize-winning one in Norwich. Other exciting developments include projects in Newham and Stepney Green, Camden and Hackney, all in London and all except the Donnybrook Corner, Hackney, in brick. These were featured in a 2018 exhibition at London's Design Museum, 'Peter Barber: 100 Mile City and Other Stories', which sadly the writer missed.

One sidelight on past excesses which came out of the extensive coverage in the serious newspapers in October 2019 was that an alternative design to the tower blocks and 'streets in the sky' of 1960s Sheffield was created by one senior architectural employee of the city: the letter writer, John Fullard, did not name his former colleague. In Norfolk Park, in place of the tower blocks demolished over eighteen years from 1997, the unnamed architect envisaged a high-density scheme with low-rise houses each with their own individual garden nestling on the hills in a green, parkland landscape without the blockages of on-street car parking. Sadly, it was not brought to fulfilment. But with the brownfield site, an approximation in Yorkshire to a Tuscan hill village might be possible and at a lower cost than reinstating the tower blocks.

But, how far this vision will be achieved is debateable. Recent reports on current private housebuilders' schemes suggest the majority of new estates are designed for easy access by car, not to permit children to play in safe spaces.

Fig.1 Goldsmith Street, Norwich: new two storey. brick-built houses on a mixed development of family homes with three-storey flats. Every dwelling has a street door facing its neighbours and without cars blocking the street.

It is hoped, following a visit to Norwich and more than one visit to London, to include an appreciation of the Norwich buildings and their peers in a future issue of *British Brick Society Information.*

The defect of prizes for social housing, unfortunately, is that coachloads to architectural tourists turn up on their doorsteps. No one ever visited the council estate in the middle of which this writer grew up in a brick-built house constructed in 1939 that was different to the majority of houses on this and adjacent roads. Using an area where sewers, water pipes, electricity gables, and gas mains all installed by a builder who completed three pairs of semi-detached, three-bedroomed houses in 1939 and had planned to build four larger detached houses in 1940 on one of five adopted roads, to build over 300 BSIF three-bedroomed houses that were off the ration and for which the labour was German prisoners of war not yet repatriated, was a good idea in 1947 to 1949 to assist in meeting Luton's housing crisis, one that was mild by the standards of many towns with a similar population level, 100,000 people. The BISF houses, which met the incipient Parker-Morris standards, provided solid homes for people desperate for somewhere to live: BISF was the British Iron and Steel Federation, which operated from 1934 to 1967. Designs for the BISF houses were initially made in 1946 but during the half decade of their construction across Britain, the concept did not change much.

This issue of *British Brick Society Information* concentrates on bricks and the their manufacture, containing, as it does, reports on the society's visits to the York Handmade Brick Company at Alne, North Yorkshire, and the last brickworks producing Fletton bricks at Whittlesey, Cambridgeshire, as well as queries about bricks with some potential answers on specific brick and ceramic block types.

The next issue of *British Brick Society Information* will concentrate on 'Brick in South-West England' as the society is due to hold its Annual General Meeting on Saturday 16 May 2020 in Bridport, Dorset, with the meeting scheduled to begin at 11.00 am in the Committee Room of the Town Hall. For *BBS Information,* **145,** four substantial articles as well as a lengthy contribution to 'Brick in Print'. A taster of brick in south-west England is given in this issue of *BBS Information* in the 'Review Article: Local Solutions to a National Problem — the *Deserving Poor'* (pages 9-15) which concentrates on Dorset and its adjacent counties.

Details of the Annual General Meeting will be enclosed in the society's late April 2020 mailing with *British Brick Society Information,* **145,** May 2020.

The third mailing from the society this year will be in October 2020 with *BBS Information,* **146,** October 2020. This issue has considerable space for articles, notes, and book reviews.

British Brick Society Information did not have an issue dated January 2020. *BBS Information,* **144,** February 2020 is therefore the earliest opportunity for the society to remember that seventy-five years ago, the Soviet Army liberated Auschwitz on 27 January 1945.

It is a sobering thought that while Adolf Hitler and what my father called 'his gang of cut-throats' may have devised the Final Solution, there were many others involved in the construction of Auschwitz-Birkenau.

Someone designed the complex.
Someone drew the drawings.
Someone dug the clay.
Someone made the bricks.
Someone excavated the lime.
Someone made the mortar.
Someone laid the bricks.

Lest we forget.

DAVID H. KENNETT
Editor, *British Brick Society Information,*
31 January 2020

How to Research Nineteenth- and Twentieth-Century Brickmakers

David Cufley

In *British Brick Society Information,* **143,** November 2019, the editor mentioned 'different authors requesting information about specific brickmakers' and asking about nineteenth- and twentieth-century research sources. This article is the author's experience in producing an index for use by family and local historians of the owners and workers on the brickfields. The note cited from the recent *BBS Information* suggests the use of trade directories but there are additional sources that can be used. The one problem with early directories is that they list trades by parish without giving a precise address. This is because everyone knew where the brickfields were and because the areas were not fully built up, strangers visiting the parish could either see or smell where the brickfields were located. In larger parishes with good clay soil, there may be more than one brickfield, each under different ownership.

Today these sites may be lost from local memory because they have become housing estates, built over with factories, or in rarer cases returned to agricultural use. The attached flow diagram (fig.1) is the author's summary of sources that could be used to help discover the brickmakers, the workers, and their brickmaking sites. The sources may even help with knowledge of the products, manufacturing equipment, and layout of the brickfield. We are fortunate that the internet provides us with search engines for discovering sources, which finds some original document images available online. Do not ignore American websites as some of these have digitised images of early books and magazines published in the UK.

Discovering brickfield workers and owners gathered from the census, local histories, and directories is typical family history research, mainly for England and Wales but with some entries from other counties in the United Kingdom and Ireland. The data collected by the author also has a few overseas entries for British-born brickmakers. Our major archive is the National Archive at Kew (TNA) The most extensive of these catalogue search engines is the TNA's called 'Discovery'. 'Discovery' has been extended as it not only covers the national archives' '1000 years of history' but allows one to find records from over 2,500 archives across the UK (*https://discovery.nationalarchives.gov.uk/*). The other archives, museums, and recrd offices have started to make their catalogues available online. This enables visits to be planned or digitised documents obtained for a fee without visiting the archive.

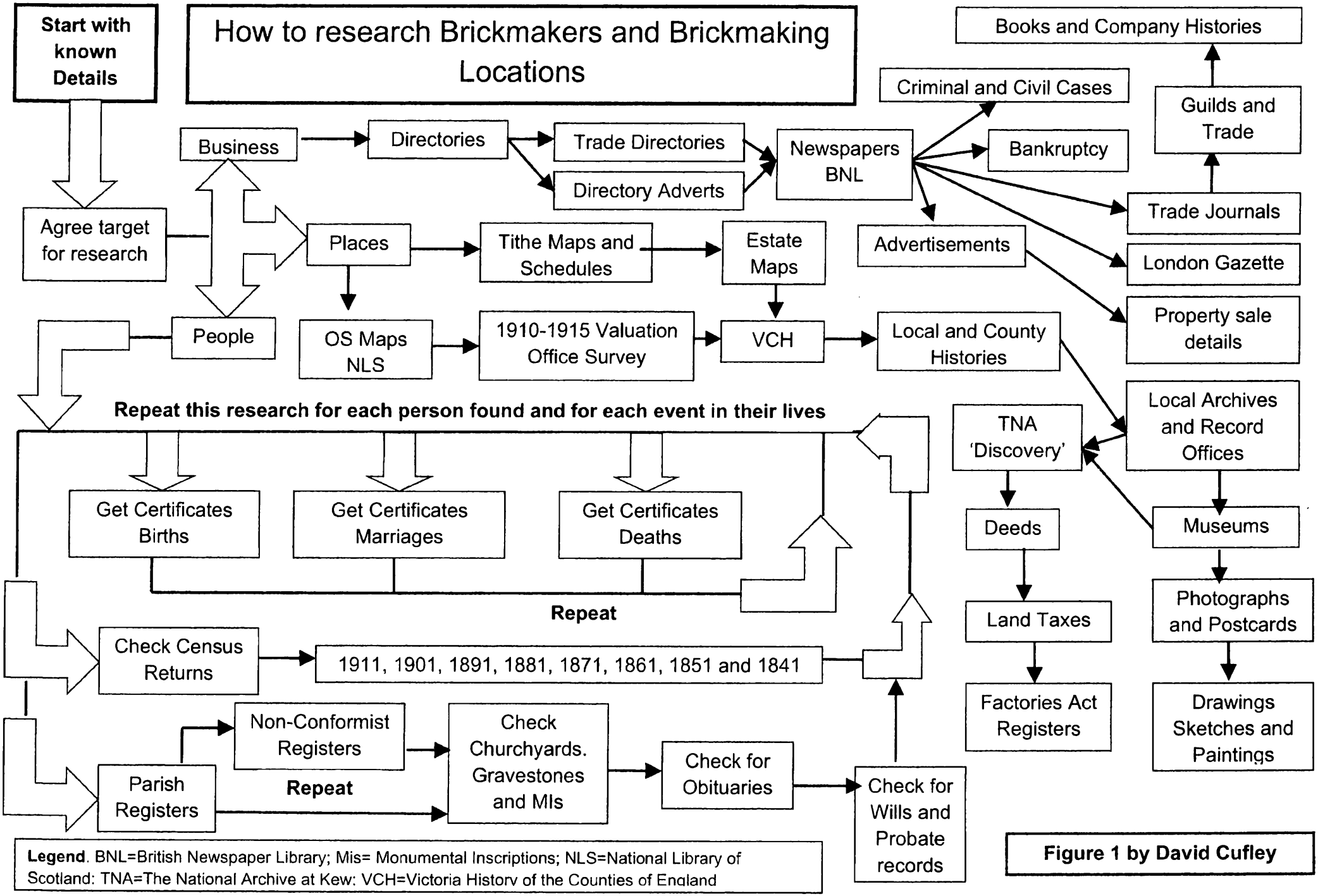
Having ancestors who were brickmakers, my early research followed the normal family history path of birth, marriage, and death certificates and census records. This did not answer the questions of what was involved in this occupation. Being a largely seasonal trade meant that most workers moved around the counties: only the brickfield owners and key workers stayed for more than one season. This led to my study of the brickfields and their place within the local community.

The reason for my ancestor's main move from Dartford, Kent, to East Wickham, Kent, was found to be their working for the same Dawson family of brickfield owners.

Expanding the research to understand the Dawsons and their trade and production was needed to complete the story of my ancestors' working lives. It also led to discovering the period of manufacture the Dawsons were involved in and what happened to their brickfields when they ceased production.

There are many local and county histories produced by county and local history volunteer groups. The most reliable professionally-produced county history is the *Victoria History of the Counties of England* (VCH), which is a national historic survey, beginning in 1899. The scope of the volumes includes social, economic, and industrial histories of each county as well as topography and geology. The topographical volumes of the VCH so far completed include a detailed description of each parish that is essential reading as a preliminary source for brickmaking and other industrial history research. Volumes of the VCH are available online on the 'British History Online' website (*https://british-history.ac.uk*).

This method of research shows the three aspects — of people, places, and businesses — are interwoven and from the attached diagram (fig.1), it is hoped it will help others find the brickyard site's history. The method applies to brickfields and workers throughout the UK brickfields.


Start with known Details
How to research Brickmakers and Brickmaking Locations
Books and Company Histories
Criminal and Civil Cases
Guilds and Trade
Business
Directories
Trade Directories
Directory Adverts
Newspapers BNL
Bankruptcy
Agree target for research
Places
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Property sale details
People
OS Maps NLS
1910-1915 Valuation Office Survey
VCH
Local and County Histories
Repeat this research for each person found and for each event in their lives
TNA 'Discovery'
Local Archives and Record Offices
Get Certificates Births
Get Certificates Marriages
Get Certificates Deaths
Deeds
Museums
Repeat
Land Taxes
Photographs and Postcards
Check Census Returns
1911, 1901, 1891, 1881, 1871, 1861, 1851 and 1841
Factories Act Registers
Drawings Sketches and Paintings
Non-Conformist Registers
Check Churchyards. Gravestones and MIs
Check for Obituaries
Parish Registers
Repeat
Check for Wills and Probate records
Legend. BNL=British Newspaper Library; Mis= Monumental Inscriptions; NLS=National Library of Scotland: TNA=The National Archive at Kew: VCH=Victoria History of the Counties of England
Figure 1 by David Cufley

The business research leads, as is suggested, through directories but one needs to understand the sites by using maps. Old England and Wales Ordnance Survey mas are available online through the National Library of Scotland (NLS). Prior to these are the Tithe Maps and their schedules of plots with ownership, tenancy, name, usage, and acreage.

The object of the author's project was to provide an index to brickmakers and other brickfield workers who frequently travelled from one brickfield to another, as their work was seasonal. It was not only bricks that were manufactured in the brickfields but also other ceramic products such as tiles, chimney and flower pots, crocks, drain-pipes, sugar moulds, and terracotta ware. So, trade descriptions of the workers can sometimes be misleading as they were not just brickmakers, skintlers, and kneaders but also potters and mould makers.

Help is needed to determine how long the brickfields were in operation. The brickfields around London and other city suburbs closed as the extent of building land caught up with and overtook them. Elsewhere alongside railways and canals, brickfields were open up to produce bricks for the new forms of transport and then continued after construction works had been completed as they had transport links to building sites in the developing towns and cities. The archival and printed resources also need to provide brickfield addresses to discover where the brickfields, brickyards, or brick kilns were in any parish. These addresses may help with census searches and movements of the workforces.

Frequently the families of brickmakers married members of other brickmaking families. The sources can sometimes help with connecting these inter-marriages. They show that brickfield berths — sometimes known as stools — included men and women as well as children. A berth typically was approximately six people. In a lot of cases it was only the 'brickmaker' who was employed, the other members of his team were contributing to the manufacture. The stool or berth, being led by the moulder, who was paid per 1000 bricks at the kiln for the stool. An example of this was Rutters' Brickfield at Crayford, Kent, in 1873 (*The Times*, 16 September 1873, page 8, column d) where their foreman claimed in court that they only employed 22 moulders, *i.e.* less than 50 employees lower limit required under the Factory Act. He said that they had no control over the gang engaged by the moulders. The judge disagreed and found Rutters guilty and fined them for not complying with the Act.

The population of the brick industry in England and Wales is estimated according to J.H. Clapham's *Economic History of Modern Britain Volume II,* based on the factory inspectors reports of 1870 to be 1,770 works with an average number of work-people per works of 12.7, a total of 22,479 workers.[1] If we apply the Rutters case above, this may well be a serious underestimation of the industry. Marion Bowley in her book *Innovations in Building Materials* states that in the 1924 Census of Production for the whole brick and fireclay industry there was an average of 43.8 work-people in about 1,600 production units, a total workforce of 70,080.[2]

The 1851 Census tally for Brickmakers and Dealers is given by the Registrar General's Office (RGO) as 31,169 people.[3] In 1841, Frederick Spackman's *An Analysis of the Occupations of the People* gives at total of 17,221 persons for England and Wales and the 'Isles' in the British seas, which does not include labourers.[4] The total for Kent is stated as 627, which seems very low when the breakdown shows 612 male workers and only six female workers. Again, these figures exclude labourers. The number of men employed in the industry in Kent reached a maximum 5,113 in 1901 having risen from 3,335 in 1891, according to Michael Winstanley's *Life in Kent at the Turn of the Century*[5] and the VCH Kent volume.[6] The decline in the brickmaking industry in Kent can be seen by the fact that there were only 3,198 men employed in 1911. Many left to find alternative employment and hundreds were driven to emigrate.

What these surveys show is that there are a lot of brickmaking sites to discover and they all required workforces, some of which were not permanent employees.

The number of sources varies with each area and parish and requires local knowledge. It is not possible within the space limitation of this article to cover in detail all the sources in figure 1 or the more obscure sources that may exist in a limited number of archives or private collections.

It is hoped that this article with its figure 1 will help any researcher state their exploration of a place, business, or its people. Writing up the research by the authors will help us discover further sources and the history of brickmaking.

NOTES AND REFERENCES

1. J.H. Clapham, *Economic History of Modern Britain Volume II, Free Trade and Steel, 1850-1886,* Cambridge: Cambridge University Press, 1932, p.119.
2. M. Bowley, *Innovations in Building Materials: An Economic Study,* London, Gerald Duckworth & Co., Ltd., 1960, p.60.
3. RGO (1854) *The Census of Great Britain in 1851 comprising an account of the numbers and distribution of the people, their ages, conjugal condition, occupations and birthplace,* London: Longman, Brown, Green and Longmans, 1854, p.72 and p.127, Table XXXIII.
4. F.W. Spackman, *An Analysis of the Occupations of the People,* reprinted New York: A.M. Kelley, 1969, in the *Economic Classics* series. Original publication, 1847, Appendix, Table p.17 and p.148, Summary of persons engaged in manufactures'
5. M. Winstanley, *Life in Kent at the Turn of the Century,* Folkstone: William Dawson, 1978, p.178.
6. *The Victoria History of the Counties of England, Kent, Vol* **III,** London: Dawson of Pall Mall, 1932, p.393.

BRICK IN THE NEWS:
REOPENING OF THE GEFFRYE MUSEUM AS THE MUSEUM OF THE HOME

The Geffrye Museum, in a building founded as almshouses in 1704 by the Ironmongers' Company using a bequest from a former Lord Mayor of London, Sir Robert Geffrye (*d.*1703), closed in January 2018 for building work. This long, to-storeyed brick building was built in 1712-13 on Kingsland Road, Shoreditch, London, probably designed by the builder Robert Burford. The inhabitants of the almshouses had a single room each, with four almspersons sharing a staircase. Each first-floor room had two windows facing the green, giving each group the appearance of a five-bay house; the rear pair of rooms also had two windows. Fourteen staircases were provided, eight in the main block and three each in the side wings, giving accommodation for 56 people. The group face a large garden.

In the centre of the main block was the chapel of three bays, an arched window either side of the door with above the (replaced) statue of the donor (original 1723: Nost workshop); the original has been re-sited at the Ironmongers Company's new almshouses at Fleet, Hamphire. The chapel is brought forward by its stone quoins and there is a pediment including a clock covering the whole front of the chapel. Inside the chapel is the resited wall monument to Sir Robert and his wife, who had died in 1676 (1704: Richard Saunders) originally in the city church of St Deonis Backchurch. The chapel retains its eighteenth-century fittings: triple-decker pulpit, decorative texts, and a black and white marble floor. At the end of the eighteenth century a polygonal apse was provided for the communion table given by Richard Jupp, the surveyor to the Ironmongers' Company, in about 1791; he probably designed the fan-vaulted apse.

The almshouses were vacated in the early twentieth century and conversion to a furniture museum took place in 1912-13 and 1925: Shoreditch was the centre of furniture making. Under London County Council auspices, the museum exhibited rooms of various periods. The original almshouse use was shown in the former room No.14.

Refurbishment, including turning the semi-basement cellars into exhibition spaces has been directed by architects, Wright & Wright, who also designed the former Women's Library in Castle Street, London E1 in 2002, and the Law Library of London Metropolitan University in adjacent ?? in two years later.

When opening in Summer 2020, the Geffrye Museum will become the Museum of the Home, with a new entrance giving access from Hoxton Station.

