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BRITISH BRICK SOCIETY

INFORMATION 146

OCTOBER 2020

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* *The annual subscription to the British Brick Society is £12-00 per annum.*
Telephone numbers and e-mail addresses of members would be helpful for contact purposes, but these will **not** *be included in the Membership List.*

British Brick Society web site:

http://britishbricksoc.co.uk

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Cover Illustration:

The Great Dust Heap at King's Cross, 1837
See 'Dustbin Rubbish and the London Stock Brick', pages25-37.

Worshipful Company of
Tylers and
Bricklayers

This certificate confirms that the Company has recognised

Dr Gerard Lynch

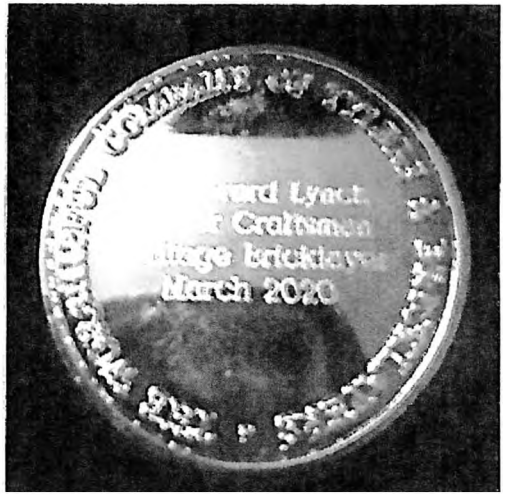
as a

Master Craftsman Heritage Bricklayer

Given under the Common Seal of the Company, and presented by,
Lt Col Mark Stephenson MC and The Master
on Thursday 5 March 2020 at Carpenters' Hall

Master

Clerk



Editorial:
Update from the Chairman

Whilst the onslaught of Coronavirus/Covid 19 on the United Kingdom has had a huge and continuing effect on us all, the British Brick Society's membership will be well aware of the very negative impact that it has had on our expected programme for 2020, and of course the overall wellbeing of the society.

In *British Brick Society Information*, **145**, May 2020, notification was given of the postponement of the Annual General Meeting and of the planned visits and events, albeit then with the hope that some of this could be retrieved later in the year. Of immediate concern was the AGM, with the only practical way forward of asking the membership to approve the postponement and associated motions via a postal ballot on the committee's decisions in dealing with the accounts for 2019, and the nomination of officers.

I would like to thank both the membership and fellow officers for unanimously supporting this ballot and for everyone's determination, hard work, and commitment to ensuring that the Society and *British Brick Society Information* continues to thrive.

With the effects of the virus still causing great uncertainty, and now with the spectre of local lockdowns, it is clear that any hope of trying to go ahead with the remainder of the programme is not possible, and that the Society should now plan to implement the 2020 programme in 2021.

On a wider note, the nationwide lockdown and its continuing aftershocks, have had a severe effect on the United Kingdom's housebuilding industry, with the inevitable impact on the Brick Industry, with the majority of factories closing, and sadly, several for good, including Ibstock's factories at West Hoathly, West Sussex, and Nostell, South Yorkshire, which the Society has previously visited. Whilst factories are now re-opening, many are not yet on full output and certainly unable to host visits.

It is hoped to be able to re-arrange the planned visit to Forterra Cradley Brick, or alternatives for next year.

On a more positive note, it has been interesting to see recent press reports into work on the development of standard clay bricks into energy storage units that is being carried out at an American university, and closer to home, that several prospective new members are in the process of joining the Society.

So, in conclusion, whilst our year has been severely curtailed, our publication *British Brick Society Information*, continues to flourish and provides a 'lifeline' to our membership and we can hopefully look forward to 'normal service' being resumed in 2021.

I would like to take this opportunity to thank you all for your understanding and valued support in these exceedingly difficult times, and wish you all a healthy and safe remainder of this year.

Best Wishes
MIKE CHAPMAN
British Brick Society Chair

Award from the Worshipful Company of Tylers and Bricklayers to Dr Gerard C.J. Lynch

The British Brick Society congratulates its long-standing member, Dr Gerard C.J. Lynch on the Master Crafts Heritage Bricklayer Award he received on 5 March 2020 from the Worshipful Company of Tylers and Bricklayers which has been granted under the company's charter, first given by Queen Elizabeth I in 1568.

Photographs of Dr Lynch receiving the award, of the certificate of the award and the accompanying medal, both obverse and reverse, are shown on the page opposite.

DHK

A Note from the Editor, *British Brick Society Information*

A substantial part of this issue of *British Brick Society Information* has been devoted to reviews of Carolyne Haynes, *Brick: A Social History*, Cheltenham: The History Press, 2019. On page 56 of *BBS Information*, **144**, January 2020, the editor sought reviews of the book from members, so as to present as wide a range of opinions as possible. The editor is particularly grateful to Mike Chapman and Peter Hounsell for providing a review of the book from the standpoint of a brickmaker and of a someone looking for an introductory book about brick, respectively. These neatly complement his own comments from the perspective of a building historian. One other British Brick Society member initially intended contributing a further review, but on reading the book and assessing its worth felt unable to offer more than a brief notice, before deciding, in view of the extensive reviews on pages 5-24 herein, that such a laconic response would be pointless.

Preparation of the final editorial work for *BBS Information*, **147**, February 2021, will begin on Tuesday 5 January 2021 with the idea of giving the master sheets to the printer towards the end of January 2021 or in early February 2021. It would be helpful for any items for inclusion therein were to be notified to the Editor, *British Brick Society Information*, preferably by Friday 20 November 2020, with texts and illustrations available to him before Friday 25 December 2020.