For a brief account of the almshouses see B.K. Cherry and N. Pevsner, *The Buildings of England: London 4: North,* London Penguin Books, 1998, page 521 with plan and plate 32. Recent redevelopment was reported *The Guardian,* 27 November 2019, with seven illustrations.

Review Article:
Local Solutions to a National Problem — the Deserving *Poor*

Angela Nicholls, *Almshouses in Early Modern England: Charitable Housing in the Mixed Economy of Welfare, 1550-1725,*
Woodbridge: The Boydell Press, for the Economic History Society, 2017,
xii + 278 pages, 19 illustrations, 15 tables,
ISBN 978-1-78327-178-8; price, paperback £19-99.

Thirty years before the nascent twenty-first-century interest in the history of almshouses, Elizabeth Cockburn published a survey of almshouses in Dorset,[1] an early county survey of the local solutions to the national problem of housing those unable to work productively through the interaction of poverty with old age and/or infirmity. Apart from having almshouses erected in the time-frame of Dr Nicholls' book — in brick at Wimborne St Giles in 1624, at Beaminster in 1630, at Blandford Forum in 1682, at Pamphill in 1698; in rubble at Milton Abbas *circa* 1674 but reconstructed on a new site in 1779 and whitewashed like the cottages of the village; and in stone at Dorchester in 1616[2] — Dorset is a county where there was also a late flourish in the construction or rebuilding of almshouses, that is houses founded by a charity, offering accommodation for poor people: examples include rock-faced buildings at Frampton put up in 1868; new buildings in stone in 1858 at Sherborne, for a charity founded in 1438; and also in stone for a new foundation at Trent in 1845-46. A late-twentieth-century rebuilding, Abbots Cottages, Corfe Castle, replaced former almshouses in the town.[3]

Similarly, in Cornwall where almshouses were constructed of stone, the Rashleigh Almshouses in Fowey,[4] two ranges of before 1636 and 1662, date from Ms Nicholls period, but there are nineteenth-century foundations: the former almshouses of 1860 in Morval, and Earle's Retreat of 1869 in Falmouth.[5]

Beyond Dorset, as of September 2019, counties in south-west England with studies of the history of local provision for what always has been a national problem — providing for elderly but sentient persons who are in need of somewhere to live — were Berkshire and Wiltshire, respectively a University of Reading MPhil thesis and a book.[6] Elsewhere in England, county studies of almshouses and early modern welfare systems include Lincolnshire, London, Nottinghamshire, Shropshire, and the West Riding of Yorkshire.[7] Doubtless, these publications probably influenced Dr Nicholls in her choice of counties to survey for the provision of almshouses from after the Reformation to the reign of George I (*r.*1714-1727) and their use: County Durham, Kent, and Warwickshire, each a county with a recently-published Hearth Tax.[8]

Ms Nicholls make extensive use of the Hearth Tax returns, particularly that for 29 September 1670. By treating exemption from payment as a proxy for poverty she has been able to publish a map showing each parish from the highest level of over 55 percent exemption to the lowest, between 0 and 15 percent exemption (her figure 2.4 on page 52). A similar exercise for Dorset[9] shows similar variety in the Hearth Tax exemption rate. While there are several parishes or tythings with no persons claiming exemption in 1673, another six have two-thirds or more of the inhabitants excused payment, five of which are in the Blandford Division of the county. In contrast the Shaftsbury Division of the county has only five places with just over half the households exempt and only twelve with two-fifths of the inhabitants who did not pay.

Dorset's major towns show wide variation in the levels of exemption. In the coastal west of the county it is greater: 55½ percent exempt in Bridport, 46½ percent excused payment in Lyme Regis. Further east, the resort towns of Weymouth and Melcombe Regis, then with similar numbers of households — 179 as against 199 respectively — show very different levels of poverty: just over one-third exempt in the former as opposed to one-fifth in the latter. Of the towns of the interior, Dorchester had three in ten excused payment and just under a quarter of the households in Shaftsbury. But in Blandford Forum and Sherborne, levels of exemption were one in seven and one in eight households respectively.

One topic Ms Nicholls does not explore is the differences in the economy of the three counties around which she bases her study. In the middle of the nineteenth century, the agricultural commentator, Sir James Caird (1816-1892) drew two lines across England.[10] The first between the high-wage, industrial north and the low-wage, mainly agricultural south is less relevant to the period between 1550 and 1725, but the second, between the mainly arable east and the predominantly pastoral west is worth examining in more detail.

Fig.1 Sir James Caird's map of England showing the division between the low-rented arable land of eastern and southern England and the high-rented pasture are of central and northern and north-western England (the solid line) and the division between the northern high-wage area and the southern low-wage area in 1851 (the dotted line from the Dee estuary to the Wash. Counties which are shaded are those for which a county survey or listing of almshouse or study of poverty has been published.
Source: Sir James Caird, *Agriculture in England in 1850-51,* London: Longman, Green, Brown and Longmans, 1852.

To the east of the Caird line (the thick line on figure 1) are Northumberland, County Durham, the North Riding of Yorkshire excluding the Dales, Yorkshire's East Riding, Lincolnshire and the eastern counties of Huntingdonshire, Cambridgeshire, Norfolk, Suffolk, and Essex. Beyond Bedfordshire, Hertfordshire, and Middlesex, the line swings south-west to encompass Kent, Surrey, Sussex, most of Berkshire (but not the Vale of the White Horse), Hampshire, southern Wiltshire, and Dorset. Even in the late sixteenth and seventeenth

centuries, there is a world of difference between Kent and County Durham. In contrast, pastoralism was as well-established by 1550 in Warwickshire as it is today, with, for example, sheep grazing on fields with ridge-and-furrow around the nineteenth-century house at Ettington Park and in Honington, two parishes south.[11]

The combination of low wages, the decay of industrial activity, and levels of poverty have been examined for southern Wiltshire[12] and the conclusions apply equally to Dorset. They can be taken back into the second half of the seventeenth century when the Hearth Tax was raised.[13]

Nicholls' approach is not strictly architectural[14] but is important for the study of the buildings, not least because all buildings are erected for a purpose, in this case housing the poor, and by persons with their own agenda, something discussed at some length in chapter three, 'Almshouse Founders and Their Motivations' (pages 56-89). Following an 'Introduction' (pages 3-19), Ms Nicholls' first two chapters discuss 'Housing Policy' (pages 20-36), the 'Chronology and Distribution of Almshouse Foundations' (pages 37-55). Two chapters look at what it meant to live in an almshouse: 'Almshouse Residents and the Experience of Almshouse Life' (pages 90-137) and 'The Material Benefits of an Almshouse Place' (pages 138-187). As the final chapter, the author offers a 'Case Study: A Seventeenth-Century Welfare Republic — the Parish of Leamington Hastings and its Almshouse' (pages 188-223).[15] A 'Conclusion' (pages 224-236), four appendices, a full bibliography,[16] and a good index follow.

Almshouses were erected within a specific legal context, established after much discussion in the final seven decades of the sixteenth century. No fewer than twelve general Acts dealt with the twin topics of relief of the poor who genuinely needed assistance and the punishment of 'rogues, vagabonds, and sturdy beggars' to quote the title of one of the 1598 Acts.[17] The last-named was the fifth punitive Act in sixty years[18] and was followed by another dealing with this aspect of the problem in 1610, which added 'other lewd and idle persons' to the list of malefactors. Providing for the relief of the genuine poor unable to work was the subject of Acts in 1552, 1572, 1598, and again in 1601; in legal terms, this seems to have worked well as revisionary legislation was not enacted until 1662 and 1697. By the second half of the seventeenth century, demographic circumstances had changed. Dr Nicholls' case study, based on a well-archived parish, illustrates that parish's responses to the problems caused in an age when, to quote the statistician Gregory King, one half of the population was 'decreasing the wealth of the kingdom',[19] a group which included the residents of almshouses.

However, in 1723, a new regime for dealing with the poor was enacted: The Act for Amending the Laws Relating to the Settlement, Employment and Relief of the Poor, also known either as the Workhouse Act or as Knatchbull's Act. Ms Nicholls contrasts the Sir John Banks Almshouses, Maidstone, Kent,[20] of 1700, with Framlingham Poor House, Suffolk,[21] built in 1729 (pages 234 and 233 respectively). The Maidstone building has six, two-storeyed, brick-built cottages, each with its own front door, one window on the ground floor and two windows on the first floor, with both floors having a fireplace: a place of some dignity in which to reside. Here, as at the Fishermen's Hospital, Great Yarmouth, Norfolk (fig.2),[22] built in 1702, you remained a citizen. In contrast, Framlingham Poor House, which follows the building footprint of the great hall of Framlingham Castle, may be nine bays wide but there is only one front door to two storeys and an attic floor. The ground floor is one vast room, gloomy and with little light as the back wall is the that of the curtain wall of the castle. This gaunt and forbidding place is accompanied by sleeping accommodation either in communal space or cubicles on the upper floors, with persons of each gender separated. The only fireplaces were at the ends of the range. Here, the inmate was definitely a pauper, second- or even third-class in every respect.

Framlingham Poor House was an early example to copy the workhouse erected in 1725 on the recently laid out Mount Street to serve the parish of St George's Hanover Square, London W1, where Benjamin Trimbrell and Thomas Phillips produced a 'model' for 'any part of the Kingdom', not only capable of construction in 'wood stone or brick' but having infinite flexibility.[23] Hampshire has three such workhouses: an adapted building in Basingstoke, and new buildings in Ringwood, of 1725, and in Christchurch, built in 1763-64.[24]

But the foundation of almshouses deceased in the century after Workhouse Act of 1723. There were no new almshouse foundations in either Dorset (p.53)[25] or Hampshire between 1723 and 1834.[26] New buildings in Somerset are just three: Goathurst in 1780, Frome *circa* 1796, and Ilchester in 1810.[27] In the same county between 1660 and 1723, there had been eight new almshouses.[28] The contrast was equally marked in Wiltshire: twelve almshouses founded and built between 1660 and 1723, but only six in the period 1723 to 1834.[29]

Fig.2 The Fishermen's Hospital, Great Yarmouth, built by Great Yarmouth Corporation in 1702 to accommodate twenty 'decayed fishermen' and their wives.

Nicholls discusses the buildings themselves in the section on 'Accommodation' (pages 139-157) of her Chapter Five, 'The Material Benefits of an Almshouse Place'. Apart from the buildings in Framlingham and Maidstone, she illustrates two other brick-built almshouses, one at each end of the social scale. The six dwellings of the John and Ann Smith's Almshouses at Longport, Canterbury,[30] are a simple row of eight one-storey dwellings, erected in 1657 (page 145). These red brick houses have paired doors, three-light windows with external shutters, and a fireplace, represented by a tall chimney, under a tiled roof. At each end is a shaped gable bearing the date in wrought iron. Most almshouses are of this form. A row of dwellings, usually single-storey, perhaps with a dormer indicating an upper floor as sleeping quarters.

Much grander and to be seen as an example of the local boy made good flaunting his worldly success is Abbot's Hospital, Guildford, Surrey,[31] with its three-storey gatehouse with four big corner turrets looking like a not-so-minor country house fronting a courtyard plan (p.69). George Abbot, Archbishop of Canterbury from 1611 to his death in 1633, had been born in Guildford in 1562 and is buried in the south transept of Holy Trinity church. The almshouse, for twelve men and eight women, was built between 1619 and 1622.

While Ms Nicholls does not extend her survey of the legislation beyond 1725, it is worth remarking that in 1782, Gilbert's Act permitted parishes to amalgamate in providing workhouse accommodation but *only* for the elderly, the sick, and the orphaned.[32] It did not deal with the able-bodied who were unemployed. This Act was much taken up in Norfolk and Suffolk.[33] Similar buildings are known in Hampshire: one in Alton built in 1793 and another in Headley of 1795 with that in Froyle erected *circa* 1800.[34]

The Poor Law Amendment Act of 1834 which established a formal nationwide system of workhouses, with imposed catchment areas not respecting traditional county boundaries, produced a national solution to the problem of the poor but, not least in its attitudes to the poor,[35] the Act had a long gestation in the eighteenth century including the idea of the separation by gender, even of long-married couples. Implemented at speed, the Poor Law Amendment Act resulted in no fewer than 127 workhouses being built almost immediately and 350 new constructions in the first five years of the Act.[36] But it did not obviate the need for other, more

traditional forms of provision for the elderly: many counties have Victorian foundations: five in Berkshire, seven in Hampshire, and two in Wiltshire.[37] All were established by donors wishing to give dignity in their old age to widows and spinsters and to spare them the workhouse and banish the fear of the workhouse.

Ms Nicholls' careful study provides a blueprint for research on the post-1723 foundation and building of almshouses as much as it does for the period it covers.[38]

D.H. KENNETT

NOTES AND REFERENCES

1. E.O. Cockburn, *The Almshouses of Dorset,* Dorchester: The Friary Press, 1970. For other twenty-first-century county surveys see nn.6 and 7, *infra.*

2. M. Hill, J. Newman, and N. Pevsner, *The Buildings of England: Dorset,* New Haven and London: Yale University Press, 2018, p.673 (Wimborne St Giles); p.110 (Beaminster); p.131 (Blandford Forum); p.442 (Pamphill); p.416 (Milton Abbas); and p.256 (Dorchester). Earlier foundations surviving the Reformation are the Hospital of St John, Sherborne, founded in 1437, and St Margaret's Hospital, Wimborne Minster, founded in 1241 and rebuilt in the sixteenth or early seventeenth century; see Hill *et al.*, p.540 and 442, under Pamphill, respectively.

3. Hill *et al.*, 2018, p.299 (Frampton); pp.540-542 with pl.104 (Sherborne); p.613 (Trent); p.277 (Corfe Castle).

4. P. Beacham and N. Pevsner, *The Buildings of England: Cornwall,* New Haven and London: Yale University Press, 2014, p.206. John Rashleigh I (*d.*1582) rebuilt what is now 'The Ship Inn', Fowey, in 1578 and was buried in St Fimbarrus church; his grandson, Jonathan Rashleigh III built the first range of the almshouses, and John Rashleigh IV (*d.*1683) built the second range 'as a thanksgiving for surviving the Civil War': Beacham and Pevsner, 2014, pp.201-202 and 206. Jonathan Rashleigh IV is buried in St Fimbarrus' church, where his father is shown on the monument to his father, John Rashleigh II (*d.*1624). In the eighteenth century, the Rashleighs moved across the river to build Menabilly, the house Daphne du Maurier coveted and where she ultimately resided (see 'Endpiece', forthcoming in *BBS Information,* **145,** May 2020, the issue to be devoted to 'Brick in South-West England' [Ed.]).

5. Beacham and Pevsner, 2014, p.360 (Morval), and p.195 (Falmouth).

6. S. Lambert, 'Seventeenth-century Berkshire Almshouses', unpublished M.Phil. dissertation, University of Reading, 1997; S.J. Thompson, *Wiltshire Almshouses and their Founders,* Warminster: Hobnob Press, 2016.

7. L. Crust, *Lincolnshire Almshouses: Nine Centuries of Charitable Housing,* Sleaford: Heritage Lincolnshire, 2002; C. Berridge, *The Almshouses of London,* London: Ashford Press, 1987; E.A. Earl, *Nottinghamshire Almshouses from Early Times to 1919,* Nottingham: the author, 2011; S. Watts, *Shropshire Almshouses,* Wootton Amberley: Longaston Press, 2010; H. Caffrey, *Almshouses in the West Riding of Yorkshire 1600-1900,* King's Lynn: Heritage Publications, 2006. A map with a list and references, but not a full county survey, is K. Thompson, 'Almshouses', in D. Short, ed., *An Historical Atlas of Hertfordshire,* Hatfield: Hertfordshire Publications, 2001, pp.150-151.

8. Nicholls, 2017, p.15 tells us that the author selected the three counties to represent the north, the south, and the Midlands, respectively. It might be pointed out that in 2011, each had a relatively recently published Hearth Tax: A. Green, E. Parkinson, and M. Spufford, eds, *Durham Hearth Tax Assessment Lady Day 1666,* London: British Record Society 2006; D. Harrington and P. Hyde, eds, *Kent Hearth Tax Assessment Lady Day 1664,* London: British Record Society, and Maidstone: 2000; and T. Arkell and N.W. Alcock, *Warwickshire Hearth Tax Assessment Michaelmas 1670,* Stratford-upon-Avon: Shakespeare Birthplace Trust for the Dugdale Society, and London: British Record Society, 2010.

9. By the present writer using the figures from the Michaelmas 1673 return for Dorset, given C.A.F. Meekings, ed., *Dorset Hearth Tax Assessments 1662-1664,* Dorchester: The Friary Press, 1951, pp.118-122, 'Analysis of the 1673 Lady Day Assessment', which gives number of hearths, number who paid and the number exempt for each parish or tything. It is hoped to produce a Dorset map on the line of Ms Nicholls' map of Warwickshire. A similar exercise for Bedfordshire, involving actually counting those who paid, those who were exempt and the listing the number who 'receive constant alms', the latter sometimes recorded as those who 'receive collection', is in progress although the percentage of the exempt and those receiving alms in each parish or hamlet has yet to be completed. The Bedfordshire Hearth Tax for 1671 was originally published in L.M. Marshall, *The Rural Population of Bedfordshire 1671-1921,* being *Bedfordshire Historical Record Society Publications,* **16,** 1934, and reprinted as L.M. Marshall, ed., *The Bedfordshire Hearth Tax Return for 1671,* Bedford: Bedfordshire Historical Record Society, 1990.

10. J. Caird, *English Agriculture in 1850-51,* London: Longman, Brown, Green & Longmans, 1852, p.iv is the original publication of the map reproduced and used as the base map for Fig.1. The whole volume is available on-line.

11. Personal observation over the past twenty-two years; the two places cited are those where sheep grazing on fields of ridge-and-furrow had been observed in September 2019. Ridge-and-furrow indicates that the land had been intensively ploughed for many years at a previous time.

12. R. Molland, 'Agriculture, *c.*1793-*c.*1870' in E. Crittall, ed., *Victoria County History: Wiltshire,* **IV,** 1959, esp. pp.80-84, cited J.D. Chambers and G.E. Mingay, *The Agricultural Revolution 1750-1880,* London: Batsford, 1966, pp.134-140, which also includes a number of quotes from Caird, 1852.

13. The initial section of a forthcoming paper on 'The Larger Houses of Dorset, 1660-1770: Context, Materials, Destruction, Rebuilding', in progress for a future issue of *BBS Information,* under 'Context' will examine the contrasts in wealth and housing between the builders and occupiers of houses of 11 hearths or more and those exempt from paying Hearth Tax.

14. For architectural approaches to almshouses see (in order of publication): S. Heath, *Old English Houses of Alms: A Pictorial Record with Architectural and Historical Notes,* London: 1910, reprinted Forgotten Books, 2012; W.H. Godfrey, *The English Almshouse, with Some Account of its Predecessor, the Medieval Hospital,* London: Faber and Faber, 1955; B. Bailey, *Almshouses,* London: Robert Hale, 1988; B. Howson, *Houses of Noble Poverty: A History of the English Almshouse,* Sunbury-on-Thames: Bellevue Books, 1993; A. Hallett, *Almshouses,* Princes Risborough, Shire Publications, 2004; B. Howson, *Almshouses: A Social and Architectural History,* Stroud: The History Press, 2008. As W.H. Godfrey admitted, these works are primarily about the architecturally grand rather than the more commonplace single row of four to eight cottages.