In July 1564, the parish priest wrote in the parish register of the church dedicated to the Holy Trinity at Stratford-upon-Avon three simple words, *Hic incipit pestis*. Future generations in Great Britain, as elsewhere in Europe, may write of 31 January 2020 the same terrifying three words: *Hic incipit pestis*. 'Here began the plague' for which in 2020 we may interpret as 'Here began Covid-19'.

The British Brick Society hopes that all its members have survived the disease, are healthy, and have stayed both safe and well. The Society very much regrets that circumstances have meant that no meetings have been possible in the summer of 2020.

DAVID H. KENNETT
Editor, *British Brick Society Information*,
1 October 2020

Brick Query:
Joseph Kennett, Brickmaker and Kiln Builder

Does any member of the British Brick Society know the location of a brickworks whose kiln and chimney stack were built by my grandfather Joseph Kennett (1878-1965)?

There was a photograph of the kiln and the stack on his desk but, unfortunately, since his death in 1965 the photograph has become lost.

The stack had 'J. Kennett' or 'J. Kennett & Son' prominently displayed down its length.

The date would be between 1920 and the 1950s, but is most likely to have been in the 1930s or 1940s.

The location could be in the Poole area of Dorset. In 1951, aged 72 Joseph Kennett was acting as the works manager for the Upton Brick Company at Lytchett Minster, near Poole. Alternative places where the kiln and the chimney were situated are the West Midlands or the Forest of Dean in Gloucestershire. Mr Kennett is also known to have built kilns for the Sussex Brick Company.

Any suggestions as to the location of the structure or where I might search for information would be most welcome.

MARGARET SUMMERWILL
Email: *margaret@summerwill.co.uk*

Book Review:
An Introduction to the Study of Brick

Carolyne Haynes. *Brick: a social history.*
Cheltenham: The History Press, 2019.
288 pages, 8 pages of colour illustrations, black and white illustrations throughout.
ISBN 978-0-7509-9193-3, Price paperback with flaps, £18-99.

There is almost certainly a gap in the market for an introduction to the history of bricks and brickmaking for the general reader, or for someone taking their first steps in a more serious interest in the subject. My own experience of starting to research the history of brickmaking occurred about thirty years ago. So around 1990, the books I read were John Woodforde, *Bricks to Build a House,* London: Routledge & Kegan Paul, 1976; Martin Hammond's Shire Album *Bricks and Brickmaking,* Princes Risborough: Shire Publications, 1981; and Ronald Brunskill and Alec Clifton-Taylor, *English Brickwork,* London: Ward Lock, 1977. The last-named now supplemented by the revised editions: R.W. Brunskill, *Brick Building in Britain,* London: Victor Gollancz in association with Peter Crawley, 1990, and R.W. Brunskill, *Brick and Clay Building in Britain,* New Haven and London: Yale University Press in association with Peter Crawley, 2009. Otherwise, as far as I am aware, there have been few, if any, introductory volumes for newcomers to the subject, despite the fact that there have been many important books and journal articles in the intervening period. I have on my bookshelves James Campbell, *Brick: a World History,* London: Thames & Hudson, 2003, which is an impressive volume, with stunning large colour plates by Will Pryce, but this is not a book, on account of its size and price, that will appeal to anyone wanting a dip their toes in the subject.

Carolyne Haynes's new book is therefore to be welcomed. It should be noted that, like Woodforde's book, this book is focused on bricks and their use in Britain. Carolyne is connected with Burseldon Brickworks Museum, Hampshire, which is a member of this Society, and her enthusiasm for the subject is ever present in the text. In her introduction she writes of her involvement with two heritage projects – the Buriton Chalk Pits and the Bursledon Brickworks in Hampshire – and she notes that feedback from visitors to the Brickworks Museum often involves comments such as 'who would have thought a brick could be so interesting' (page 8). This book therefore arises in large part from a desire to share the knowledge about bricks and brickmaking that she has acquired with a wider audience.

The first question to ask, then, is has she achieved that aim? I think that generally she has, but there are some caveats. At the outset, the title itself is slightly misleading. *Bricks and Mortar* might have been a better reflection of its content, because, as the author says in her introduction 'Bricks do not stand alone, they work best with a sticky material to bind them together. So, woven into this story of bricks is an exploration of the use of lime' (page 8). The story of lime, mortar, and, finally, cement is woven into the narrative throughout the book.

In terms of approachability, the book is a pleasant read, and the narrative flows easily enough not to dissuade a newcomer to the subject. There are no endnotes or footnotes, but direct quotations are credited in the text. The bibliography suggests a wide range of reading, including a number of articles that have appeared in this journal over the years.

The author tells us she is an architect by training and this comes through in the text. There are three narrative threads running through the book, and one of these is a history of changing architectural styles and building types. The second is a social history of England, and the third is about the manufacture of bricks and lime, and the changes that have occurred in these industries over time. There are parts of the book where the three strands come together well, but there are sections where that integration is thinner, and places where I found it difficult to see the relevance of a particular architectural style or a piece of social history to a book about bricks. For example, the passage about Georgian life in town and country, quoting from Jane Austen and Anthony Trollope does not seem to be germane to the story (page 153), despite the fact that Trollope does write interestingly about brickmakers in *The Last Chronicle of Barset.* The attempt to sketch in the historical and intellectual background with a light touch at times produces sentences like 'the Renaissance was creeping across Europe ever closer to this country and eventually arrived in England in the late sixteenth century' (page 127).

The book starts well with a chapter on the chemistry of brick clay and lime, which James Campbell praised in his review last December as being very helpful to the non-specialist.[1] This is followed by a series of

largely chronological chapters taking the reader through a history of the use of bricks from their introduction into Britain by the Romans to the present day. This treads familiar ground that will be well known to many British Brick Society readers: the reuse of Roman materials by the Anglo-Saxons, followed by the reintroduction of brickmaking into England from the near continent. The medieval brickyard in Hull is given extended treatment in chapter 6, brick building in East Anglia with buildings such as Tattershall Castle, Lincolnshire, in chapter 7. The following chapter focusses on the impetus given to the use of brick by the need to create buildings that were more fire resistant, and the effects of the Great Fire of 1666.

Chapter 9 is about the increase in demand for bricks in the eighteenth century and the brickmaking techniques that developed to meet that demand. This section draws on Houghton's *Collection for the Improvement of Husbandry and Trade*, published in 1728, from which she quotes at length, as did Woodforde and Nathaniel Lloyd before her. The quotations are not the same, but there is some overlap.[2]

What is confusing for the reader, then, is to return in the sixteenth and seventeenth centuries in Chapter 10. The following chapters contain a lot of architectural history, demonstrating changing styles of buildings with a series of examples. Much of this is interesting in its own way, but there are times when the social history of the buildings and the way the social life of the residents interacted with the buildings takes over, and the focus on brick is lost. Chapter 13 looks at the industrial revolution and the way the canals made it easier to transport goods around the country, and the following chapter carries this forward with the contribution that the railways made in increasing the demand for bricks when they were being built, for tunnels and viaducts, and in moving bricks long distances across the country.

Chapter 15 'The March of Bricks and Mortar' is where brickmaking itself comes fully back into focus with descriptions of the technological processes that transformed the industry in the nineteenth century: the developments of new types of kilns, like the Hoffmann, and new types of bricks, such as wire-cuts. Chapter 16 is largely about housing the poor and the focus is on London, with a description of the replacement of the Old Nichol slum by the LCC's Boundary Estate, and this includes references to Charles Booth's poverty maps of London. The chapter ends with a paragraph designed to bring the reader back to bricks and to provide a link into the next chapter. 'Without bricks it would be difficult to imagine how so many people could have been housed, even if that housing was often so poor' (page 219) which leads into a much more focused chapter on Working Life in the brickyards.

This chapter covers many of the characteristics of nineteenth century brick manufacture: the long hours of work experienced by the brickies, the drunkenness for which they were notorious, and the physical demands made upon women and children working in moulding teams. This chapter is effective, but draws on a narrow range of secondary sources, including Dickens' description of the brickmaker's home in *Bleak House*, and Mary Bayly's *Ragged Homes and How to Mend Them* of 1860. However, it is confusing to read evidence from a child taken by 'the commission' on page 226, and have to wait until the following page for the Children's Employment Commission to be described. The influential Fifth Report of the Commission, published in 1866, and the campaign by the reformer George Smith, author of *the Cry of the Children from the Brickyards of England*, are identified as the main influences that resulted in the changes in the law restricting the employment of children in brickfields. Elsewhere in the chapter, the abuses of the 'truck' system (payment in kind rather than money), is mentioned, although the term is not used. The author employs a sleight of hand in describing the drunkenness of the brickworkers: she quotes Henry Mayhew's *London Labour and the London Poor* to support a view that London labourers were more likely to be drunken than other members of the community, after having already told us that Mayhew doesn't discuss workers in brickworks, as his work focuses on the docks. The first half of the statement is correct, the second half is only partly so, as the section of Mayhew she quotes from is about the coal heavers.

The final chapter, 'Decline and Resurrection', covers the twentieth century. In it she discusses the reasons why brick went out of fashion with the rise of modernist architecture, and the availability of new building materials. There were also changes in the types of brickmaking with the dominance of machine made, particularly Fletton bricks, and the use of road transport creating a national market for bricks. Alongside this a small number of traditional yards have survived. The remainder of the chapter discusses the garden city movement and the type of architecture employed, and the main text ends with four twentieth century buildings where brick is confidently used: Battersea Power Station (1928-33: Halliday & Agate; 1933-35 and 1954-55: Sir Giles Gilbert Scott), Bankside Power Station (1954-60: Sir Giles Gilbert Scott), Guildford Cathedral (1932 and 1936-66: Sir Edward Maufe) and the Isle of Dogs Pumping station (James Outram 1986-88, now grade II* listed) with its use of multi-coloured brickwork within a decidedly most-modernist aesthetic.

There are two appendices, one on each of the two heritage projects with which the author has been involved, Buriton Chalk Pits and Bursledon Brickworks. These occupy 24 pages, but could have been longer as they capture the enthusiasm of those involved in the two projects, and draw on oral testimony of people who worked in the industry. The reader will feel encouraged to visit the Brickworks Museum.

As a physical object, this is a nicely produced book with a striking and unusual cover photograph of the Finsbury Park Underground Reservoir built in the 1860s, and a decent index. The photographs in the book are mostly by the author, except for some historical ones. The colour images in an 8-page section are clear and complement the text very well. Some of the monochrome images however are on the murky side, and some like the interior of Dr Johnson's house (page 152) and the Booth poverty map (page 218) relating to the description of the Old Nichol, do not add anything to the general story. However, the pictures of machinery at the Brickworks Museum are very clear and helpful.

One statement that surprised me occurred in the description of a medieval brickyard. 'The brick moulder – in later years this role was often undertaken by a woman – would work at a bench'. (page 67). If there is substantial evidence for the widespread employment of women moulders, I confess my ignorance, as I have not encountered it in my extensive research into nineteenth century brickmaking in the London area.

Overall, this is an enjoyable book, but it leaves the reader wondering about the relevance of some sections to the manufacture and use of brick. I suspect that many members of the British Brick Society and readers of this journal will know the outline of the history of English bricks and brickwork told in this book, but they may well find the two appendices more interesting. However, I assume that we are not the intended audience, and for those coming new to the subject and wanting an introduction to the fascinating story of bricks and brickmaking in Britain, this may well be a useful starting point.