15. For another discussion of a single almshouse see N. Goose and M. Yates, 'Charity and Commemoration: a Berkshire Family and their Almshouse, 1675-1763', in C. Briggs, P.M. Kitson, and S.J. Thompson, eds, *Population, Welfare and Economic Change in Britain 1290-1834,* Woodbridge: The Boydell Press for the Economic History Society, 2014, pages 227-248. The almshouse is the Raymond Almshouses in Newbury founded by Philip Jemmett in 1676. This paper is not cited by Ms Nicholls. See also A. Clark, *The Sherborne Almshouse Register 1437-1866,* being *Dorset Records Society,* **17,** 2013.

16. Regrettably, for books, the bibliography lists only the place and date of publication and but not the publisher.

17. Four separate Acts were passed in 1598: see Nicholls, 2017, p.261, in the Index, for titles.

18. Acts dealing with 'rogues, vagabonds, and beggars' were passed in 1536, 1547, 1572, 1598, and 1610. See Nicholls, p.261, in the Index, for list of titles. The Acts of 1547 and 1572 also dealt with the relief of the poor. For a discussion of the various pieces of legislation cited in this and the preceding note see J. Healey, *The First Century of Welfare: Poverty and Poor Relief in Lancashire, 1620-1730,* Woodbridge: The Boydell Press for the Economic History Society, 2014, pp.4-12 and 56-59. Healey's work examines poverty from the perspective of the poor themselves.

19. J. Thirsk and J.P. Cooper, *17th Century Economic Documents,* Oxford: The Clarendon Press, 1972, pp.765-798, provides a full transcript of Gregory King's statistics.; most sixth-form and university textbooks dealing with England in the seventeenth century include them.

20. J. Newman, *The Buildings of England: Kent West and the Weald,* New Haven and London: Yale University Press, 3rd edn, 2013, p.405.

21. J. Beetley and N. Pevsner, *The Buildings of England: Suffolk: East,* New Haven and London: Yale University Press, 2015, p.257. These authors suggest that the brick and flint front of 1729, clearly visible in Nicholls, 2017, fig.7.1, is a re-fronting of a red brick building of 1660.

22. N. Pevsner and B. Wilson, *The Buildings of England: Norfolk: Norwich and the North-East,* London: Penguin Books, 1997, p.522 and pl.92 of the centre.

23. T.A. Markus, *Buildings and Power: Freedom and Control in the Origin of Modern Building Types,* London and New York: Routledge, 1993, pp.100-101 with fig.4.4.

24. For brief notes on the buildings of the Hampshire workhouses established under the 1723 Workhouses Act see M. Bullen, J. Crook, R. Hubbuck, and N. Pevsner, *The Buildings of England: Hampshire: Winchester and the North,* New Haven and London: Yale University Press, 2010, page 64 (Basingstoke); and C. O'Brien, B. Bailey, N. Pevsner, and D.W. Lloyd, *The Buildings of England: Hampshire: South,* New Haven and London: Yale University Press, 2018, pages 554 (Ringwood) and 223 (Christchurch).

25. This ignores the 1736 rebuilding in greensand blocks of the entrance to almshouses in Church Lane, Blandford Forum; J. Newman and N. Pevsner, *The Buildings of England: Dorset,* Harmondsworth: Penguin Books, 1972, p.99; also Hill *et al.,* 2018, p.132.

26. The writer has noted all references to almshouses in both Bullen *et al.*, 2010, and O'Brien *et al.,* 2018, and found none founded between 1653 and 1800.

27. J. Orbach and N. Pevsner, *The Buildings of England: Somerset: South and West,* New Haven and London: Yale University Press, 2014, pp.351 (Goathurst) and 375 (Ilchester); and A. Foyle and N. Pevsner, *The Buildings of England: Somerset: North and Bristol,* New Haven and London: Yale University Press, 2011, p.509 (Stevens Almshouse and Charity School, Frome).

28. Author's reading of Orbach and Pevsner, 2014, and Foyle and Pevsner, 2011.

29. N. Pevsner, rev. B.K. Cherry, *The Buildings of England: Wiltshire,* Harmondsworth: Penguin Books, 2nd edn,

1971, *passim*, notes a total of 23 almshouses founded between 1600 and 1834.

30. J. Newman, *The Buildings of England: Kent: North East and East,* New Haven and London: Yale University Press, 4th edn, 2013, p.266.

31. N. Pevsner, rev. B. Cherry, *The Buildings of England: Surrey,* Harmondsworth: Penguin Books, 2nd edn, 1971, pp.278-280 with pls.39-40.

32. The formal title of Gilbert's Act is The Relief of the Poor Act 1782 [22 Geo. III c.83].

33. A. Digby, *Pauper Palaces,* London: Routledge and Kegan Paul, 1978, *passim*; S.J. Thompson, 'Population Growth and Corporations of the Poor, 1660-1841', in Briggs *et al.*, eds, 2014, pages 189-225, esp. pages 214-225.

34. Bullen *et al.*, 2010, pages 127 (Alton, 1793), 324 (Headley, 1795), and 293 (Froyle, *c.*1800).

35. All types of the poor were dealt with by this Act with elaborately divided accommodation provided for no fewer than seven types of pauper. See Markus, 1993, pp.141-145 with figs.4.45-4.48. But examining the model plans by Sampson Kempthorne for the 'new workhouses' and the existing plan forms for prisons and asylums, given Markus, 1993, pp.118-141 with figs.4.24-4.44, one is struck by the close similarities. Clearly the same ideals and ideas permeated all three institutions. A paper in preparation for *BBS Information,* 'The Bad, the Mad, and the Sad: Buildings in Stafford for the Re-Formation of Character', will examine the similarities and differences in these building types in a case study.

36. Markus, 1993, p.142 notes the speed at which workhouses were built or enlarged. Workhouse construction, coupled with private investment in railway structures 1825-1845 and several new prisons, all built of brick, gives the lie to the idea that repeal of the Brick Tax in the Finance Act of 1850 led to a boom in brick building: see 'Editorial: The Brick Tax Revisited', *BBS Information,* **84,** June 2001, pp.2-3 for the reasons for its repeal., summarising S. Dowell, *A History of Taxation and Taxes in England to 1885 Volume IV,* London: 2nd edn, 1888, pages 389-397, to be read in conjunction with *ibid., Volume II,* pages 312-319.

37. For the buildings of Victorian almshouse foundations see G. Tyack, *The Buildings of England: Berkshire.* New Haven and London: Yale University Press, 2000, pp.179 (Bourton, 1847), 212 (Brimpton, 1854), 237 (Childrey, 1867), 377 (Maidenhead: House of Rest, 1895), and 400 (Child's Almshouses, Newbury, 1879); Bullen *et al.*, 2010, pp.127 (Normandy Cottages, Alton, 1869), 141 (Andover, 1841), and 244 (East Meon, 1863); O'Brien *et al.*, 2018, pp.172 (Bournemouth, 1862), 177 (Bramshaw, 1867), 267 (Emery Down, 1871), and 554 (Ringwood, 1843); Pevsner, rev. Cherry, 1971, p.538 (two separate foundations in Trowbridge, 1861 and 1900). In Wiltshire, a number of almshouses were rebuilt in the second half of the nineteenth century.

38. The early draft of this Book Review was written in 2018 as a potential contribution to the forthcoming 'Brick in South-West England' issue of *BBS Information,* now *BBS Information,* **145,** May 2020. The article has been brought forward to give members a flavour of Dorset and the adjacent counties and to allow more space for contributions from members resident in those counties and not reliant on this contributor, who lives between 30 and 300 miles away. [Ed.]

Brickmaking in the Black Country - Collaborative Studentship between the Black Country Living Museum and University of Birmingham

Elizabeth Thomson

In June 2018 I began a collaborative part-time PhD based with the Black Country Living Museum and the University of Birmingham on the brickmaking industry of the Black Country. I have always had an interest in bricks and my career in building conservation and my role as heritage adviser for the Canal & River Trust in the West Midlands has provided useful and diverse experience for my current research.

The Black Country Living Museum celebrates the identity of the area which, today is described as the Boroughs of Dudley, Sandwell, Walsall and the City of Wolverhampton. My studentship forms part of a major development project at the Black Country Living Museum called Forging Ahead. The £23m expansion (2019-2022) will see the creation of a new 1940s–1960s historic development telling the story of social, cultural, commercial and industrial life in the Black Country during this period and enabling items in the Museum's designated collection from this period to be publicly accessible for the first time. This will feature a working library, shops, NHS clinic, a bowling green, and demonstrate industries that led to worldwide export of Black Country products, such as brick-making, edge tool manufacture and aluminium founding. Buildings from the Black Country region have been identified and will be translocated, recreated or replicated at the Museum. Forging Ahead will see *c.*14,000sqm of open-air culture and leisure floorspace created or refurbished and will bring 2.054 Hectares of brownfield land back into economic use. The project is being funded by the National Lottery Heritage Fund (£9.8m), Black Country Local Enterprise Partnership (£8.6m), Arts Council England (£1.275m), Dudley Council (£250k), BCLM's own investment (£900,000), and Exhibition Tax Relief (£60k).

During my first year on the PhD my main role was to support the Museum with its second stage funding application to the National Heritage Lottery Fund. Working with the Museum's learning, collections and researcher teams and the Forging Ahead architect, plans were drawn up for a replica brickworks. The proposed brickworks will include a collection of buildings which represent both mass-produced and small-scale brickmaking in the Black Country including the fireclay industry. The buildings are loosely based on a group of buildings which once stood at Cricket Field Colliery in Brockmoor, which was owned by several prominent Black Country brick makers including John Hall, J.T Price & Co and E.J & J Pearson up to its closure in the 1970s. Unfortunately, none of these buildings were recorded before they were demolished so the replica buildings are based on photographic analysis of various images which were taken in the 1970s. Although the new brickworks buildings will be replica buildings, together with the rest of the 1940s-1960s historic development, they will provide an exciting backdrop for informal learning programmes and activities. Together, these developments will enable the Museum to deliver more hands-on opportunities across a wider variety of curriculum areas. Some of the Museum's diverse brick collection will be relocated to the replica brickyard as well as brickmaking machinery also from the Museum's collection.

I am now into the second year and have begun the academic work of the PhD. The Black Country brickmaking trade was not defined by gender; men, women and children were all involved in the physical process of brick production. I appreciate that women worked in the brickmaking in other regions, but I have not been able to find any detailed research on the role of women in this trade. This research will consider why brickmaking was such a prolific industry for the Black Country even in the 1960s. By examining the brickmaking trade in the Black Country from the 1600s onwards the study will seek to define the role of women – the 'brickyard wench', from the early days of brickmaking in the area through to the decline of the industry in the late twentieth century.

Fig.1 Artist's impression of the new 1940s-1960s street at the Black Country Living Museum, Dudley, West Midlands. The red brick building on the right is Woodside Library, Dudley, built in 1894, for which the bricks were supplied by J. King & Co of Stourbridge.

The buildings and structures which are built out of bricks made in the Black Country will be the main historical sources for some elements of the study, particularly buildings from the seventeenth and early eighteenth century built before the arrival of canals into the region. This study will also use digital mapping techniques to plot and analyse brickmaking activity taking place from 1600 onwards. This data known as the *A-Z of Black Country Brickmaking* will form the foundation of the study. To help with the research I have two volunteers from the Museum who are searching the archives for information about local brickmakers. So far, we have found 209 companies who were making bricks in the Black Country in the nineteenth century. This data will be used to direct where the voices of the women brickmakers may be found in historical sources such as, oral histories, factory inspector reports and probate records.

I am sure many BBS members are enthusiastic brick stamp collectors and another aspect of my research is to trace and record Black Country brick stamps. I have started an Instagram page called @blackcountrybricks and any contributions of names and locations of Black Country bricks are very welcome. So far, I have had contributions from the French Guiana, Trinidad and New Zealand. I look forward to hearing from any members who are interested in any aspects of my research. I can be contacted electronically:

Elizabeth.thompson@BCLMcom

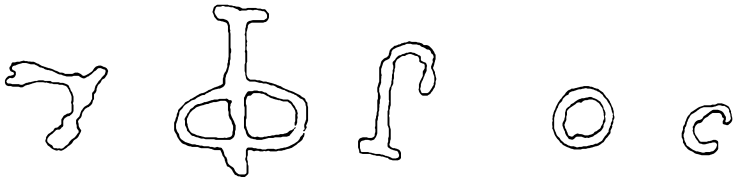
@lizey13 (twitter account)

The Mutford, Suffolk, Brick Inscription

British Brick Society Information, **141,** April 2019, pages 40-41 includes a query abut an inscription in a nineteenth-century chimney stack brick in the village of Mutford, Suffolk. In the text it is stated — though the context can hardly justify the phrase 'generally agreed' — that the letters — Greek (or possibly Cyrillic) — read, from left to right:

> π (*pi* = 'p'), φ (*phi* = 'ph'), ρ (*rho* = 'r'), ο (*omicron* = short 'o', viz the 'o' in English 'tot' as opposed to 'tote'), σ (*sigma* = s), and a further *sigma,* though 'much better drawn but only half shown in the photograph'.

Curiously this does not seem to conform to what is depicted and my own reading, in a tracing at a smaller scale than the published photograph, is thus:



First, it takes an eye of faith to read the mark at the far left as *pi*; it seems, in fact, more like a doodle, itself quite meaningless, or perhaps even accidental. Following this, the letter is indeed almost certainly *phi*, but in upper case Φ. Then comes, probably, lower case *rho*, though it is rather ill-formed, perhaps influenced by its equivalent 'r'. But I cannot see the claimed three letters after it; rather, there seem to be just *two*: *omicron* (probably lower case, though the two cases are indistinguishable apart from size) and an ill-formed or damaged letter like another *omicron* or a lower case *sigma*; in ancient Greek (including the Hellenistic *Koinē*) this was sometimes written 'c' (capital 'C') but in the nineteenth century was unlikely to be used except by someone *especially* erudite! If this letter is indeed σ then it cannot be the end of a word, where (terminal) sigma is written ς. On the other hand, if the letters are Cyrillic then this last letter could be *c* equivalent to English 's'.

David Kennett's suggestion that the letters are used to spell the English word 'frost' is plausible; but less so, perhaps, the rest of his conjecture: it is inconceivable that one with even a rudimentary knowledge of Greek would try to represent 'f' using *pi*; *phi* itself represents the digraph 'ph', pronounced exactly as 'f' — hence the alternative spellings of English 'fantasy' and (less commonly) 'phantasy'.

As for that putative *pi* itself, a Greek word beginning πφ ... is quite impossible, like 'pf' in English (though not in German: *pfeffer,* pepper; *pfennig,* penny; etc). That the *phi* is almost certainly upper case suggests that what is shown is a word being with that letter. Liddell and Scott's *An Intermediate* [*Classical*] *Greek-English Lexicon* has no word beginning φροσ ...; nor does my small Modern Greek dictionary, whilst a Russian dictionary looked at has no word beginning Φροс ... . Accepting, therefore, that the word is indeed English in Greek characters, the (most probably) upper case *phi* suggests a personal name, most likely Fros[t] — presumably that of the cutter.

Much of the above would apply if the letters are Cyrillic rather than Greek. But it is surprising to find someone carving his (or her) name — if that is indeed what happened — using either alphabet in a brick at a remote Suffolk village. The local incumbent would have had the necessary knowledge of Greek, but it is hard to imagine a nineteenth-century clergyman indulging in such activity.

It seems likely that this instance of name-cutting is a one-off. If further examples are encountered, it would be good to learn of them. But there are more rewarding things to do in life that travelling around inspecting chimney stacks on the remote chance of finding a possible serial graffitist with a knowledge or the Greek or Cyrillic alphabet!

TERENCE PAUL SMITH

Clay Building Products in Ripon

Mike Chapman

Following the Society's AGM at a meeting room within the Ripon Workhouse Museum, we were treated to a very interesting walking tour of the old part of the town. Apart from the use of local stone many of the buildings were constructed of brick, with one notable exception being the town Spa Baths which used terracotta and faience ware. Much discussion ensued as to the source of these materials, with the age of the brick buildings dating back to a time when transport would have limited the distance, that is until the opening of the Ripon Canal in 1773 which would have made the transport of heavy building materials both easier and cheaper. The opening of the railway connection into Ripon provided access to a much wider market

BRICKMAKING AT LITTLETHORPE

The geology of the area east of Ripon is dominated by the Triassic series overlain with lacustrine clays, all of which are very suitable for producing a variety of clay products.

Our guides mentioned Littlethorpe Brickyard as being a possible source, being near to the Ripon Canal and being a major producer in the area.

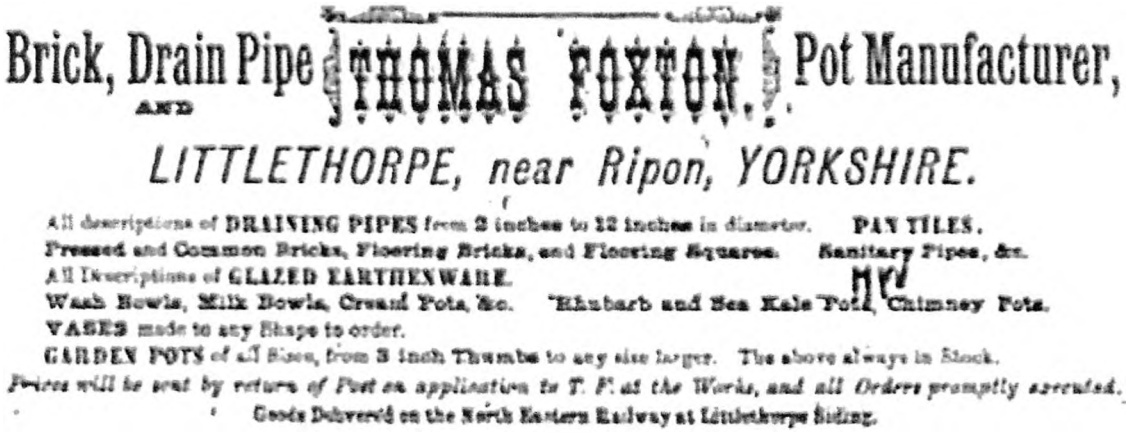


Fig 1 Advertisement for Thomas Foxton as a brick, drain pipe and pot manufacturer at Littlethorpe, near Ripon.

Historical research has shown that a 'clayworks' was founded by a James Foxton in 1831, with site firstly concerned with the production of bricks and tiles for the family building business, but with a pottery arm producing horticultural ware and brown earthenware.

This business continued until by 1908 the works had been divided into the Littlethorpe Brick & Tile Company and the Ripon Brick & Tile Company. The whole site was eventually purchased by a W Hymas, and then by 1920 established as the Littlethorpe Pottery Company, with brick and tile making having died out. The firm's advertisement (fig.1), from the late nineteenth century shows the range of products and the all-important railway siding connection to the wider North Eastern Railway network.[1]

The site is now owned by Roly Curtiss and operates as a successful pottery and earthenware business, with full information available on their web site.[2]

BURMANTOFTS OF LEEDS AND THE BATH SPA AT RIPON

One of the architectural 'gems' of Ripon was when the tour concluded, being the Bath Spa, designed by the architect S Stead and opened in 1904 by Princess Henry of Battenburg. Originally conceived as a spa and pump room the building is faced with an almost pale orange terra cotta ware, with the foyer richly decorated with brightly coloured faience ware (Figs. 2 and 3).[3]

Fig. 2 (right) Faience ware at the Bath Spa, Ripon, by Burmantofts of Leeds.
Fig.3 (left) The original pump head at the Bath Spa, Ripon, an elaborate piece of Burmantofts ware.