PETER HOUNSELL

NOTES

1. He suggested the opening chapters alone were worth the price of the book. *Current Archaeology* December 2019 [accessed online]

2. J. Woodforde, *Bricks to Build a House*, London: Routledge & Kegan Paul, 1976, pp. 58-60; Nathaniel Lloyd, *A History of English Brickwork*, London: H. Greville Montgomery, 1925, reprinted London: The Antique Collectors Club, 1983 and 2003.

RECEIVED FOR REVIEW

Alistair Douglas, Berni Sudds, Marit Gaimster, and Frank Maddens,
Elite Residence to Manufacturing Centre: Excavations on the site of the Archbishop of York's Palace and the Battersea Enamelling Works, of the former Price's Candle Factory, Regent and Grove Wharves and Bridges Wharf, Battersea,
London: Pre-Construct Archaeology, 2019,
175 pages, numerous illustrations,
ISBN 978-1-8199961553-6. Price, paperback, £20-00.

This book will be reviewed in the forthcoming 'Brick in London' issue of *British Brick Society Information* in October 2021.

Book Review:
Brick: A Social History - A Brickmaker's View

Carolyne Haynes, *Brick: A Social History*,
Stroud: The History Press, 2019,
288 pp., 66 black-and-white illustrations, 8 pages of colour plates.
ISBN 978-0-7509-9193-3, price £18.99.

The author is an architect by training, with a special interest in vernacular architecture. She was the project manager of the National Lottery Heritage Fund grants for Buriton Chalk Pits lime works and Bursledon Brickworks projects. Both projects have both conserved and brought to life important aspects of industrial heritage, being important for both Hampshire and the wider national interest. Carolyne is now the project manager at the Bursledon Brickworks museum and part time teacher in architecture at the University of Portsmouth. Carolyne's experiences with both projects, have given her a clear understanding the processes, products, and the human interaction essential for everything to work, and create the relationship between brick and its influence on the wider society.

This is a book for anyone wanting to explore, the history of brick, in both its use and importance in the built environment, the natural resources, methods and developments used in manufacture, with a unique insight into the lives of the people who were the brickmakers. The book chronicles the significant social, religious and industrial changes that have occurred at key moments and in the successive periods of history, and how each change promoted the use of brick and changes in manufacturing techniques to meet the ever-increasing demand.

The introductory chapters deal with the basic raw materials used in all brick and lime mortar manufacturing, giving geological classifications and the distribution of clays and calcium carbonates to be found throughout Britain. The fundamental relationship between brick and lime mortar, essential in creating good brickwork is explained and well documented.

The book then progresses on to a defining moment for brick: the Roman occupation of Britain, with the knowledge of brick and building techniques that were introduced. Here the book describes in some detail brick making methods and importantly the sizes of Roman brick.

Whilst the skills of the brickmaker were largely lost at the end of Roman occupation, the author explains the gradual re-introduction of the brickmaker's skill, particularly by monks representing various religious orders, giving rise to an early brickmaking industry in parts of Eastern England.

With the roots of modern brickmaking established in the medieval period, the book explains in very interesting detail the creation of the 'Medieval Brickyard' the operational practices used, the costs of both raw materials and the finished products and how this early brickmaking influenced the social structures of the period, all against a backdrop of the demand for brick gathering pace. To assist in understanding the significance of this period, in brickmaking terms, the author takes as an example Tattershall Castle in Lincolnshire, where intermittent, summary building accounts from between 1434 and 1446 survive, and being a very creditable piece of detective work into what would today be described as a "complete design and build "project with great emphasis on costs and the supply chain.

The book then moves into another significant age, and one which greatly helped brick, along with natural stone to become the construction materials of choice. The outbreaks of the plaque, a general fear of fire in the owners of large houses and halls, together with the Great Fire of London,1666, hastened social change and a desire for greater building safety and, for the first time, statutory regulations to determine the quality of bricks and defining their use.

These changes in the greater use of brick, brought with it a huge surge in demand and for the skills of the brickmaker to produce a quality product suitable for use. These demands were instrumental in the establishment of specific trade guilds, such as the Worshipful Company of Tylers and Bricklayers which received its charter in 1568 and established the specifications for consistency in colour, size, and shape, all now well-established components of any modern quality assurance scheme.

These sections also describe how brickmaking was being organised, the working life and generally hard conditions of the brickmaker and his family, and the changing methods employed to create the colours and quality that was demanded.

After looking at the changes and transitions in architectural styles and planning, the book moves into the Georgian and Victorian ages and the fundamental changes that were sweeping the country, all of which created a demand for building materials as never experienced before.

With brick and its accompanying lime mortar, brickmaking changed from essentially a cottage industry to one organised on industrial factory-based principles, with great attention being paid to the development of mechanisation and efficiencies in the use of labour and materials all pursued in the search for greater production and increased profit

During these periods, the brickmaking industry mirrored all the social ills of the other industrial sectors, such as the mills and coal mines, with child labour and poor pay and working conditions being found throughout the land. Whilst social reformers were successful in legislation to improve these conditions, the brickmaking sector was very resistant to these changes. with some very unacceptable practices (by modern standards) persisting into the early twentieth century and ultimately making recruitment that much harder. These sections also highlight the challenges of transporting dense materials such as building products, which in turn gave rise, where suitable clays were obtainable, to the establishment of large numbers of small brickyards supplying very local markets and styles of building.

This fundamentally changed with the canal and subsequent railway building ages, which facilitated the shipment of building materials to much wider markets at greatly reduced costs. Whilst initially advantageous, the massive changes in availability of colours and textures, had a detrimental effect on the local supply and would eventually contribute to a decline in the brick industry overall.