Fig.4 The entrance to Burmantofts Offices in Leeds.

The external terracotta and internal faience ware were supplied by Burmantofts of Leeds who were a leading supplier of very high-quality materials. Originally a separate company, Burmantofts amalgamated with six other Leeds manufacturers in 1889 to form the Leeds Fireclay Company, with the Burmantoft brand remaining until the middle of the twentieth century.

Other 'curiosities encountered' were firstly a number of bluish coloured paving bricks marked as produced by the Tees Scoria Brick company (fig.5).[4] These very durable paving bricks were made from steel making slag and produced by the company at a site in Middlesborough.

Within the actual Workhouse museum an unusual foot warming brick was displayed: a 'Nawell's Patent Foot Warmer' (fig.6).[5]

Fig.5 Burmantofts Pottery Decorating Shop from *The Builder*, 1897.

Fig. 6 (top) Steel slag paving brick made by the Tees Scoria Brick Company, Middlesborough.
Fig.7 (lower) "Nawell's" Patent Foot Warmer in the Workhouse Museum, Ripon.

NOTES AND REFERENCES

1. Information on the Littlethorpe brick yard: *https://locksands.wordpress.com/tag/pottery* and *riponmi.nwdb.co.uk/*
2. Information on the present Littlethorpe Pottery business: *www.littlethorpepotteries.co.uk*
3. Lynn Pearson, *Tile Gazetteer: A Guide to British Tile and Architectural Ceramics Locations*, Ilminster: Richard Dennis for the Tiles and Architectural Ceramics Society, 2005, page 384 Ripon.
4. Information on the Tees Scoria Brick Co. *www.gracesguide.co.uk/1893_Institution_of_Mechanical_Engineers_Visits_to_Works*
5. For Nawell's Patent Foot Warmer, see 'Editorial: The Heated Brick: Ideal Bed Warmer and Foot-Warmer', *BBS Information,* **120**, May 2012, pp.2-4

GOOD AND BAD RENDER: ST AGNES LODGE, HIGH ST AGNESGATE, RIPON, NORTH YORKSHIRE

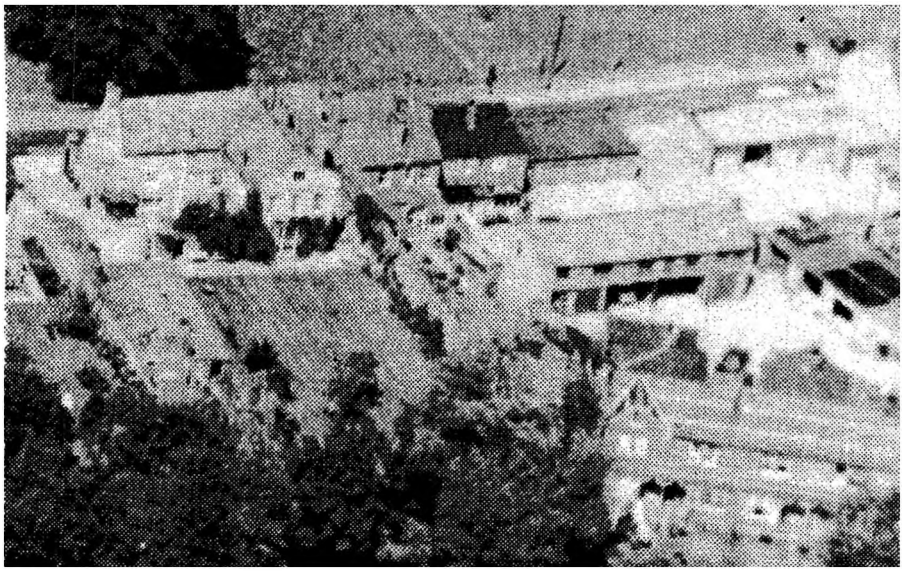


Fig.1 St Agnes Lodge, Ripon, North Yorkshire, from the south showing the shaped gable in the rear wing.

St Agnes Lodge, High St Agnesgate. Ripon is a striking house of rendered brick on the south side of the street (fig.1). On the site of a medieval burgess plot, conferring the right to vote in parliamentary elections for the borough, it was rebuilt in the early-seventeenth-century by Arthur Aldburghe (1585-before 1653) although he sold the property in 1641. The house is 'T-shaped' with the top of the 'T' facing the street, on its south side. This wing has five bays with the central three comparatively narrower than the two outer ones; there is a major chimney stack on the outside of the west gable and another within the east gable (fig.2). It was remodelled and the stock of the 'T' rebuilt, probably in 1693, in brick with a shaped gable giving also an attic window.

The house had suffered a major fault in a previous restoration. The render had been lime-based but someone, whom is not recorded, replaced this with impermeable cement render. The current owners, Robert Brodie and Annette Peachey, have had the walls stripped back to the original brickwork and given the whole a coat of white, much softer, breathable lime render.

As with cement for pre-Victorian brickwork, cement bad, lime good.

Damaged stonework has been replaced with carefully matched pieces, important where different styles are involved in the exterior. The current couple had commissioned a renovation of the kitchen, installing new tiles, with a nine-tile design of the rear of the house as well as making a garden room where there had been a

Victorian conservatory, long demolished. But the piece-de-resistance of the internal work is the bookcases in Mr Brodie's study, floor-to-ceiling on at least two walls, with sliding stacks in front of fixed shelves: one is envious!

This is the latest phases of the history of a house deeply involved in the political shenanigans of a parliamentary borough in the seventeenth and eighteenth centuries. Arthur Aldburghe was a man on the make. Already the lord of the manor of nearby Aldborough and controlling another three of the nine burgess plots in the village, he sought influence in Ripon, where 150 burgess plots had voting rights. But he overreached himself, buying other plots in the town; he was forced to sell up in 1641, not just St Agnes Lodge but all its furniture too. Initially purchased by Dame Mary Tancred, a local landowner, to be rented out, it was sold in 1698 to Roger Beckwith.

Fig.2 The north front of St Agnes Lodge, Ripon, North Yorkshire, showing the steep pitch of the roof, the large chimney stack of with arched decoration rebuilt *circa* 1700 on the right, and on the left, windows of the easternmost bay, replacing a mid-Victorian Gothic-style bay window. The oculi of the other four bays were installed in the 1730s or 1740s. The render is recent and lime-based.

Beckwith owned the house for a decade after 1698 but is the date written into a roof timber in the rear wing together with the carpenter's signature, 'Abraham Smith 1693', a commission from Beckwith or from Dame Mary? The date fits with the work done at that time: a rebuilt rear wing with a fashionable 'Dutch gable', a major refurbishment of the entrance hall and stairs, corner fireplaces in the hall and parlour and in the rooms above these, panelling in major rooms, and the massive chimney on the west gable. Assuming that the carpentry and joinery was all the work of Abraham Smith, he was engaged on an extensive up-dating of the house. But in the front range, four massive raised cruck trusses were retained producing the steep pitch visible from the road; the roof has pantiles. This roof also has timbers cut in the 1540s, reused from the preceding timber-framed house on the site.

Like Aldburghe, six decades before, Beckwith became involved with an attempt to enter parliament. In 1701, following the death of his cousin, Jonathan Jennings, a seat was up for grabs. But despite being the grandson of Sir Edmund Jennings, who had controlled elections in Ripon since the Restoration in 1660, Beckwith had a rival, John Aislabie. The rivalry was personal as well as political: Beckwith's great-uncle had

slaughtered Aislabie's father in a duel, having called George Aislabie, 'the scum of the county'. Aislabie gained one of the two Ripon seats, the other going to Archbishop Sharp's son.

Despite being High Sheriff of Yorkshire in 1706-07, Beckwith departed Ripon, selling St Agnes Lodge to Aislabie for £300 in 1709. Ownership of St Agnes Lodge in the eighteenth century falls into two parts: a succession of owners before 1766 and the forty-five-year tenure of the Revd Richard Browne, vicar of Ripon until his retirement in 1811.

Regarding the building, the north front was redone following the publication of Gibbs' *Book of Architecture* in 1728. The curious circular oculi relate to this publication as does the rusticated central door but who commissioned the renovation is unclear. Henry Hodges purchased St Agnes Lodge from John Aislabie in 1710 or 1711 but Hodges sold it to William Hinde in 1736. Hinde is the more probable patron of the work, early in his tenure. But Browne was content to live in the house without doing more than routine maintenance.

In the mid nineteenth century, Jane Featherstone and her son, Captain Craven John Featherstone RN, attempted improvements, not least in installing a Gothic-style bay window in the left-hand parlour: this lasted until the 1950s. It has since been removed. But the windows on both floors of the easternmost bay look far too incongruous.

Information on St Agnes Lodge has been gleaned from P. Leach and N. Pevsner, *The Buildings of England: Yorkshire West Riding: Leeds, Bradford and the North,* New Haven and London: Yale University Press, 2009, page 666; and J. Legard, 'Passage to Parliament: St Agnes Lodge, Ripon, North Yorkshire', *Country Life,* 4 December 2009, pages 80-85 with nine photographs.

DAVID H. KENNETT

BRICK AT RISK: ORFORDNESS LIGHTHOUSE, SUFFOLK

The lighthouse on Orfordness is in danger of being undermined by encroachment of the waters of the North Sea. It is in such peril that it has been anticipated that at some point in the twelve months from July 2019, it is liable to fall into the sea as the shingle beach retreats and the shoreline retreats to the site of the lighthouse. Despite having listed building status at grade II, there appears to be little that can be done to save the structure. A local group are seeking to rescue artefacts from the lighthouse and place them in a smaller building.

Replacing a structure erected in 1634, the present lighthouse was financed by Lord Braybrooke in 1792 and designed by William Wilkins (1778-1839). It is 90 feet (30 metres) high.

In contrast, further north along the ness, the Aldeburgh Martello Tower, visited by members of the society in 1992, is currently better protected from the ravages of the North Sea.

Across the North Sea, the Rubjerg Knude lighthouse in Hjørring Municipality, Denmark, at the north end of the Jutland peninsula has had a much better fate than its sister on Orfordness. Between 14 August and 22 October 2019 the lighthouse was moved away from the sand dunes which are being eroded by 1.5 metres (5 feet) a year; the dunes had already destroyed the lighthouse keeper's dwelling in 2009. Moving was effected by placing the whole structure in a steel cradle and pulling it slowly along specially constructed tracks. The lighthouse was built in 1899 and began work in 1900; it was operational until 1968. Decommissioned because the sand was obscuring the beam, the building is a pyramidal, white masonry tower, 23 metres (75 feet) high, square in plan, with a red lantern on top.

On the Orfordness Lighthouse, there is a brief comment in J. Bettley and Nikolaus Pevsner, *The Buildings of England: Suffolk: East,* London and New Haven: Yale University Press, 2015, page 451. Reports of the danger to the lighthouse appeared on BBC Ceefax from 9 to 12 July 2019. Moving the Rubjerg Knude lighthouse was reported in *The Guardian,* 23 October 2019, and in *BBC News online* on 22 October 2019; there are a number of web descriptions.

D.H. KENNETT

Brick for a Day:
York Handmade Brick Company, Alne, North Yorkshire

As part of the Annual General Meeting of the British Brick Society at Ripon on Saturday 17 May 2019, the Society was invited, by David and Guy Armitage, to make a return visit to the York Handmade Brick Company. This was arranged for the afternoon of Friday 16 May 2019, which thereby added to the overall interest of the AGM event.

Fig.1 Society Members, with some of the York Handmade Brick Company's products awaiting despatch.

The Society last visited this works on Saturday 19 September 2015, with the report appearing in *British Brick Society Information,* **132,** February 2016. As this latest visit took place on a working day, we were able to see the various processes all fully operational and thus appreciate the complexities of actually producing the wide variety of bricks and special shapes made.

The Company, formed through the vision and direction of David Armitage, whose own brickmaking family heritage goes back to the 1840s, when George Armitage and Sons was formed in West Yorkshire. In 1988, a derelict site, since then transformed into an operation, which owes its considerable success in its ability to supply an extensive range of high-quality traditional clay products.

The Company's niche market comprises restoration, conservation, new build and contemporary projects where vision, heritage, vernacular preservation combined with the traditional skills of the master bricklayer are once again, greatly valued and have created the demand that York Handmade is in a unique position to satisfy.

The company continues to operate in a very competitive market, where innovation, flexibility and bringing new products to market are key to survival. Success can be demonstrated by recognition, yet again, of being shortlisted for awards as this year's Brick Development Association (BDA) prestigious Brick Awards, held in London in November.[1]

The two projects that have been selected are the Peter Hall Performing Arts Centre at the Perse School, Cambridge, and the Loxley Stables project in Hertfordshire.

Innovative product development has resulted in a new brick range being introduced into the market.

With the brand name of "London Stock", the range is essentially a London Yellow stock, and introduced for the market in London and the South East, where demand for this type of brick is high and attracts a substantial number of imports. The product has been well received, with several projects already completed and crucially for York Hand Made, more orders confirmed.

THE BRICKMAKING PROCESS AND THE PRODUCTS

The factory utilises a large deposit of adjacent Lacustrine Clay, as its main raw material, and also imports a variety of clays from external sources to achieve the wide fired colour ranges.

After crushing and grinding, the various clay mixes are stored for use. The clay has a typical wet to fired shrinkage of 11% and is mixed with a small amount of fired "grog" so as to open up the very plastic clay for ease of drying and firing.

The actual making process consists of genuine handmade, machine-aided hand-thrown, and extruded bricks, all complimented by a range of standard and purpose made special shapes.

Fig.2 The handmade special shapes process being demonstrated.

We were also able to see the machine-aided hand-made process in full operation, where the process enables prepared clay to be delivered to hand throwing stations, where the "walks" of clay are physically thrown into pre sanded mould boxes. After this the mould sets are then automatically de moulded onto pallet trays for onward movement to the dryer and then finally setting area.

Fig.3 Prepared "walks" of clay ready for throwing on the mid photo conveyor, and in the foreground spare clay being conveyed back into the mixer for re use.

Fig.4 A hand maker with an empty mould set in front of him. As these hand makers have to work to the speed of the machine, they regularly rotate with colleagues to minimise fatigue.

Fig.5 Wet bricks de-moulded and marshalled into packs ready for drying.

One of the major changes taken place since the British Brick Society's previous visit has been the installation of a new dryer. This was constructed completely in-house and by the use of computer-controlled technology, has greatly improved both the overall drying time, yield of best product, and all achieved at a much-reduced cost.

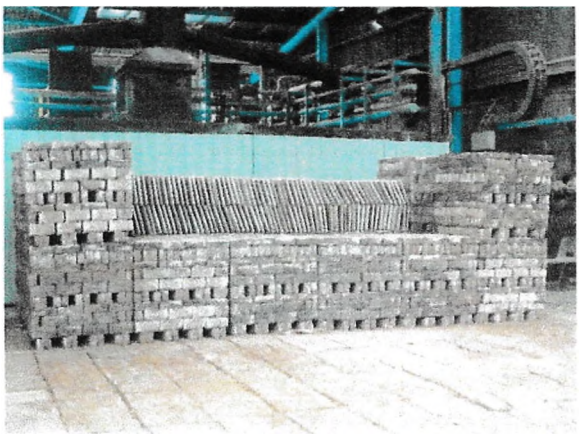


Fig.6 Packs of dry green brick, supporting floor tiles placed on the hearth of the Moving Hood kiln to form part of the next batch for firing.

Fig.7 The Consultant Gas Equipment, CGE, kiln, firing temperatures for the local clay were 1000° C, whereas for the more refractory Williamson Cliff clay, this required a higher temperature of 1215° C.

From firing the packs were moved to a semi-automatic unloader and packaging machine, which, still most importantly allowed colour blending to take place.

Fig.8 Guy Armitage demonstrating the fired brick pack unloader.

Fig.9 A small selection of the products made at the factory, with a consignment of the new Yellow Stock blend in the background.

With the bricks having been sorted, blended and packaged, they were taken into the stockyard in readiness for despatch.

The visit concluded with a look at the product show room where Guy Armitage was able to highlight the range of shapes made and the Company's excellent marketing material. The web address is included for any readers wishing to explore further *www.yorkhandmade.co.uk/* .

On behalf of the British Brick Society our thanks go to Guy Armitage for arranging and hosting the visit and to the other employees who so ably demonstrated their brickmaking skills.

In a link to the following Annual General Meeting we were informed that the company had supplied bricks for an extension to the Workhouse Museum, which had been produced to match those bricks used when the workhouse was built in 1854.

MIKE CHAPMAN

REFERENCES

1. York Handmade Brick Co website, *www.yorkhandmade.co.uk/* and Brick Development Association 2019 Brick Awards.
2. All photographs courtesy Mike Chapman Collection

BRICK IN THE NEWS: ALDERSHAW HANDMADE TILES LTD WINNERS OF THE HERITAGE CRAFT ASSOCIATION/MARSH CHRISTIAN TRUST 'MADE IN BRITAIN' AWARD 2019

Fig.1 Tony Kindell of Aldershaw Handmade Tiles Ltd, winner of the HCA/Marsh 'Made in Britain' Award 2019, with Nick Carter, Marsh Christian Trust.

Members will recall that the British Brick Society visited Aldershaw Handmade Tiles Ltd, Sussex. in September 2014, which was reported in *British Brick Society Information,* **125**, February 2015.

Aldershaw Handmade Tiles Ltd are the proud recipients of the **HCA/Marsh 'Made in Britain' Award for 2019.**

The Sussex-based company employs traditional hand making methods using wooden moulds and 150-million-year-old local Wadhurst clay. The company is one of only a few still making sanded, rubbed or glazed mathematical tiles, used since the 1700s as a method of weatherproofing timber-framed buildings in Kent, Sussex, Surrey, and Hampshire and refacing brick-built country houses such as Althorp, Northamptonshire, or cemented ones like the demolished Stockwood Park, Luton, Bedfordshire.

Aldershaw's terracotta tiles can be found in floors and roofs all over the country: on The Queen's House at The Tower of London and St James Church, Piccadilly, are two London examples. Prominent examples in Middlesex include Harmondsworth Medieval Barn and the Real Tennis Court at Hampton Court. An important rural example is the National Trust Village at West Wycombe, Buckinghamshire, and their tiles are found on English Heritage properties as well as at many private estates.

MIKE CHAPMAN

Brick for a Day:
Forterra's Kings Dyke Works, Whittlesea, Cambridgeshire

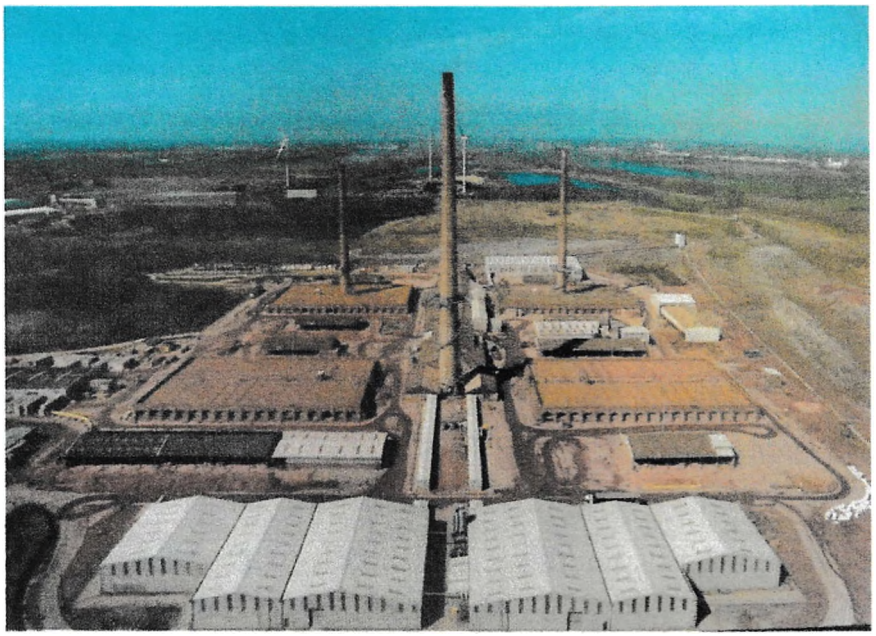


Fig.1 Aerial View of Forterra's Kings Dyke Works, Whittlesea, Cambridgeshire.

On 1 June 2019, fourteen members of the British Brick Society were welcomed by Mr Andrew Mortlock, Forterra's archivist, who looks after all the extensive archive material documenting the history of the London Brick Company Ltd. Andrew ensured that our visit was most informative, firstly exploring the sites long brickmaking history and then showing us around the only remaining "Fletton" brick factory now operational in the UK.

Fig.2 Plaque recording the opening of the Kings Dyke Works.

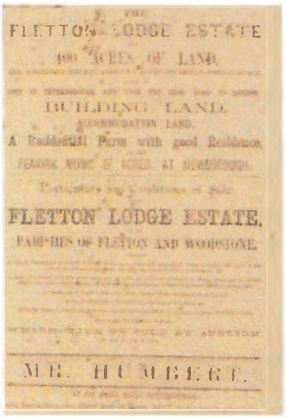
The works was originally opened by the London Brick Company Ltd (LBC) on 24 June 1969, the first phase of a plan to build a "new generation" of "Fletton" Works. That these plans were very successful is demonstrated by the further expansion of production between 1971 and 1973, with a capacity by then of some 250 million bricks per annum.[1]

Whilst the history of the Fletton brickmaking process is very well documented, a summary of the events that created such a significant enterprise will help to put Kings Dyke works into the context of the UK's brickmaking industry, both past and present and further explain why the process became synonymous with the Peterborough, Marston Vale Bedford and the area around Bletchley.

Brickmaking has been a traditional industry around the Peterborough area for several centuries. Production would have been organised on a typical "country brickyard" approach, similar to that described in the HG Matthews visit in September 2018.[2] The clays mainly used, were superficial deposits or "Callow" that were soft ,easy to dig, and prepare and thus very suitable for hand making. The clay deposits encountered at the base of the "Callow" were known to be much harder and therefore difficult to extract and process. Both these clay types were already well documented geologically, with the name Oxford Clay given to describe the series by Dean Buckland in 1818. The underlying clays, generally termed the Oxford Clay Series possessed unique and valuable properties that in 1818 were undiscovered

As demand for bricks increased in the mid-nineteenth century, the output from these small yards proved to be inadequate, and experiments began to find ways to mechanise the existing process and more significantly to try and use the underlying clay. Any such development work required considerable capital often far exceeding the individual brick yard owners. The Joint Stock Companies Act 1856, creating the limited liability company, would prove to be invaluable as a mechanism for such companies to raise the finance required.

Prior experimentation to establish the true nature of these lower clay seams had already shown that if the clay could be crushed to a fine granular material, it possessed a uniform moisture content which made it suitable for making into bricks by using the semi-dry pressing process. However, its greater attribute was that the clay contained a high concentration of organic matter (hydrocarbons) which resulted in the brick almost firing itself in the kiln and thus drastically reducing the amount and cost of fuel normally required in the process of firing a kiln.


FLETTON LODGE ESTATE

BUILDING LAND.

FLETTON LODGE ESTATE,

MR. HUMBERT.

Fig 3 Auction notice, 23 June 1877, for 37 acres comprising Fletton Lodge Estate.[3]

It is generally accepted that the "Fletton" process was started in earnest with the auction of a parcel of land called the Fletton Lodge Estate. Thirteen acres of this land was purchased by James McCallum Craig who started a small brickworks using the lower clay, thereby determining that all bricks to be produced using this type of clay were known as "Fletton Bricks". After a series of land deals the Hempsted brothers, brickmakers and engineers of Grantham, Lincs., bought Craig's works and started the long process overcome the difficulties of using this Lower Oxford Clay.

Other significant engineering developments were also taking place in the wider brickmaking industry particularly with the introduction of robust machinery to both prepare the clay and then to mechanically form into a brick which would find great benefit when adapted to the Fletton process: with the Hoffman continuous kiln being the most important.

After considerable development the most successful machinery for pressing the brick was manufactured by C. Whittaker & Co of Accrington, Lancashire. This equipment whilst modified over the years is still in use at Kings Dyke.

Whilst a number of companies were involved in the early years of Fletton brickmaking, a process of amalgamation and consolidation eventually saw the dominance of the London Brick Company. It was formed in 1889 when J.C. Hill bought the works at Fletton for £6500 and called it The London Brick Company. It was incorporated as the London Brick Company Limited in 1900 and adopted the trademark "Phorpres" in 1901.The name literally means pressed four times within the Whittaker press.

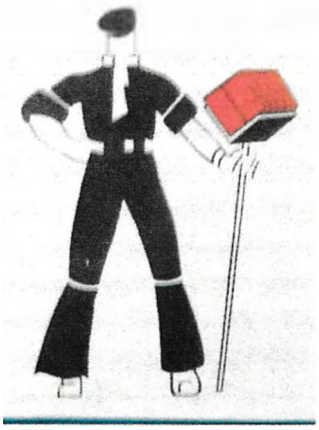


Fig.4 (left) The Hod Carrier, used as the principal trademark of LBC.
Fig.5 (right) 'LBC Phorpres' in the frog of a Fletton brick.[4]

The brick hod carrier and LBC Phorpres (Fig 5, the pictured brick) were the principal trademarks of LBC, although both are no longer used, with the Phorpres name being dropped in 1974.

Whilst LBC was developing in and around Peterborough, the Bedfordshire company of B.J. Forder & Son Limited had established Fletton brickmaking in the Marston Vale near Bedford and in 1923 amalgamated with LBC to form the London Brick Company & Forders Limited, a logo being prominent on the chimneys of Stewartby works.

During the 1960s and the 1970s, LBC bought the remaining Fletton producers: Redland Flettons, Marston Valley Brick Company, Flettons Limited and the National Coal Board's Whittlesey Central Brick Co.

In 1984 the whole business was bought by the Hanson Trust and became the Fletton division of Hanson Building Products. Now part of Forterra, formed in 2015 following a divestment from the Heidelberg Cement Group, the Fletton brand has been retained and still makes a significant contribution to the UK's brick production figures, all from the last remaining Fletton Works at Kings Dyke, Whittlesey.

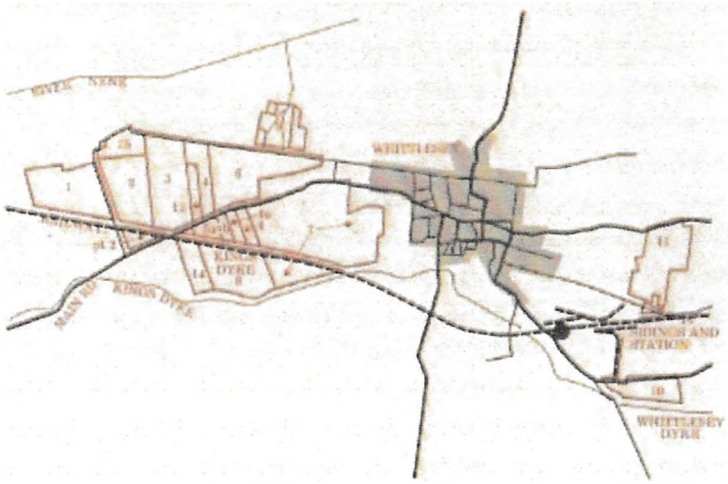
The economies of mass production and in-built fuel together with national distribution offered by the railway network enabled Fletton products to dominate the brick making industry ultimately leading to a decline in the many small traditional works that could not compete. The Fletton Industry did, however, ensure that clay brick maintained a dominate presence as a material of choice and never more so than in the government funded social housing schemes of the mid-twentieth century.

The area around Whittlesea sits on the same Oxford Clay series as did Fletton itself and the development of brickmaking mirrored the wider Peterborough area, although the thickness of the clay reaches a maximum depth for the Peterborough area and with a high degree of uniformity within the clay beds is ideally suited for high volume mechanised extraction.

The undated map (Fig 6, above) records sixteen parcels of land that have been used for brick production, or clay extraction. Areas 1,2,3,4,6,12, and 15 all to the north of the railway crossing are important in that they are the approximately the site of Kings Dyke works and quarry. The original owner of part of this land was Arthur W. Itter, who amalgamated his brickmaking business here with LBC and later established the Calvert, Bucks. Brickworks, also eventually part of LBC.

Eight works are recorded for Whittlesey in the Ministry of Works census,1941,[5] ref 4, one of which is the original LBC Kings Dyke works, noted as closed under care and maintenance and with Whittlesey spelt as Whittlesea, its original spelling.

As a consequence of the huge output of Fletton bricks, viable reserves of Oxford Clay have become less easy to obtain and work. More recent environmental legislation has impacted on the permitted level of fumes generated during the firing process, all requiring much capital expenditure to ensure clay reserves are used efficiently and legislation is always complied with. The serious downturn of national brick sales in the recession of 2008 has resulted in Forterra concentrating their Fletton production on one very efficient site.



Map 4. Detailed location map of Fletton brickmaking sites around Whittlesey

Fig.6 Location map of Brickmaking sites in Whittlesey.[6]

Fig.7 Sign at the entrance to the Kings Dyke Brickworks.

Following a safety briefing our guide for the day, Andrew Mortlock, described the stages of the production process followed by a tour of the main parts of the site. Although unable to see the actual quarry at the Must Farm site, Andrew arranged for an aerial shot of the dragline excavator used to dig the raw material, with the clay then being transported to the works by conveyor (fig.8).

After being delivered from the quarry, the clay is fed to a primary crusher which reduces the material to a much smaller size and suitable to be fed to a series of 16 Craven-Fawcett "Incla Dry Rim Discharge grinding pans (fig.9, left), the first stage of clay preparation. A dry pan, so called because it deals with relatively dry clay,works by crushing the clay between the large diameter rollers and the pan base. Clay is fed in at the rear and fed under the rollers which are rotating within their own axis. The base rotates and pinches the clay under the rotating rollers the clay is crushed to a powder which is then directed over the rims of the base,by centrifugal force,to be fed onto an adjacent conveyor.

Following the Dry Pan stage, the clay is then "sieved" by a series of wire screens. With the oversized material returned to the Dry Pans for further grinding, this screening process ensures that the granular size of the clay is exactly correct for the all-important brick pressing process.

Fig. 8 Clay extraction at the Must Farm quarry site.

Fig. 9 (left) The "battery"of 16 Incla Dry Pans with the
(right) A pan under maintenance, showing the all important pan floor,with two base sections removed.

Fig. 10 Sieving the clay by means of wire screens.

Figure 11 shows the pressed bricks emerging from a Whittaker press,and being automatically fed on to a conveyor system which ultimately takes pressed bricks from all of the press machines. On figure 12 an employee is adjusting the flow of bricks on the conveyor.The company invests a huge amount of time and effort itno ensuring the safety and well being of its employees; this photograph shows the extensive machinery guarding in place and the employee wearing the full range of personal protective equipmet (PPE) essential for working in thc cnvironment of the press shed.

Fig.11 (left) Pressed bricks emerging from a Whittaker press, and automatically fed on to a conveyor system.
Fig.12 (right) An employee adjusring the flow of bricks on the conveyor.

Fig.13 (top left) The conveyor system of green bricks heading for the sanding station.
Fig.14 (top right) A pressed green brick, showing the works ID number,33 in the left-hand side of the frog and the press number in the right.
Fig. 15 (below) A finished kiln pack of green bricks being lifted away by fork lift truck.

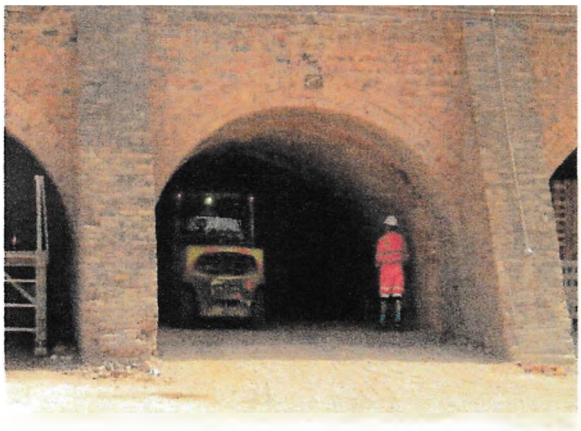
Once pressed the output from all the presses is marshalled onto conveyors, with the individual bricks now separated and ready for surface texturing and sand application for onward delivery to the kiln pack building area.

A finished kiln pack of green bricks being lifted away by a forklift truck with specially designed grippers to ensure minimal damage is done to the bricks that are gripped (fig.15).

The company has made a very significant investment through the installation of a series of robotic handling devices capable of building the complicated designs of pack required to fit into the arched chambers of the kilns. Figure 15 shows a "shoulder" pack which fits into the profile of the kiln arch.

This repetitive work was hitherto done manually and demonstrates how technology more usually associated with modern car factories can be successfully adapted into the modern brick industry From this stage in the process the bricks are taken to one of the operational kilns for firing.

Whilst the traditional "Hoffman" type kiln design is still in use, both the kiln construction, the fuel used and the degree of process control and would be unrecognisable to the early pioneers of the Fletton process.



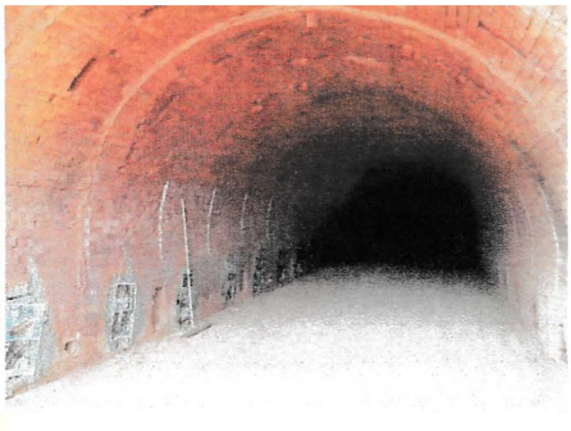


Fig. 16 (left) Placing the green brick packs into one of the kiln chambers. Note the "Spotter" who ensures that the pack is placed in exactly the correct position by the truck driver.

Fig. 17 (right) The chamber's arched construction,with green brick packs already placed at the back.

The foot of each arch contains a series of 'trace' holes,which inter-connect with the adjoining chambers and ensure that during final drying and firing,that the hot gases are forced downwards from the chamber roof,and again critical to ensuring good fired brick quality.These 'trace' holes are papered over, literally using newspaper (any brand will do),to give a seal which prevents cold air being leaking in and reducing the kiln suction and thus overall kiln draught.

Fig.18 Bricking up and sealing the kiln entrance, or wicket, once the chamber has been filled.

The process of bricking up and sealing a kiln entrance, or wicket, is still done manually which ensures that the entrance is properly sealed, and important factor when the chamber is being fired as any in leakages of cold air will affect brick quality.

Traditionally the fuel used for firing was a coal slack, known as 'Smudge'. This was a very labour-intensive part of the process with the smudge being fed by hand from the kiln top, and all the resultant ash being removed in the same way.

With the introduction of natural gas for firing, this has allowed new technology to again be deployed, allowing firing process, and resultant emissions being controlled remotely by a uniquely designed computer process control system (fig.19).

Fig. 19 The bank of computer screens displaying every stage of the firing process, giving continuous insight into what is happening at each stage of the firing process

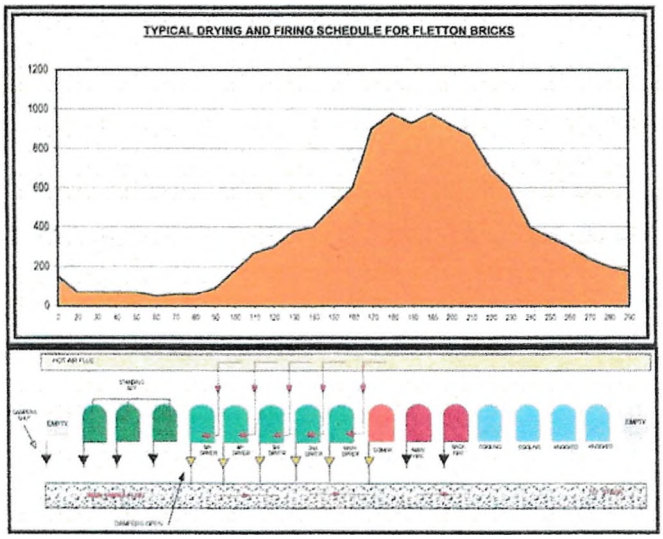


Fig. 20 This diagram shows the unique 'Fletton' firing process, the temperature gradient and the number of chambers being used in one 'firing group' Typically each kiln has 34 chambers, allowing at least two separate firing groups to be deployed on a continuous basis. The top firing temperature is 900 degrees Celsius, with the carbonaceous matter (the oily material) burning out between 200 and 900 degrees Celsius, with only a small amount of natural gas being required to maintain each chamber at a top soaking temperature essential to achieve the desired fired quality.[7]

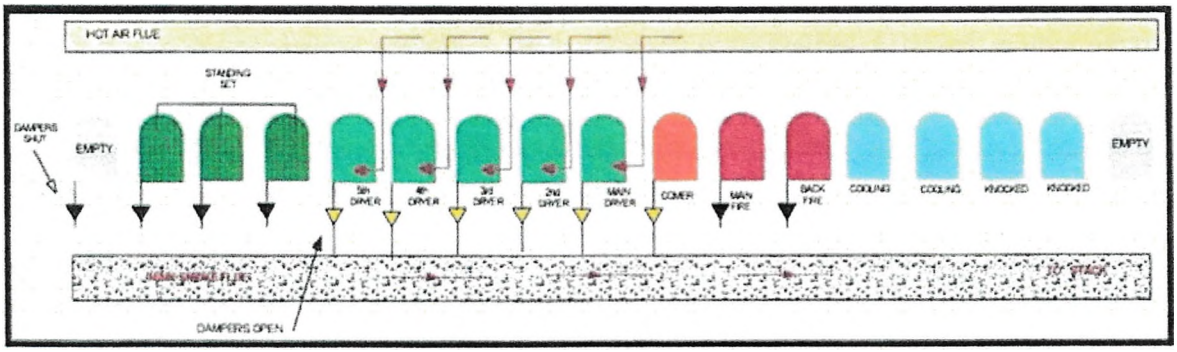


Fig.21 This enlarged photo shows one group of chambers "under fire". The direction of fire travel is from right to left, with 4 cooling chambers, in blue, 3 in fire in red, and the 4 in light green in the drying stage. The darker green are chambers set with green brick and waiting for the firing stage to get to them. Finally, one chamber in grey is standing empty. This demonstrates the tight relationship with each chamber in the firing group and the importance of maintaining both air tightness and continual and effective control.