The book's final chapters deal extremely well with decline and with the ultimate resurrection of brick manufacturing into the highly mechanised and efficient industry that is now dealing with the challenges of the twenty-first century.

The author has completed the book with very worthwhile appendices, which give a unique snapshot into two aspects of Hampshire industrial heritage: the chalk pits and lime works at Buriton and Bursledon Brickworks. For the brickmaker, Bursledon, as the only dedicated brickworks museum in England, is very worthwhile visiting. Both enterprises again give a glimpse into a different aspect of social history in that Buriton was developed by B.J. Forder, who was one of the founders of the London Brick Company, now represented today by Forterra's Kings Dyke Works at Whittlesey, Cambridgeshire, and for Bursledon, the Ashby family, who established the works, and in particular H.F. Ashby, who, in the 1960s was Managing Director of Redland Bricks, with a number of their factories becoming part of the present day Ibstock Brick Ltd.

Whilst there are a small number of technical brickmaking inaccuracies, they do not detract from the overall reading experience.

The book has particularly good reference and bibliography sections, which give the opportunity for further reading, and in-depth study. Overall, it is a very commendable publication.

MIKE CHAPMAN

Review Article:
Brick and Social History

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.

WRITING SOCIAL HISTORY

Social history can be written from the top down or from the bottom up. G.M. Trevelyan, *English Social History*,[1] is the prime example of the former. However, it should be remembered that almost all who wrote about the past, both historians and archaeologists, whose school education was received before 1953, when student grants became mandatory, were almost exclusively drawn from the upper and upper middle classes; men from these classes, educated at fee-charging schools, often the nine with the greatest social prestige, as is instanced in the examples given in notes to this and a later paragraph, proceeded to the most prestigious colleges in the two ancient English universities. They would, naturally, have sympathised with their peers. It is only with a few scholars who had fought in the Second World War or did National Service in the late 1940s and 1950s that the idea of writing history from below becomes a viable working assumption, represented by E.P. Thompson, *The Making of the English Working Class*,[2] which by 'rejecting "the enormous condescension of posterity" often to be found in history written by the educated rich', as a recent obituary noted,[3] showed that a more complete history of the people of England (and for that matter Wales, Scotland, and Ireland) was possible; from a more recent generation, we may cite Emma Griffin, *Liberty's Dawn: A People's History of the Industrial Revolution*.[4]

In studies of the manufacture and uses of brick, as with buildings and building materials more generally, a top down approach would be from the standpoint of those whom the American sociologist, Charles Wright Mills, called 'the power elite',[5] the patrons, those who commissioned the buildings and paid for them; while from the bottom up, it is the brickmakers and bricklayers who provided the labour first to dig the clay and make the bricks and second to construct the buildings on whom one would concentrate. Part of the problem of the latter approach is that until about 1800 the documentary evidence strongly favours the patrons whilst from the early nineteenth century onwards, far more material about brickmakers and bricklayers becomes available. Thus, for the last two-and-a-quarter centuries, it is easier to write about brick and its manufacture and uses from the standpoint of the workers than it is from before the nineteenth century. From her text, one strongly suspects that Ms Haynes' sympathies lie with the workers rather than with the patrons of brick.

Unfortunately, however, Carolyne Haynes falls into the category of those who try to ride both horses without quite deciding on which saddle she is astride. It is a tendency found in many authors of social and industrial history whose tertiary education and formal qualifications are not in an historical field: Ms Haynes is an architect by training who became involved in conservation projects in Hampshire at Buriton Chalk Pits and Bursledon Brickworks, subjects on which she writes well and is informative. This is evident in the appendices on the conservation work at Buriton Chalk Pits (pp.250-259) and Bursledon Brickworks (pp.260-274) and the chapters on 'The March of Bricks and Mortar' (pages 186-207) and 'Working Life in the Brickyards' (pages 220-229). Her discussion on kilns and kiln types would have been enhanced by diagrams.

There is also the problem that while the book is called *Brick: A Social History*, it is unclear from the narrative whether the subject of the book is brick — its manufacture, the regulation of its manufacture and use, and the uses made of the material — or the somewhat different topic of the social history of brick as used in buildings and social change in the patronage of this building material. Most of the book is decidedly concerned with the former rather than the latter but the author has succumbed to the temptation to stray into the domain of the history of building, more as generalised description rather than specifically aligned to social history.

There is also another question which has perhaps never been asked but should be at the centre of any enquiry into the social history of brick and its uses: what are the limits of brick? It is clear from public buildings

of 1760 to 1840, that brick was the acceptable walling material for the prison, the lunatic asylum, the hospital, or the workhouse but not for the shire hall which housed the county's criminal and civil courts together with a room, the grand jury room, to serve as the meeting place of the county magistrates.[6] A shire hall needed to show a public face of stone: the building would be the symbol of county administration and only the highest quality, affordable materials would do. On the other hand, brick as the walling material for houses begins at the top of society and slowly creeps down the social scale (see below).