A vital part of the firing process is to ensure that for much of the time the chambers under fire are maintained under a "reducing" kiln atmosphere,[8] essentially meaning that the bricks are being fired whilst being starved of oxygen. This is essential to control the rate at which the oily matter in the clay is burnt, with only the final stages of the firing process being under normal oxidising conditions. If not controlled the temperature gradient would exceed the clay's natural ability to withstand a rapid rise in temperature resulting in both the bricks themselves and the kiln structure being severely damaged.

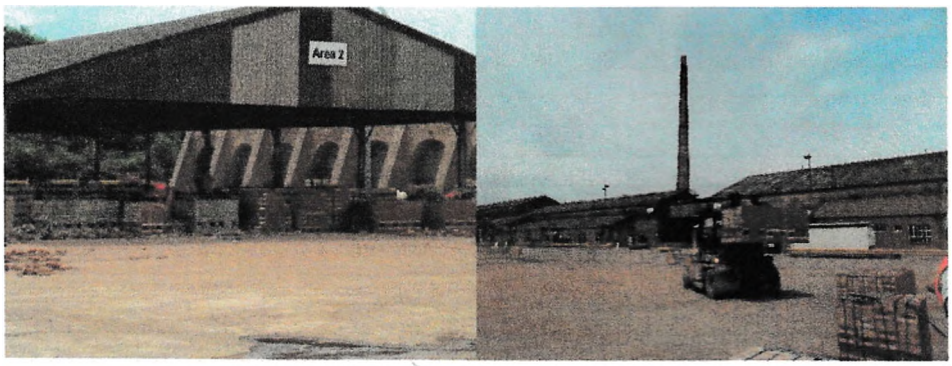


Fig. 22 Hand blocking in progress and dispatch of the bricks.

Finally, once the chambers are sufficiently cooled, the fired brick packs are removed by forklift truck and taken to a sorting and packing (blocking being the term used for Flettons) area, where packs are built and shrink wrapped for onward despatch by road haulage.

The entire output of the factory, some 2.25 million bricks per week is processed by hand, as the only way to ensure a good quality product reaches the customer.[9]

MICHAEL CHAPMAN

ACKNOWLEDGEMENTS

The British Brick Society is indebted to Forterra, and in particular Andrew Mortlock and Diane Munday for both facilitating the visit and giving the members such a detailed insight into the Fletton brick making process.

All colour photography, Mike Chapman Collection

NOTES AND REFERENCES

1. The UK's peak production of clay bricks was in 1968, reaching 6.799 million, with approximately 50% of that being Fletton production, hence the Brick Industry being classified into the Fletton and Non Fletton sectors. From Mineral Resources Consultative, *Common Clay and Shale,* London: HMSO, 1982.
2. M. Chapman, 'Brick for a Day: H.G. Matthews Brickworks, Bellingdon, near Chesham, Buckinghamshire', *BBS Information,* **142,** August 2019, pages 39-46.
3. Figure 3 from Richard Hillier, *Clay that Burns, A History of the Fletton Brick Industry*, London: London Brick Company Limited, 1981; reprinted London: Heffers, 1982.
4. Figure 5 shows an LBC Phorpres brick, courtesy of Penmorfa Old Bricks, History at your feet: *www.penmorfa.com/Bricks/index.htm*
5. Figure 6, Location map of Fletton brickmaking sites in Whittlesea and gazetteer references, courtesy Hillier, 1981/1982, fig.
6. Ministry of Works, *Directory of Brickworks, Great Britain 1941,* London: HMSO, 1941, page 53, Census of brickworks sites at Whittlesea, Eastern Area, Cambridgeshire.
7. Figure 20, Kiln Firing profiles, courtesy Forterra, Kings Dyke Factory
8. Figure 21, E. Rowden, *The Firing of Bricks,* Winkfield Row: Brick Development Association, 1964 gives references to the reducing atmosphere in the firing process.
9. See note 1, *supra,* for details of brick production in the UK. David Kennett tells that during his sojourn at Bristol Polytechnic in academic year 1990-91, he collected brick production statistics for the United Kingdom between 1947 and 1989, including regional statistics.

BIBLIOGRAPHICAL NOTE

General historical references in the history of Fletton Brickmaking and the history of the London Brick Company Limited: John Woodforde, *Bricks to Build a House With.* London: Routledge & Kegan Paul for the London Brick Company, 1976; with additional material from Alan Cox, *A Survey of Bedfordshire Brickmaking, A History and Gazetteer,* Bedford: Bedfordshire County Council and London: Royal Commission on Historical Monuments (England), 1979.

BRICK IN THE NEWS: NEW STADIUM FOR EVERTON FOOTBALL CLUB

In late July 2019, the Premier League side, Everton — the Football Club in Liverpool who play in blue — revealed plans for a new stadium on the edge of Bramley-Moore Dock. The stadium is designed to seat 52,000 spectators; the architect is Dan Meis. Like most modern stadia, the new stadium is designed to be used for events and concerts: the Edinburgh Festival in 2019, for example, opened with the Los Angeles Philharmonic Orchestra playing in Tynecastle, the stadium of the Heart of Midlothian club.

Unlike recent stadia — the Principality Stadium in Cardiff for the Welsh Rugby Union or those in north London such as the Emirates Stadium for Arsenal Football Club and Wembley Stadium, the English national football stadium — the projected new stadium for Everton will have external walls of brick.

Many of the stadia which some male members of the British Brick Society will remember from their boyhoods were designed by a Scots mechanical engineer, Archibald Leitch (1865-1939), including Everton's at Goodison Park. As at Goodison Park, the outer walls of these were often of brick.

Everton's new venture was reported *The Guardian,* 26 July 2019. For Archibald Leitch's stadia see S. Inglis, *Engineering Archie: Archibald Leitch — Football Ground Designer,* London: English Heritage, 2005; pages 100-107 for Goodison Park.

D.H. KENNETT

Brick Query: Phorpres Hollow Clay Blocks

from John Bowmer, responses from Michael Chapman, Michael Hammett, David H. Kennett, and Michael Oliver

THE QUERY

In September 2019, John Bowmer, an architect, wrote to the British Brick Society, via Michael Oliver, the Honorary Secretary, as follows:

> I am undertaking research into LBC's Phorpres hollow terracotta blocks. Information is scarce and I was wondering if you know anything about them.

An advertisement from the mid-twentieth century was attached but this proved to be of little use as the text could not be read; illustration has therefore been omitted. Through the good offices of Carl Cuthbert of the Forterra Works at King's Dyke, Whittlesey, Cambridgeshire, a more informative advertisement (fig.1) was made available and is used here.

Mr Bowmer commented that beyond the advertisement he had, more information was hard to find and that he would be grateful if the society was able to share what we know.

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www.johnbowmer.com

THE RESPONSES

The query was circulated to several of the officers of the British Brick Society: Michael Chapman, Michael Hammett, and David Kennett. Their responses to the enquiry are given below. These cover the manufacture of Phorpres hollow clay blocks including their places of manufacture; the uses of these hollow clay blocks; the regulations governing their use; the disadvantages of using Phorpres hollow clay blocks; and the alternatives to them.

THE PRODUCT

The advertisement for Phorpres Hollow Partition Blocks (fig.1) shows the blocks in two sizes — standard block and half block — and in two formats — keyed and smooth-faced; it was also made as a fixing block, as a keyed block, for adding skirting boards and picture rails. On all formats, the top and botton of the block was keyed so that mortar could be easily applied in building a wall of these blocks.

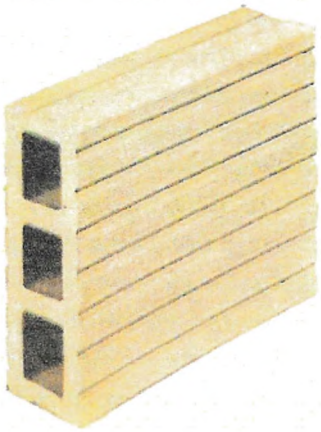
LONDON BRICK COMPANY'S ROLE IN THE HISTORICAL PRODUCTION OF HOLLOW CLAY BLOCKS

The hollow blocks shown on the right-hand side of the London Brick Company's advertisement can confirm that LBC did indeed produce them and as such were a product that differed fundamentally in the manufacturing process from their dominant "Fletton" range of clay bricks.

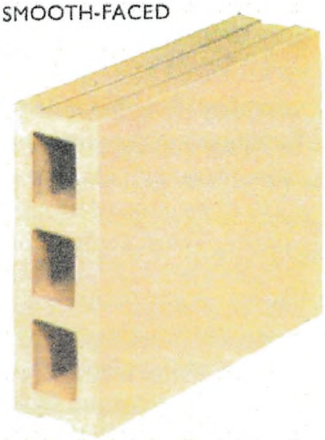
Fig.1 (opposite) Advertisement for 'Phorpres' Hollow Partition Blocks.
Source: Carl Cuthbert, Forterra.

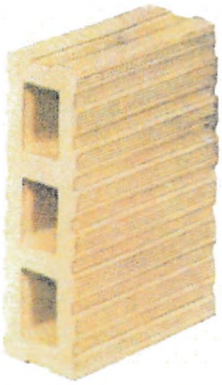
'PHORPRES' HOLLOW PARTITION BLOCKS

STANDARD KEYED BLOCK

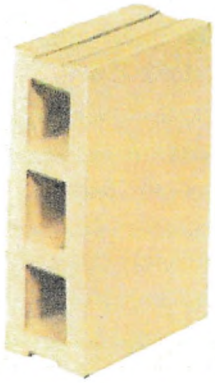


STANDARD SMOOTH-FACED BLOCK





KEYED HALF-BLOCK



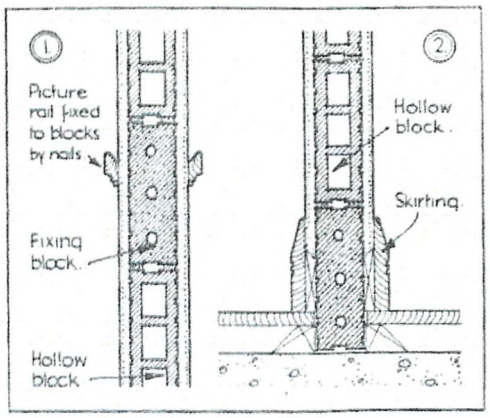
PLAIN HALF-BLOCK

TABLE OF WEIGHTS & AREAS OF HOLLOW PARTITION BLOCKS

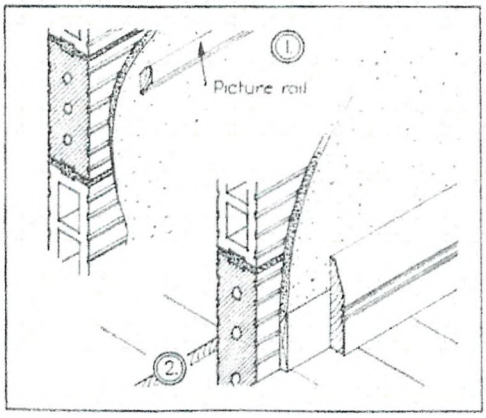
SIZE	WEIGHT PER SQUARE YARD OF BLOCKS		NUMBER OF YARDS PER TON	
	Gault	Terra-cotta	Gault	Terra-cotta
12" × 8⅝" × 2"	80	112	28	20
12" × 8⅝" × 2½"	90	118	25	19
12" × 8⅝" × 3"	112	124	20	18
12" × 8⅝" × 4¼"	132	140	17	16

'PHORPRES' FIXING BLOCKS FOR JOINERY FIXING

"Phorpres" Fixing Block is made in the standard size, 9" × 6" to course with all 9" partition blocks; it can be built in wherever fixings are required and nails can be driven directly into it, without plugging or other packing.



THE FIXING BLOCK



Details of Construction: (1) Picture Rail (2) Skirting Fixing

NOTE :—

1. "Phorpres" partition blocks are computed at 12 blocks per yard.
2. "Phorpres" partition blocks are supplied keyed or smooth faced both sides.
3. Standard bonding lengths, Conduit and fixing blocks are available in all thicknesses.
4. Substitute 8⅝" course dimension for 9" in all cases.
5. "Phorpres" hollow clay blocks are manufactured to comply with British Standard 1190:44.

The London Brick Company had built a very successful business mass producing their pressed 'Fletton' brick, made exclusively from Lower Oxford Clay, and pressed using the patented 'Phorpres' pressing action. Wishing to expand their clay product portfolio they acquired several independent companies who were already producing extruded clayware, including hollow clay blocks.

The Worboys Brick Company, near Ramsey in Cambridgeshire (formerly Huntingdonshire). This company, founded in 1886 used the Ampthill clay series to produce both handmade and extruded bricks, which fired to a creamy yellow colour. This clay overlays the Oxford clay already exploited by LBC for their 'Fletton' manufacture. The company was acquired by LBC & Forders Ltd in 1933 and then run solely by LBC from 1936 to its closure in 1984.[1]

The Arlesley Brick Company (Beart's) Ltd, originally founded in 1852 by Robert Beart, was acquired by LBC in 1928, using Gault Clay to make a patented extruded perforated brick, drainage pipes and hollow blocks, again all firing to a creamy yellow colour. The works was redeveloped in the early 1980s by the then owners Hanson Building Products, to produce a soft mud facing brick, eventually closing in 1992.[2]

The Clockhouse Brick Company, Capel, Surrey was purchased by LBC in 1941.This works also produced bricks and hollow clay blocks using the Wealden Clay, producing a red firing product of superior fired strength and durability to the blocks made at Worboys and Arlesley.

The kiln in use at Clockhouse was a version of the Hoffman Continuous kiln called a 'Zig-Zag' or Buhrer kiln in which the direction of the 'fire' was forced diagonally across each chamber, rather than going straight through as was normal for a Hoffman kiln. It was claimed that this design was more efficient and better suited to hollow block production.[3]

Hollow blocks were produced at Clockhouse into the 1970s, at which time it was converted to a modern tunnel kiln factory producing a range of soft mud facing bricks. (see below for further information).

LBC appears to have recognised the advantages of using hollow clay blocks in the post war building boom as it converted all the three works over to block production, with land drains also being an important part of the product range.

Their importance, however, should not be ignored, and indeed questions were asked in the House of Commons regarding the lack of availability of hollow blocks in comparison to pre-Second World War levels.[4]

Other brick manufacturers offered hollow blocks, an example being the Maltby Metallic Brick Company, Maltby, near Rotherham,[5] the scale of London Brick operations that they would eventually dominate this sector and include their hollow blocks within their 'Phorpres' trademark collection.

MIKE CHAPMAN

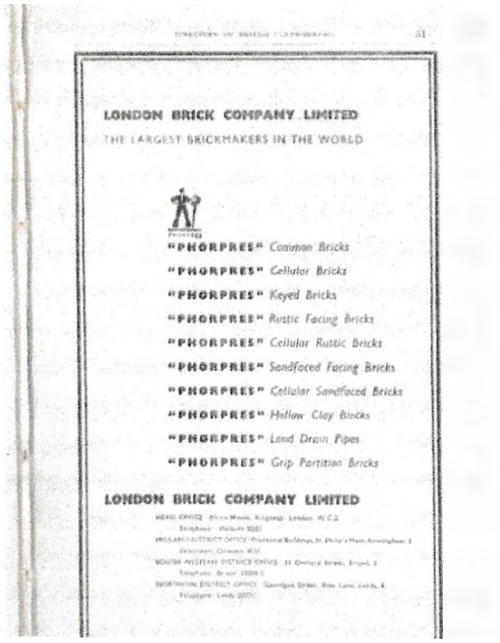


Fig.2 The London Brick Company advert: *Directory of British Clayworkers,* 1949, page 51.

THE CLOCKHOUSE BRICK COMPANY AND THE MANUFACTURE OF HOLLOW CLAY BLOCKS

As noted above, one place where Phorpres hollow clay blocks were produced was the London Brick Company works at Capel, Surrey, which began as the works of the Capel House Brick Company Ltd.

The Capel House Brick Company Ltd was founded in about 1933 to exploit a rich deposit of high-quality Weald Clay occurring south of the village of Capel. The works made high-grade ceramic blocks and was moderately successful until the Second World War broke out on 4 September 1939. When this happened housebuilding more or less ceased, not least because mortgages were difficult to obtain: a middle-sized building firm with a good relationship with its bank could obtain a loan of £100,000 just before 10.00 am on Monday 5 September 1939,[6] something which would have been impossible after the opening of normal business. On the other hand, private persons wishing to purchase a specific house found it would only be possible if the purchasers had the full purchase price in their bank accounts.

Male workers producing building materials were conscripted into the armed forces. Clock House Brick Company Ltd went into liquidation by 1941; the majority of the share capital was sold to the much larger London Brick Company to avoid full closure of the works. In 1945, the London Brick Company acquired the full share capital resulting in the works becoming the property of the London Brick Company. Under their ownership brick and block production was substantially increased as housebuilding began to take off in the post-war boom, first with emphasis on the building of municipal housing to replace war-damaged and destroyed houses in large towns and to meet the demand of young parents for homes away from living with one or other set of grandparents, and secondly in the 1950s to supply the growing market for owner-occupied homes. In the 1960s the factory at Capel was rebuilt as more efficient production methods had to be accommodated. It is not known when the manufacture of hollow blocks ceased at this works, but by the 1970s lightweight concrete aggregate blocks and AAC blocks were established as more popular alternatives.

The London Brick Company was taken over by Hanson PLC in 1984 who refitted the Capel works to produce multi-stock bricks under the 'Butterley' and 'Capel' brand names. This was very successful: three major exhibitors at the 1998 Ideal Home Exhibition were using Clock House bricks in their exhibits. By 2000, the Clock House Brickworks was producing 42 million bricks a year, it being Hanson's main soft mud production site.

However, eight years later, the global financial crisis hit the building materials industry very hard. In 2008, house prices suddenly slumped; housebuilding almost ceased; the demand for bricks plummeted. In March 2009, Hanson PLC announced a 'phased closure programme' with immediate effect. Since then, Hanson PLC has changed ownership and the Clock House Brickworks site has been in limbo awaiting redevelopment.

MIKE HAMMETT

USES OF PHORPRES HOLLOW CLAY BLOCKS

Chapter X of the 20th edition of *Building Construction and Drawing: A Textbook on the Principles and Details of Modern Construction for the use of Students and Practical Men,* by George A. Mitchell and A.M. Mitchell, edited by W. Hanneford-Smith, London: B.T. Batsford, 1950, is concerned with 'Partitions'. On page 307, it notes that partitions may be made from brick, terra-cotta block, slab partitions formed from plaster or pumice concrete, reinforced concrete, using one of the forms of expanded metal, or Hy-rib, a ribbed form of stamped steel sheet. Under 'Hollow Brick Blocks, Tiles or Pots' it notes:

> These should be made from marl or terra-cotta in blocks about 12 inches long by 9 inches high. The walls of the blocks are about 1 inch in thickness with diaphragms to strengthen the walls. They are usually joggled on the beds and when set in cement mortar form a strong, sound and fire resisting partition. They are formed in thickness from 2 to 9 inches and are easily cut and adaptable. [The illustration (not included herein) shows] a hollow brick block of which there are many types on the market.
>
> Special blocks are made with wood grounds inserted for fixing skirtings.

> The disadvantage of hollow blocks compared with the solid type is that if a fixing is required the thin walls do not afford a very secure hold for wood plugs, and when plastered the joints cannot be discerned. They are also not so easy to 'chase' for electrical conduits.[7]

Mitchell's *Building Construction* also makes it clear that cellular bricks 'should not be used in cavity wall skins'.[8]

M. HAMMETT

Unfortunately, in respect of the inner wall of a cavity wall skin on a small estate of semi-detached bungalows built *circa* 1957 in Bradwell, a village outside Great Yarmouth, Norfolk, cellular bricks and hollow clay blocks *were* used for the inner skin of the cavity walls as well as the partition walls between rooms and in part of the double skin party wall between the two dwellings (see below).

D.H. KENNETT

Two RAF housing schemes, known to me, built of hollow clay blocks were at RAF Coningsby, Lincolnshire (see below), and an estate built for RAF personnel in Stanmore, Middlesex. The latter was demolished about twenty years ago. These examples suggest that that the product could have had wide use in services housing.

M.S. OLIVER

Phorpes Hollow blocks were also advertised as suitable for Piggery floors as a way of keeping the stock warm and increasing their value. The advertisement reads:

> A warm, dry floor can make very many pounds difference to the value of your stock. Sows with litters, in particular, should be housed on floors which provide complete insulation from damp. In fact, all stock should have this extra care, which costs but a few pence more.
>
> 'Phorpres' Hollow Blocks are quickly laid and easily cleaned. Quotations may be obtained from your usual merchant or direct from the London Brick Company & Forders Ltd.
>
> M. CHAPMAN

REGULATIONS CONCERNING THE USE OF HOLLOW CLAY BLOCKS

Building Research Station Digest, **No.53,** April 1953, has two long paragraphs on 'Perforated Clay Bricks', which read:

> Although most architects and builders in Britain are familiar with hollow clay blocks, few have first-hand experience of perforated bricks, and there is often prejudice against them outside those areas in which they are well-known and traditionally used. On the other hand, a striking feature of building on the Continent is the widespread use of perforated clay bricks and hollow clay blocks for work that in Great Britain would be done with solid bricks. For example, the output of solid bricks in France is equivalent to that required for the construction of some 9,000 dwellings per month, as compared with the output of perforated bricks and hollow blocks sufficient for the construction of about 11,000 similar dwellings a month.

The trend towards perforated and hollow units that is apparent in France is also to be seen in other countries such as Germany, Switzerland, and the United States. On the other hand, in this country, the use of hollow blocks is limited mainly to partitions, while the use of perforated bricks is confined largely to the Bridgwater and Barton-on-Humber districts. Cavity bricks of various types are .....

> also made for use with the cavity downwards; it is not uncommon for these to be laid incorrectly with the cavity upwards. The proportion of perforations in the perforated bricks that are at present made in the districts mentioned is relatively small by the standards current abroad, and it does not usually exceed 15 percent of the volume of the brick. Bricks with such amounts of perforation are often considered solid bricks in other countries. Thus, according to the latest German standards, bricks that do not contain more than 15 percent of perforations are classified as solid, whilst in the U.S.A. the

> limit is 25 percent. The maximum proportion of perforations in the more advanced designs on the Continent frequently attains 50 percent of the total volume.[9]

This was followed up five years later in *Building Research Station Digest,* **No.114,** September 1958 'Questions and Answers with a section 'Hollow Clay Blocks' giving a question posed by a local authority which asked

> which properties of hollow clay blocks should be considered in assessing their suitability for use in external walling without a rendering. It was noted that B.S. 1190, 1951, relates to hollow blocks for internal use only. Advice on general suitability, absorption, and also tolerance was specifically requested.[10]

The reply given was:

> The general considerations set out in Digest No.53, 'Perforated Clay Bricks', apply equally to hollow clay blocks; the distinction is merely verbal and has no technical basis. Design details and laying technique may need adjustment according to the design and size of the block.
>
> On the specific issue, general suitability, absorption, and size tolerance, the following brief comments may be made. Assuming that the stresses allowed in B.S. Code of Practice C.P.111 are not exceeded, a hollow clay block is just as suitable for use externally without rendering as a standard brick made of the same clay and equally well fired. Water absorption is not a significant property and there is no more reason for specifying a maximum water absorption for hollow clay blocks than there is for a similar restriction for clay facing bricks. Size tolerances for blocks for internal use are given in the above British Standard; they could reasonably be applied to blocks to be used for facing work also.[11]
>
> M.S. OLIVER

DISADVANTAGES OF USING PHORPRES HOLLOW CLAY BLOCKS

It is worth repeating the last two sentences from the description in Mitchell's *Building Construction.* They read

> The disadvantage of hollow blocks compared with the solid type is that if a fixing is required the thin walls do not afford a very secure hold for wood plugs, and when plastered the joints cannot be discerned. They are also not so easy to 'chase' for electrical conduits.[12]

They were also difficult to cut and vulnerable to breakage by rough handling.

Also, in Mitchell's *Building Construction* it is specifically stated that the I.B.A. required the two skins of cavity walls to be solid and that cellular bricks should not be used in cavity walls.

M. HAMMETT

The great disadvantage of hollow clay blocks was that they were hollow. From personal experience, they were extremely lacking in thermal insulation characteristics. Semi-detached bungalows in Bradwell, a village south of Great Yarmouth, Norfolk, built *circa* 1957 had the inner skin of the cavity walls, the party wall between the two dwellings at least partly as a double skin of hollow clay blocks, and the partition walls within each bungalow constructed of hollow clay blocks. The bungalows had extremely poor insulation; even with gas-fired central heating and radiators, it was cold when the east wind blew! On such days, use of the gas fire was imperative.

The builders seem to have used hollow clay blocks at a return of one entry to the bungalow: some time after the writer moved in, mould began to appear on the north-west corner of the internal wall, partly due to this being only one brick this for approximately 20 inches (0.5 metres); tiles in the bathroom obviated any evidence of the same at the south-east corner of the entry.

Drilling holes to put up bookshelves resulted in the drill bit suddenly encountering space, which is how the use of hollow clay blocks in the double skin party wall was discovered: this room had no fireplace nor, until central heating was installed, any form of heating. The shelves stood for the twelve and a half years of the writer's residence. They were difficult to take down.

Apart from the London Brick Company's facing bricks on the external part of the cavity wall, the only other parts which were of solid bricks were the chimney breasts and walls adjacent to chimney breasts.

D.H. KENNETT

The RAF housing at Coningsby, Lincolnshire, produced a complaint about formaldehyde odour. Urea-formaldehyde foam cavity wall insulation had been installed in services housing built of hollow clay blocks. The foam has a free formaldehyde content: in conventional cavity walls with proper solid leaves it does not penetrate (much) into the dwelling, but it can penetrate from a hollow block, and causes odour, irritation, and distress.

M.S. OLIVER

ALTERNATIVES TO HOLLOW CLAY BLOCKS

The poor thermal insulation characteristics of hollow clay blocks put them at a great disadvantage when compared with the alternatives such as lightweight aggregate concrete blocks and autoclaved aerated concrete blocks (AAC blocks) that were introduced in the 1950s. Both the latter products were particularly promoted for their insulation benefit.

M. HAMMETT

NOTES AND REFERENCES

1. Information from Dr Gerard Lynch.
2. A. Cox, *A Survey of Bedfordshire Brickmaking: History and Gazetteer,* Bedford: Bedfordshire County Council, and London: Royal Commission on Historical Monuments, 1979, page 70, site 6.
3. F.H. Clews, *Heavy Clay Technology,* London: Academic Press, page 263.
4. *Hansard,* volume **432,** 3 February 1947; available online
5. *The Directory of British Clayworkers,* 1949 edition, page 124.
6. Information given to D.H. Kennett by the late Sir Herbert Janes, of the Luton building firm H.C. Janes Ltd.
7. G.A. Mitchell and A.M. Mitchell, ed. W. Hanneford-Smith, *Building Construction and Drawing: A Textbook on the Principles and Details of Modern Construction for the use of Students and Practical Men,* London: B.T. Batsford, 20th edition, 1950, Ch. X.
8. Mitchell *et al.,* 1950, pp.307-309
9. *Building Research Digest,* **No. 53,** April 1953.
10. *Building Research Digest,* **No.114,** September 1958.
11. *Building Research Digest,* **No.114,** September 1958.
12. Mitchell *et al.,* 1950, p.307.

BRICK AT RISK: THE BUILDINGS OF TIMBUKTU, MALI

A recent two-part television programme on BBC4 charted a journey from Fez, Morocco, to Timbuktu, Mali. Timbuktu is currently (2019) in a war zone, posing obvious dangers to its people and its buildings. But the greatest threat to the buildings is not from acts of deliberate sabotage and the destructive effects of armed conflict but from the natural environment. Timbuktu is on the edge of the southward advance of the Sahara Desert, which coupled with the ferocious winds of the area, is damaging the mud brick buildings. The wind whips up the sand which drives into the base of the mosques, the libraries, and the other buildings to such an extent that the damage is clearly visible and not easily repaired.

A future issue of *British Brick Society Information* will include an article on the dangerous work of collecting clay for the bricks from which the new buildings of Mali's capital city, Bamako, are constructed. The city is undergoing a building boom, unlike the ancient capital, 800 miles to the north.

D.H. KENNETT

Brick Query: Paving Bricks in the USA and Great Britain

from Sam Pervis,
responses from Michael Chapman, Martyn Fretwell, Michael Hammett,
and David H. Kennett

Fig.1 Paving bricks at Lovell's Wharf, Greenwich, London
Photograph: Courtesy Corinne Noble who took the photograph *circa* 2009.

INTRODUCTION

In September 2019, Mike Chapman, Chairman of the British Brick Society, who is also a member of the International Brick Collectors Association (IBCA), was contacted by Sam Pervis of Heritage Land Company LLC, a fellow member of the IBCA, concerning paving bricks from sidewalks (footpaths) in the states of Kansas and Oklahoma in the USA. Mr Pervis lives in Siloam Springs, Arkansas, but regularly travels to Coffeyville, Kansas: Siloam Springs is near the state border with Oklahoma and a two-hour drive from Coffeyville, a town which is near the Kansas-Oklahoma state border.

Mr Pervis was requesting information on the relationship across the pond between designs found in his area of the Mid West and Britain, particularly comparisons with the products of the makers of Staffordshire blue brick pavers. He supplied three photographs (figs.1-2), two of paving bricks, of which, on Mr Pervis' advice, only one is used herein (fig.1), a view of paving at Lovell's Wharf, Greenwich, London SE 16. The paving is not probably extant, the area on the west side of the Greenwich peninsula having been redeveloped

in the last twenty years. However, Lovell's Wharf has been commemorated in Lovell Place. The third photograph submitted shows the sale on eBay of a set of paving bricks using rows of a Maltese cross (fig.3).

Mr Pervis' query was shared with Martyn Fretwell, Michael Hammett, and David Kennett, as well as evoking responses from Michael Chapman. It is hoped that Martyn Fretwell's extensive replies and the photographs he sent to Mr Pervis will form a separate article on 'Some Manufacturers of Staffordshire Paving Bricks' in a future issue of *British Brick Society Information*. Considerations of the space available in this issue of *BBS Information* mean that only a summary of the information made available to Mr Pervis is given here.

Michael Hammett found a definition of paving bricks was given by Walter Jaggard in his 1929 book, *Brickwork and its Construction*:

> *Paving Bricks.* Any of the ordinary type of standard brick can be used for pavings, provided that they are hard and well vitrified, and do not become slippery under wear, a common fault with many blue bricks; but specially made bricks, called 'adamantine clinkers', are manufactured near Stamford; these are hard, dense, and good wearing paviors, reddish buff in colour, and in various forms with chamfered edges and groove, as shown in Detail No.3 [not reproduced herein], and are suitable for kerbs, public footpaths and stable floors and yards. The 'Dutch clinker' is somewhat similar, in sizes 6 in. by 3 in. by 1 in. or thicker, and burnt at a very high temperature; they are very hard and durable, but often warped and irregular in shape.[1]

'Dutch clinkers' may be observed in several seventeenth-century paintings, for example Pieter de Hooch (1629-1684), 'The Courtyard of a House in Delft' of 1658[2] or the same artist's 'A Woman and her Maid in a Courtyard' of *c.*1660.[3] In about 1658, Jan Vermeer (1632-1675) portrayed 'A Street in Delft', clearly with brick as the paving material of the road and tiles in a pattern outside the house. 'The Little Street', the painting's alternative title, has been identified: Vermeer's aunt lived at 42 Vlamingstraat and it is her house, with walls of red brick, which is shown in the painting.[4] Pavers are also depicted on a 1920s Unilever advertisement.[5]

THE QUERY

The original correspondence in September and October 2019 initially asked about the possibility of swopping paving bricks by mail but it became clear that Mr Pervis was more interested in seeking information about links and possible photographs of similar bricks in the United Kingdom. His second email read:

> I have been working on a project to document pattern pavers and hopefully identify where each was manufactured. Some collections I have viewed here in the US have the Staffordshire diamond pavers. A very similar pattern was manufactured not far from me in Coffeyville, Kansas, and I believe similar patterns were produced in other US states as well. The clay, of course, is very different and is helpful in identifying where the bricks were made. I would like photographs and any information you may have on pattern pavers from the UK. I am sending you a few photographs of pavers I would like better photographs of. Can you confirm if the double X brick in the first photograph was made in the UK? The same pattern is also made in multiple states in the US. You never know when one may turn up in a collection here and it would be nice to know if it was documented the pattern was also made in the UK. The documents I am working on will be shared with other collectors free of charge. If you find any unique pavers, I may be willing to pay shipping.

Subsequently, Mr Pervis sent David Kennett two further informative emails with attachments containing photographs of brick pavers. One group of attachments comprised four photographs. The first is a page from an issue of *The International Brick Collections Journal* showing both American and imported patterned sidewalk pavers. The second is an exhibit in the museum at Coffeyville, Kansas, which includes the same patterns as are found in the photograph of paving bricks at Lovell's Wharf, Greenwich, but manufactured by the Coffeyville Vitrified Brick & Tile Company in Kansas. The two other photographs are of paving bricks manufactured in states of Kansas and Illinois which have similar patterns to those used at Lovell's Wharf. It is hoped to have a short article on this in a future issue of *BBS Information*.

Fig. 2 Map showing the extent of Etruria Marl, the most common clay used for making paving bricks. *Source:* Google Maps, *https://www.google.co.uk/maps/place/Staffordshire/@52.8234142.-2.58856.9z/data=!3m114b114m513m4!1s0x487080d43225d7fd:0x4b1093584f57a5ce!4d-2.0571868?hl=en*

The other set of material was a set of photographs of a meeting of the International Brick Collectors Association at Coffeyville, Kansas, showing what was on offer for exchange and how a wish to acquire an individual might acquire a particular brick or other ceramic building product. This set of six photographs may form the basis of a contribution to a future issue of *British Brick Society Information.*

GENERAL RESPONSE

It was agreed between the respondents that Mr Pervis has set himself a very difficult, almost impossible task, certainly to find manufacturers for every type of paving brick, particularly ones with the 'Staffordshire diamond' pattern. It was also agreed that shipping of actual bricks was probably not feasible, given the postage costs, even by overseas economy post.

Martyn Fretwell comments that the clay to make Staffordshire blue bricks and pavers is Etruria Marl;[6] it is mostly found in the West Midlands in an area from north of Stoke-on-Trent to Bromsgrove, but with its southern boundary bypassing north of both Redditch and Coventry but including Nuneaton. The eastern boundary runs in a north-westerly direction from north of Nuneaton but is west of Burton-on-Trent, Uttoxeter, and Cheadle. The western boundary of Etruria Marl runs more or less south from north of Stoke-c between Bromsgrove and Kidderminster (fig.2).[7]

Pavers were also made of a red clay; they were advertised by the Brick & Terra Cotta Works of B. Holmes & Sons of East Kirkby, Nottinghamshire, with the diamond pattern of which examples exist.[8]

Fig.3 Record of the sale of 35 paving bricks from Retford, Nottinghamshire, on eBay for $71.64 in 2013.

INDIVIDUAL PATTERNS ON PAVING BRICKS

Mr Pervis' photographs included three individual patterns: a diamond cross pattern, a pattern of two squares with each square divided by diagonals, and a Maltese cross pattern, the last-named in the eBay sale and on the photograph not used herein. The comments where not attributed are by Martyn Fretwell.

Pavers with the Diamond Cross pattern. Martyn Fretwell writes that in Staffordshire this blue brick paver was certainly made by Cakemore Blue Brick Company, of Rowley Regis, near Dudley. These have a dumbbell-shaped frog with CAKEMORE between the two sets of the logo TRADE / CBBC / MARK. The first B is reversed. An alternative stamp within the dumbbell-shaped frog is CBBC with the first B reversed.[9]

Martyn Fretwell has also noted that pavers made with a red clay with a diamond pattern were made by at East Kirkby, Notts., at the Brick & Terra Cotta Works of B. Holmes & Sons, who advertised them in their catalogue.[10]

David Kennett reports that these are prominent in the north Oxfordshire town of Chipping Norton, where the buildings are predominantly constructed of stone. They occur in both an end of the twentieth-century context and a nineteenth-century one. The more recent is the slope from the shops on the south side of High Street to the light-controlled pedestrian crossing; the older is outside Jaffé & Neale's bookshop-cum-café, a three-storey building of Cotswold stone, probably originally constructed in the late eighteenth century. This form of paver is also used as the treads of the steps from High Street to the much lower Middle Row in Chipping Norton; the risers are plain blue bricks.

This type of paver was observed by David Kennett in academic year 1990-91 and again in 1993 when living in Bristol where the most frequent use in the Ashley Down area of the city was for the path from the front garden gate to the principal entrance. David Kennett came across this pattern on pavers in the rear access road to the Ann Halstead Flats, 1826-1834 Lincoln Park West, Chicago (1885: Adler & Sullivan).

The pattern of Two Squares each with Incised Diagonals. Despite being in the pavement from Lovell's Wharf, Greenwich, none of Michael Chapman, Martyn Fretwell, Michael Hammett, or David Kennett is aware of these being manufactured in Great Britain. This pattern is presumed to be an American design.

The Maltese Cross pattern. The collection being sold (fig.3) originated in Retford, Nottinghamshire, which may give some clue as to where the paving bricks were made. The illustrated brick appears to be in a red clay, but there is no indication of the manufacturer who remains unknown. A photograph of several pavers supplied

by Mr Pervis, but on his suggestion not used here, shows the Maltese cross set 3 × 6 full images on each paver, unlike that illustrated in figure 3 where all four edges are half a Maltese cross, presumably to make joins easier. These were in Staffordshire blue clay.