However, during the Victorian period, particularly after the Great Exhibition of the Arts and Manufactures of All the Nations in 1851, some architects regarded brick as suitable walling, albeit with stone dressings, for even the most prestigious of government buildings as is clear from the diploma submission by Sir George Gilbert Scott (1811-1878) to the Royal Academy when he was elected a Royal Academician on 28 November 1860. His watercolour is entitled 'Government Offices, Whitehall, as it should be'[7] and the red tones used make it plain that brick was intended to be the walling material. But Scott was overruled by the new prime minister, Henry Temple, third Viscount Palmerston (1784-1865), who entered office on 12 June 1859 and as a former foreign secretary took a keen personal interest in the building to house his former departmental responsibility. Palmerston was not a fan of the Gothic and insisted on a suitably sedate classical building for the Foreign Office. Brick, a deep red brick with much red terracotta, was certainly used for the Shire Hall, built to house the assize courts, overlooking the River Ouse in Bedford (1878-83: Alfred Waterhouse).[8]

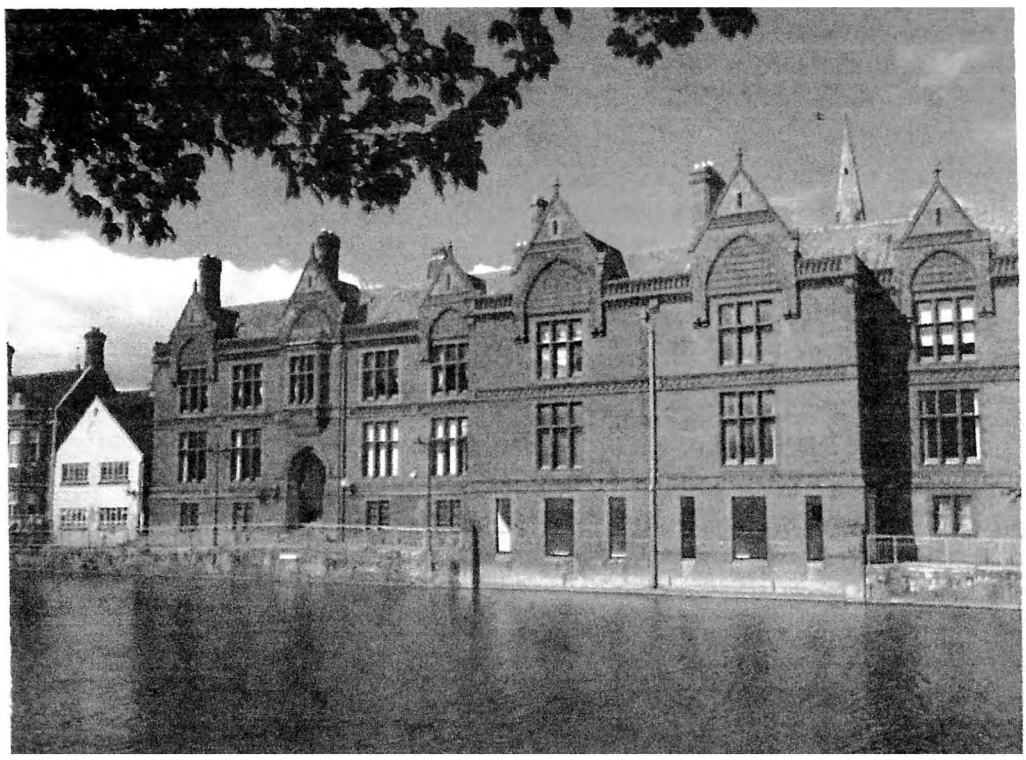


Fig.1 Shire Hall Bedford designed in 1878 by Alfred Waterhouse (1830-1905) in red brick and red terracotta. The first five bays on the right of the river front are the original build in 1879-81; the next two bays are an extension in 1882-83, also designed by Waterhouse, with the easternmost bay part of the 1910 extension designed by Charles Holden (1880-1960): an early use of brick for a major civic building.

Ms Haynes' book begins with two useful chapters on 'A Very Brief Chemistry Lesson' (pp.13-22) and 'Clay' (pp.23-29) and ends with appendices and a Bibliography (pp.275-281), recording books and articles consulted in the editions used. However, this contains older rather than more recent editions of documentary material, including chronicles and histories.[9] For example, the standard edition of *The Itinerary of John Leland*

in or about the years 1535-1543 is that edited by Lucy Toulmin Smith between 1907 and 1910 and republished in five volumes by Centuar Press in 1964,[10] rather than Thomas Hearne's edition of 1772 which Ms Haynes used via the internet. This is one of at least five cases where the internet has been used to access a volume for which a more recent print edition is available.[11] Ms Haynes has produced a passable index (pp.282-288).

In between the first two chapters and the appendices, we have sixteen chapters giving an account of brick and its uses in the British Isles from the Romans to the present day. The quality of the chapters falls into two halves. Post-1660, in chapters 8 to 18 (pages 90-249), the author is on relatively firm ground but when dealing with the period before 1500 in chapters 3 to 7 (pages 30-89) she is less sure in her approach (see below). But it is not clear from this book what use was made of brick between the generation before the Reformation in England and the Great Fire of London in 1666.

A CURIOUS HIATUS: THE SIXTEENTH CENTURY

The book has the curious hiatus in considering developments in the uses of brick between 1500 and for more than half a century after 1600.

Omitting detailed consideration of brick in the later sixteenth century is an approach which has its origins in *English Art 1558-1625,* the volume in the Oxford History of English Art series dealing with the reigns of Elizabeth I and James VI and I.[12] In his book, Eric Mercer suggested that there was only a limited amount of brick building in England in the first four-and-a-half decades with which he was concerned yet there is much use of the materials in his final quarter century.[13] The question may be asked: whence came the building craftsmen and particularly the bricklayers to build Hatfield House? How were they trained? Who trained them?

Despite much destruction wrought by the Great Fire of London in 1666, in the same vein, it would be interesting to examine the evidence for and the validity of the claim made by the King of the Scots who in 1603 became King James I of England in the quotation on the back jacket of *Brick: A Social History,* repeated in the text on page 98:[14]

> We found our cities and suburbs of London of sticks, and left them of bricke, being a material farre more durable, safe from fire and beautiful and magnificent.