NOTES AND REFERENCES

1. See also W. Jaggard, *Brickwork and its Construction,* Oxford: Oxford University Press, 1929, p.274.
2. London: National Gallery, acc.no.835. C. Brown, *The National Gallery Schools of Painting: Dutch Paintings,* London: National Gallery, 1983, pp.52-53; M.E. Wiseman, introduction, *Dutch Painting,* London: National Gallery, 2014, pp.46-48.
3. London: National Gallery, acc.no.794. Brown, 1983, pp.54-55. Not illustrated in Wiseman, 2014.
4. Amsterdam, Rijksmuseum. Reproduced N. Schneider, *Vermeer 1632-1675 Veiled Emotions,* Köln, London: Taschen, 2007, p.17. Identification of the painting with the house was reported *The Guardian,* 27 November 2015.
5. Noted but not illustrated, D.H. Kennett, 'Finding the Yellow Brick Road', *BBS Information,* **129.** February 2015, p.16. See R. Cox, 'Dishing the Dirt' in R. Cox *et al., The Filthy Reality of Everyday Life,* London: Profile Books, for the Wellcome Collection, 2011, illustration on p.45.
6. See Martyn Fretwell, *https://eastmidlandsnamedbricks.blogspot.com* and *https://uknamedbricks.blogspot.com*
7. Martyn Fretwell also sent photographs, top, base, and side views, of a wide range of patterns on pavers and their manufacturers to Sam Pervis.
8. B. Holmes & Sons, *Catalogue,* East Kirkby: B. Holmes & Sons, Brick and Terra Cotta Works, n.d., pl.5 top left.
9. Photographs sent by M. Fretwell to S. Pervis and shared with the other authors. Further details in Martyn Fretwell's two blogs, see n.6 *supra.*
10. See n.7 *supra.*

BRICK IN PRINT

Between July 2019 and January 2020, the Editor of the British Brick Society has received notice of a number of publications on brick and its uses. 'Brick in Print' has become a regular feature of *BBS Information*, with surveys usually two or three times a year. Members who are involved in publication or who come across books and articles of interest are invited to submit notice of them to the editor of *BBS Information*. Websites and television programmes may also be included. Unsigned contributions in this section are by the editor.

D.H. KENNETT

David Clark and John Steane, 'Chapel of the Blessed Trinity, Stonor',
Oxoniensia, **84,** 2019, pages 1-37.

Recent renovation work provided the opportunity to carry out in-depth building recording at the stone-built Chapel of the Blessed Trinity at Stonor in the south Oxfordshire Chilterns. A new tree-ring date confirms the building's fourteenth-century origins as a family chapel of the prominent Stonor family, who, as recusants, continued to worship there, rebuilding the chapel roof at the end of the sixteenth century and in the 1790s reconstructing the roof again.

The first addition to the chapel was a brick-built tower, begun in the early fifteenth century, probably for the family's six chaplains (see pages 24-29 and 31-33). Each face is described in detail and photographs are provided of the east, north and west elevations.

John Goodall, 'An Architectural Self-Portrait: Pitzhanger Manor, Ealing [London W5]',
Country Life, 20 November 2019, pages 58-63.

Sir John Soane bought Pitzhanger Manor and the surrounding land in July 1800; by December, he had drawn up plans for the replacement of the central block but keeping one wing designed by his teacher, the younger George Dance. The renovated house was ready for occupation on 29 April 1807 but the family's residence was short-lived, August 1804 to 1810. It was on the market in 1832 and was repurchased by Soane with the idea

of being his institutional legacy. Ealing Council bought the property and the park in 1901 and made the house into a public library which closed in 1984.

The building has now been restored as far as possible to its 1810 condition. Soane's interiors have been recreated and the great triumphal arch of yellow brick with stone columns in the centre of the main front given due prominence. Soane called it his self-portrait in architecture.

Malcolm Graham, 'The Struggle to Save Oxford's Old Houses: Bunney and Pearce's Forgotten 1930s Survey',
Oxoniensia, **84,** 2019, pages 85-106.

Between 1919 and 1939, the already much-depleted stock of old houses in the city centre of Oxford was further eroded by university and commercial development. Various architectural societies were concerned to limit the destruction. Then an Oxford undergraduate, Michael Bunney (1909-1997), made a photographic and written survey of buildings being destroyed and in danger of being destroyed between 1928 and 1935, working in collaboration with the secretary of the Society for the Preservation of Ancient Buildings, Anthony Powys, for which two artists, Maresco Pearce and Hanslip Fletcher, produced drawings.

The article examines the origins, conflicts within the work, and the importance of the survey: of its 523 houses and groups of houses, extant in the early 1930s, some 200 (38.2 percent) have been pulled down. Also, unlike the Royal Commission on Historical Monuments volume on Oxford (London: HMSO, 1939) it dealt with buildings erected in the eighteenth and nineteenth centuries, over three hundred of them.

Michael Bunney's survey is unpublished but copies are deposited in the Oxford History Centre, Cowley Road, Oxford, and at the National Buildings Record (now Historic England Archive), Swindon. Maresco Pearce's drawings have been deposited in the Bodleian Library, Oxford, and other drawings are in the offices of the Society for the Protection of Ancient Buildings, London. Malcolm Graham uses Bunney's photographs in his article on St Aldgates.

Three details of buildings in the article stand out. Page 94 has Maresco Pearce's drawing of 30-28 George Street, timber-framed buildings demolished in 1935 for the construction of the brick Threeways House. On page 96 there is a photograph of the brick-fronted 69-70 High Street which was given rendering and new windows inserted in 1932. While on page 102 is a drawing the still surviving houses on Ship Street saved from demolition in 1939 by the outbreak of the Second World War: a friend of mine from school when an Oxford postgraduate lived in one of them.

AUTHOR (adapted)

Malcolm Graham, 'St Aldgate's Widened and 'Improved': The Making of a Modern Oxford Street',
Oxoniensia, **84,** 2019, pages 107-132.

Even with traffic restrictions, St Aldgate's, the southern approach to Oxford, with the Town Hall and Christ Church on the east side, and the former Morris Garages (now the Crown Court) to the west, remains crowded with buses and taxis, not to say pedestrians and those waiting for a bus. The road which rises up a fairly steep hill was in existence before 900 and built up by 1279: as one of Alfred's burhs, Oxford was established around at the end of the ninth century, and the Hundred Rolls were taken in 1279. The causeway which became Folly Bridge is also of an early origin. The article examines proposals, both carried out and still-born for its widening and 'improvement'. These were designed to cope with increased traffic levels; give better views of some buildings; were the result of public health concerns and slum clearance. Old houses were deemed 'quaint' or 'picturesque' and not worth saving.

The concept of 'improvement' was incoherent and uncertain. Some schemes were more devastating than ones led by the idea of cars being allowed into historic town centres. Others, unrealised, would have kept people living on the street: a 1919 scheme for cottage housing backing on to the Trill Mill Stream was the result of an architectural competition was abandoned in June 1923.

AUTHOR (adapted)

Brick and Wall Query, Settle North Yorkshire

Fig.1 The brick wall at the entrance to the Greenfoot public car park in Settle, North Yorkshire.

On a recent to visit to the town of Settle, Yorkshire Dales I came across something of an anomaly. In a town which is predominantly built from locally-sourced limestone and sandstone, a brick wall, located at the side of the entrance road into the town's Greenfoot Public car park, built in a continuous brick on edge bond, and with two different brick marks being clearly visible.

Fig.2 Bricks from the wall alongside the entrance road to the Greenfoot public car park, Settle, North Yorkshire, with the marks WW and WDB.

It would be very interesting to be able to both identify the brick manufactures and something of the history of the wall itself.

Replies to

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Book Review: Making a Mark

Patrick Fry, editor, *Brick Index,*
[London:] CentreCentre, 2019
178 unnumbered pages, counting title page as 1; 7 black-and-white illustrations,
155 colour plates
ISBN 978-1-9164121-1-8, price, £20-00 softback.

The principal feature of this book is the series of 155 colour plates of bricks showing manufacturers' marks, all but one shown full size, the exception (no.137) being at 90 percent linear. There are also seven black-and-white archive photographs depicting aspects of brickyards at Bursledon, Hampshire, and Potts Brothers Brickworks, Cheshire, all taken *circa* 1900.

The book has an Introduction by David Kitching, who has himself produced a collection of brick mark photographs in colour.[1] The Introduction begins with some dubious amateur etymology, to be treated with caution. It is true that the frog in many nineteenth-century and later bricks is formed by a negative called a 'kick', but the latter term almost certainly derives from the similar raised feature in many wine bottles. That the Dutch for 'frog' (the amphibian) is *kikker* must be no more than coincidence; Dutch bricks, after all, which are thinner than their British counterparts, do not normally, if ever, have frogs. That 'this structure [the kick] "kicked" the clay towards the corners when it was thrown in to the mould' is true in so far as it did help force the clay into the corners, but any connexion of this with the idea of *kicking* is, surely, fanciful. The term 'frog' itself probably comes from the same term used for a somewhat similar indentation in a horse's hoof. The word was first used in connexion with bricks in the nineteenth century, when those working at brickyards would have been familiar with horses, much used there for various tasks.[2]

The rest of the Introduction is more satisfactory, providing a useful prelude to the series of brick mark photographs. Like the essay which follows, it notices that in cutting the negative dies for the brick marks the asymmetrical letters (fifteen using block fonts) needed to be reversed (as too with any asymmetrical numerals used) and that 'N' and 'S; seem to have caused the most trouble: they are the most likely to appear back-to-front in the bricks.

The Introduction continues with a consideration of some of the principal raw materials of brickmaking and also notes that refractory firebricks did not have frogs and that when brick marks are present they occur in a flat face. It is also correctly noted that British firebricks often travelled well beyond Britain, for example to Australia; they occur, one may add, in North and South America. One may further add that the brick marks were normally, perhaps always, made with a separate stamp after demoulding, not formed, as with the other marks, by dies integral with the moulds.[3] The latter include those in frogged bricks made from fireclay but which are not firebricks proper, a number shown in the book. They were used, sometimes as shaped specials in general building.[4]

The Introduction is followed by a three-page essay 'Brick Haikus' by Rick Poynor. The end of the essay explains that the brief brick marks may be thought of as the equivalent of Japanese haikus or even as 'accidental sculpture'. 'For determined realists', the author adds, 'I readily concede, such fanciful interpretations might be a step too far'. I am one of those tedious old realists! A real haiku is a verse form of three lines comprising five, seven, five syllables respectively and without rhyme or regular metre, as in this poor, but relevant offering:

You see a brick mark
And say that it's a haiku:
You have dropped a brick!

The term *haiku* is best left where it belongs: in the world of versifying.

The essay begins with some citations, including the lyric 'All in all you're just another brick in the wall' by Roger Waters of the rock group Pink Floyd as 'an image of abject conformity'.[5] There is also mention of an eight-line poem by Philip Larkin which 'is more ambivlant' in its treatment of bricks.[6] There follows mention of some common sayings: 'thick as a brick', meaning to be very stupid, apparently employed in a 1970s album by anther rock group Jethro Tull; 'drop a brick', meaning to say something tactless or erroneous, as in my haiku; and a mild vulgarity meaning to be badly scared. Then comes reference to 'a cautionary urban legend, "The Barrel of Bricks", which has been doing the rounds for a hundred years'. It may be so, but I know this entertaining story from its telling by the humourist and cartoonist Gerard Hoffnung (1925-1959), and on my vinyl EP recording the story is credited to Hoffnung himself.[7] This part of the essay ends with mention of Carl Andre's *Equivalent VIII,* a 1966 'sculpture' comprising a rectangle of 120 firebricks, now in Tate Modern. The furore resulting from its purchase in 1976 by what was then simply the Tate Gallery is seen by Poynor as 'the very emblem of supposed dim-wittedness — both the artist's and the gallery's — and the "pile of bricks" controversy is remembered to this day'.[8]

These matters are introduced to establish a supposed common negative view of bricks in order to make a contrast with the author's more positive appreciation based on the interest of brick marks. But the aim is achieved only by a species of special pleading, ignoring another, and once very familiar if now somewhat passé, expression. If one can be as 'thick as a brick' one can also be as *solid* or *reliable* as a brick, as when someone is (or was) called a 'real brick' or a 'regular brick': as George Eliot wrote, 'A fellow like nobody else, and in fine, a brick'.[9]

These cultural (or quasi-cultural) issues being done with — at least until the brief reprise as a coda — the essay continues with a useful introduction to the topic of brick marks, although one has to take issue with the assertion that 'every brick-maker has without fail placed its [that is, the brick's] identifying mark'. Anyone who has worked on recording individual bricks will know that this is simply untrue.: there are bricks aplenty with no such marks, even after their introduction around the middle of the nineteenth century.

The real pleasure of the book is what follows: the series of colour photographs of individual bricks with their brick marks. The latter range from the decidedly laconic — a short single word such as RYE (no.45) doing duty for the George Russell, Cadborough Brick & Tile Works at Rye, East Sussex or the uninformative MH1 (no.99), for the Milton Hall (Southend) Brick Co., Star Lane Brickworks in Essex — to what Rick Poynor calls 'the positively loquacious': INDUSTRIAL BRITANNICA / ADAMANTINE / CHARLES DAVISON & C^{O} L^{TD} / BUCKLEY CHESTER / MADE IN ENGLAND in block letters of different sizes (no.69). The shortest forms, one may note, call into question the seemingly obvious view that 'the marks were a form of promotion for the brickworks that made them' — or at least that they were *always* so. Just was sort of advertisement does the gnomic MH1 provide? And the book itself notes that the maker of the brick stamped LB / 01 / LB (no.43) is 'Unknown': so the mark scarcely provides effective publicity!

At the end of the book is a table listing each stamp together with the size of the brick in millimetres, the area where it was made, the manufacturer, the raw material, and an approximate date. As David Kitching notes, the book 'showcases just a tiny selection of the lettered bricks to be found across Britain'. This selection, small as it necessarily is, will nevertheless be useful for those wishing to identify particular bricks — if that is, their marks are included amongst the 155 included. In this respect one grouse is that the list would be even more useful — or more convenient to use — if arranged in alphabetic order. That is, after all, what one expects of an *index* which is what the book is called. With a computer database this could have been done in seconds, and the photographs then arranged in the same order.

But the book is a delight just to look through, some of the names being intriguing, most especially perhaps HILL OF BEATH (no.131, Beath being a location in Fife, Scotland), in which the 'B' is indistinct, so that at first glance it seems to read HILL OF DEATH!

TERENCE PAUL SMITH

NOTES AND REFERENCES

1. D. Kitching, *British Bricks,* Stroud: Amberley Publishing, 2016; the 168 photographs therein are shown at approximately 60 per cent linear. Amongst other useful photographs of brickmarks one may mention those in that most

excellent of local brickmaking studies, A. Connolly, *Life in the Victorian Brickyards of Flintshire and Denbighshire.* Llanrwst, Conwy: Gwasg Carrag Cwalch, 2008, pp.97. 99-101. 104, 113, 141, 157, 181, 197, 209, 245, 264.

2. T.P. Smith, 'Editorial: Brickyard Horses', *BBS Information,* **63,** October 1994, pp.2-3.

3. T.P. Smith, 'Some Sources of Firebricks Used in London', *BBS Information,* **106,** February 2008, p.34. An example therein also illustrates (fig.1) the reversal of the latter 'N', although another in the same brick is correct.

4. See the photographs in J. Cooksey, *Brickyards of the Black Country: A Forgotten Industry,* Cradley, Dudley: privately published, 2003, pp.60-62.

5. The 1979 song, with its deliberately illiterate refrain intoned by a group of children — 'We don't need no education, we don't need no thought control' — was regarded in some quarters as having some sort of sociological profundity: I even know a schoolteacher who rated it highly!

6. No reference is given and I cannot help: although I came across half a dozen mentions of bricks and brickwork, I found neither the eight-line poem nor the quoted words in P. Larkin, *Collected Poems,* ed. A. Thwaite, London: Faber and Faber, 2003.

7. 'The Bricklayer', *Hoffnung at the Oxford Union* (recorded 4 December 1958), Decca, DFE 8682, 1968, side 1.

8. On this issue see my 'Editorial: *Equivalent VIII* Revisited', *BBS Information,* **90,** February 2003, pp.2-4.

9. G. Eliot, *Daniel Deronda* (1876) Book II, chapter xvi. *Cf.* my guest editorial, 'On Being a Brick', *BBS Information,* **105,** October 2007, pp.2-3, which mentions, *inter alia,* Mary Cadogan and Patricia Craig's study of schoolgirl fiction between 1839 and 1875: *You're a Brick, Angela!,* London: Victor Gollancz, 1976. Of course, BBS members scarcely need convincing that bricks have a positive side.

Postscript to Book Review

P. Fry, ed., *Brick Index* has sold out! The undersigned attempted to purchase a copy via his local bookshop, Jaffé and Neale of Chipping Norton, but in January 2020 they were unable to source a copy, although they did precure a copy of C. Havnes, *Brick: A Social History,* very early on the next working day (see below).

Patrick Fry tells me that he expects to have further copies of *Brick Index* available at the end of March 2020. It is suggested that members wishing to purchase a copy order one in advance so as to be sure of securing one. Also, it would be a good idea to email CentreCentre at *hello@centrecentre.co.uk* to show one's interest. It would give them an idea of the level of demand for a reprint.

D.H. KENNETT

Received for Review

Carolyne Haynes, *Brick: A Social History,*
Cheltenham: The History Press, 2019,
288 pp., 66 black-and-white illustrations, 8 pages of colour plates.
ISBN 978-0-75099-193-3, price, softback with flaps, £18-99.

A review of this important book will appear in an issue of *British Brick Society Information* later in 2020. There could be more than one member's reaction to the book.

BRITISH BRICK SOCIETY
MEETINGS in 2020

Saturday 16 May 2020
Annual General Meeting
Bridport, Dorset
Meeting in the Committee Room, Bridport Town Hall, Bucky-Doo Square, Bridport
Town Hall; rope factory; seaside buildings at West Bay
Contact Mick Oliver, *micksheila67@hotmail.com*

Thursday 4 June 2020
Brickworks Visit
Cradley Special Brick
Brickworks making many types of non-standard brick on Congreave Trading Estate, Cradley Heath
Contact Mike Chapman, *pinfold@freenetname.co.uk*

Thursday 6 August 2020
Summer Meeting
Slough with Langley Marish
Seventeenth-century brick additions to Langley Marish church; 1930s town hall; the Horlicks building; railway station.
Contact David Kennett, *kennett1945@gmail.com*

Planning for further visits in 2020 is in progress and dates will be announced in a future mailing: it is hoped to arrange a visit to at least one of Alcester, Warwickshire; Banbury, Oxfordshire; or Cardiff Bay and to include a visit to another brickworks in the 2020 programme. Visits to Tewkesbury and the industrial area of Worcester are being planned for future years.

At the 2019 Annual General Meeting in Ripon it was agreed to hold the 2021 Annual General Meeting in Lincoln, on a Saturday in May 2021.

All meetings are subject to attendance at the participant's own risk. Whilst every effort is made to hold announced meetings, the British Brick Society is not responsible for unavoidable cancellation or change.

Full details of future meetings will be in the subsequent BBS Mailings

The British Brick Society is always looking for new ideas for future meetings.
Suggestions of brickworks to visit are particularly welcome.
Offers to organize a meeting are equally welcome.
Suggestions please to Michael Chapman, Michael Oliver or David Kennett.

Changes of Address

If you move house, please inform the society through its Membership Secretary, Dr Anthony A. Preston at 11 Harcourt Way, Selsey, West Sussex PO20 0PF.

The society has recently been embarrassed by material being returned to various officers from the house of someone who has moved but not told the society of his/her new address.