To her credit Ms Haynes points out the considerable disconnect between the king's perception and the slums of the poor both within the City of London and outside its walls as in the (later notorious) St Giles in the Fields (page 98). The King of the Scots seems to have been mesmerised by the magnificence of the brick buildings of the power elite.[15]

About brick building in late Tudor England, three points may be made. Elizabeth had no need to build palaces, whether of brick or of stone: from her father, Henry VIII, she inherited no fewer than forty-three residences.[16] She grew up in three of the brick ones: New Hall, Boreham, Essex, visited by the British Brick Society in July 1998; Bishop John Morton's quadrangular house of the late 1470s and early 1480s at Hatfield, Herts., where she was both when her mother Anne Boleyn was executed on 19 May 1536 and when she learned of her sister's death and thus became queen on 17 November 1558; and Humphrey, Duke of Gloucester's early-fifteenth-century Greenwich Palace, where she had been born on 7 September 1533.[17] And her favourite residence, and where she died on 24 March 1603, was Henry VII's rebuilding of Richmond Palace at Sheen, on the south bank of the Thames, south-west of London.[18]

This lack of royal patronage and the fact that several of the major *brick* houses of the 1570s and 1580s have been pulled down underlies the mistaken impression that rich men did not build in brick in the latter part of the sixteenth century. For example, William Cecil, Lord Burghley, built two brick houses, neither surviving: Wimbledon for his eldest son, the Earl of Exeter, a non-politician, and Theobalds, north of London on the Essex-Hertfordshire border, for himself.[19] The latter exchanged by James I for the old palace at Hatfield;

initially, Hatfield became the residence of and, later, the new building for Burghley's second son, Robert Cecil, later Earl of Salisbury.[20] Burghley also built in stone: the surviving Burghley House, outside Stamford.[21]

Sixteenth-century brick houses in Hampshire have been particularly badly treated by posterity. The authors of *The Buildings of England: Hampshire: Winchester and the North* point to the loss of four major early Tudor brick houses — Beaupaire at Bramley for a member of the Brocas family; Thruxton Manor for Sir John Lisle (*d.*1524); and former house of the Bishop of Bath and Wells at Dogmersfield, taken over by the Earls of Southampton; as well as the better-known Basing House destroyed after a siege in the English Civil War — and the total or substantial demolition or emasculation of at least eleven Elizabethan brick houses: Abbotstone, Avington Park, Berry Court near Nether Wallop, Bramshott Place, Elvetham, Farleigh House at Farleigh Wallop, Hartley Court at Hartley Wespall, Hurstbourne Park, Ludshott Manor, Sydmonton Court, Wield House.[22] But Hampshire has both a published Elizabethan Subsidy roll of 1586 and a published Hearth Tax return for 1665,[23] which together give some indication of the comparative wealth of the patrons and the sizes of their houses. The preliminary results of a pleasant afternoon's study and subsequent cross-referencing[24] will be given in a future issue of *British Brick Society Information*.[25]

Hampshire is not alone is the loss of major Elizabethan houses. When Ralph Agas drew a map of the Bedfordshire parish of Toddington in 1581,[26] he was careful to place at the centre the newly-built Toddington Manor, a brick, three-storeyed, quadrangular house constructed in the 1570s for Sir Henry Cheyne (1540-1587), a younger son of the builder of Shurland House on the Isle of Sheppey, a brick building now reduced to its gatehouse,[27] built for Sir Thomas Cheyne (1482 ×1487-1558), a man prominent in the government of Henry VIII. Henry had visited Shurland in 1532, a probable completion date for the house. Toddington Manor was a house many times refaced; it was structurally unsafe by 1745 when, after another change in ownership, much was demolished.[28]

An alternative way of tracing lost brick houses of the sixteenth and early seventeenth centuries can be through paintings. When Gilles van Tilborch painted *The Tichborne Dole*[29] in 1670, he depicted Sir Henry Tichborne (*c.*1623-1689), the third baronet, of the Catholic gentry family fulfilling a traditional role to be providers of largesse for the poor. The painter did more than this, he gave us a detailed view of a house demolished in 1802.[30] By 1670, Tichborne House was a multi-period house with the centre of the U-shape refaced in brick, probably about a hundred years before the painting was made with a brick porch in a more classical style, perhaps of about 1640. The use of brick in the two central decades of Elizabeth's reign, the 1570s and 1580s, would have been contemporary with at least another eleven newly-built brick houses in north Hampshire, also five in the south of the county, and perhaps half a dozen in Berkshire.[31] The finest surviving Elizabethan house in Berkshire is Shaw House,[32] Shaw, outside Newbury, built between 1579 and 1581 for Thomas Dolman, the younger son of a rich Newbury clothier. An H-plan house, it was built of brick with stone quoins and fenestration.

Rain, poor harvests, economic depression, and the aftermath of war all prevented building on the grand scale in the 1590s while political instability and economic uncertainty as the new Protestant regime became established meant a hang-over in the 1560s from the limited period of construction of major houses in the 1540s and 1550s.[33] One might investigate whether this evidence for construction of major houses or the lack of such building activity, encompassing houses rated above say 12-14 hearths in southern and eastern England, also points to the existence for the continuation of the Kuznets cycle[34] as seems probable for the fifteenth and early sixteenth centuries, at least for major houses.

Tichborne Court fell victim to subsidence in 1802 and was rebuilt in brick with a stone Doric portico.[35] But demolition and/or decay was the fate of no fewer than at least eight other brick-built houses in Hampshire north of Winchester.[36]

The two long-standing monarchs of the sixteenth century went on progress; in the summer they escaped from London. Elizabeth went to Essex and East Anglia in 1578.[37] Amongst the brick-built houses where she stayed were The Lordship, Standon, Herts., now largely demolished; Melford Hall, Long Melford, Suffolk, happily still largely extant; and Kenninghall, Norfolk, a vast, sprawling palace now reduced to a single, minor range used as a farmhouse, but with a wall from the main building over which a hedge grows some two fields away.[38]

Fig.2 The original, E-plan south front of Chawton House, Hampshire, with three gables built for Richard Knight in 1583. The mainly brick structure has stone dressings and stone mullions and transoms for the windows. Within a decade, the internal arrangements had been re-ordered and a west front had been built of Hampshire marlstone.

Elizabeth's 1601 progress took in Basing House, Old Basing, Hants. The house was built in the earthworks of a ringwork and bailey castle, as one of the principal residences of William Paulet, first Marquess of Winchester (*d.*1572). The visit bankrupted the fourth Marquess and in an attempt to cut back on his expenditure, part was demolished. A Royalist stronghold in the seventeenth-century Civil War, an almost total demolition took place at the end of the siege in 1643-45 by Parliamentary forces. In the late seventeenth and eighteenth centuries, the house became a quarry for builders in the village. Lime mortar helped with prising the bricks apart.[39]

No such fate befell another Hampshire house, Chawton House (pages 124-126 with colour plate). Built from 1583 onwards for John Knight, whose lands were assessed three years later at £30. His original main front was an E-plan house whose three gables are brick with stone quoins (fig.2).[40] However, in about 1590, John Knight seems to have had a change of plan and the present principal front of *circa* 1590 was built of stone, converting the former service rooms into a parlour, adding a new porch, two-storeyed and also of stone. Further alterations, mostly internal, were made by Richard Knight in the 1650s; the staircase is dated 1655. In 1665, Richard Knight paid Hearth Tax on a house of 21 hearths, among the thirty largest in the county. His ancestor's assessment for the subsidy of 1585-86 was also among the thirty largest in the county.[41]

So far, this review of the use of brick in the sixteenth century has examined brick houses constructed by those in what C. Wright Mills called 'the power elite' as had been the case in the middle ages. But after

1500, brick began to be favoured by those of a slightly less elevated status for their houses. Hearth Tax studies show how in counties like Bedfordshire, Norfolk, and Suffolk, houses of brick can be much more modest[42] than those previously discussed in this review. The country squire, lord of the manor of one or two parishes, might build a single range of brick, as did a member of the Chamberlayne family at Barton Broom, Norfolk, probably in 1510. In 1662, Barton Broom Hall was rated at 14 hearths.[43] This represents a smaller house than the demolished brick-built house of the courtier Sir John Gostwick at Willington Manor, Bedfordshire, at 18 hearths or even that of his cousin Robert Gostwick, Old Warden Abbey, adapting a former monastic property, in the same county, at 16 hearths:[44] of which a brick-built fragment remains.

If you could not afford a whole house of brick, then adding brick gable wall to a timber-framed range, preferably with the gable facing the street, was one way of indicating your rise in status. Norfolk examples include the Old Rectory at Methwold and the second house of the Castell family at Raveningham.[45]

A bit further down the social scale is the addition of a mighty brick chimney between the hall and the kitchen, possibly with provision for fireplaces in the (new) first-floor bedrooms. There are several examples in houses at Lavenham, Suffolk, a town where after about 1550 there was insufficient money to provide brick frontages to the timber-framed houses.[46] Chimneys were something on which William Harrison, a late Tudor topographer, commented in 1587:

> There are old men yet dwelling in the village where I remain which have noted three things to be marvellously altered in England within their sound remembrance: the addition of chimneys to houses; a great amendment of lodging involving the replacement of straw pallets with flock and featherbeds; and the exchange of wooden treen vessels for pewter.[47]

Fig.3 Chawton Cottage, Chawton, Hampshire, a timber-framed building modernised by using brick tiles (mathematical tiles) to up-date its appearance. This was the home of the novelist Jane Austen (1775-1817), her sister Cassandra and her widowed mother from 1809.

AFTER 1660

Another way of up-dating your timber-framed house was to add a brick front completely covering the whole front with bricks as with nos.30 and 31 Lower Church Lane, Farnham, Surrey (pages 120-123), ignoring the jetty as the photograph on page 121 demonstrates, or, as at Chawton Cottage, Chawton, Hants. (fig.3), the house where Jane Austen, the novelist, lived with her sister and mother (page 126), the front could be made to look like brick by using brick tiles (also known as mathematical tiles),[48] a device used on houses great and

small: Althrop, Northants.,[49] is an example of a great house being re-clad in mathematical tiles. Brick tiles are found across much of England's southern counties and many layers of the social spectrum. The material could have been further explored: Chawton Cottage is its only citation (page 126) by Ms Haynes.

The chapters on the eighteenth and nineteenth centuries, written from the standpoint of the workers rather than the patrons, stand out as the best portions of the book. Given the self-imposed limitation of discussing only brick as the material from which one builds the walls of the house, discussion of the twentieth century (pages 230-249) is succinct and of wide interest.

But that chapter opens with an incredulous statement: 'bricks drifted out of fashion with the arrival of a new architectural style, Modernism' (page 230).[50] It is an exaggeration of the true situation. Brick was used for far more public and commercial buildings than is often seen in the accounts given by the propogandists for 'Modernism', a style often called 'the Modern Movement'.[51] To take one building type, buildings for county administration; in south-west England between 1932 and 1970, each of the seven counties and the county borough of Bristol built a new administrative headquarters. Of these eight buildings, five were constructed in brick,[52] and one each in well-cut ashlar,[53] with an aggregate facing,[54] and using pre-cast concrete panels facing a reinforced concrete frame.[55] Only two are in what might be described as a Modernist style: Cornwall and Berkshire, with the latter proving unsatisfactory within four decades.[56]

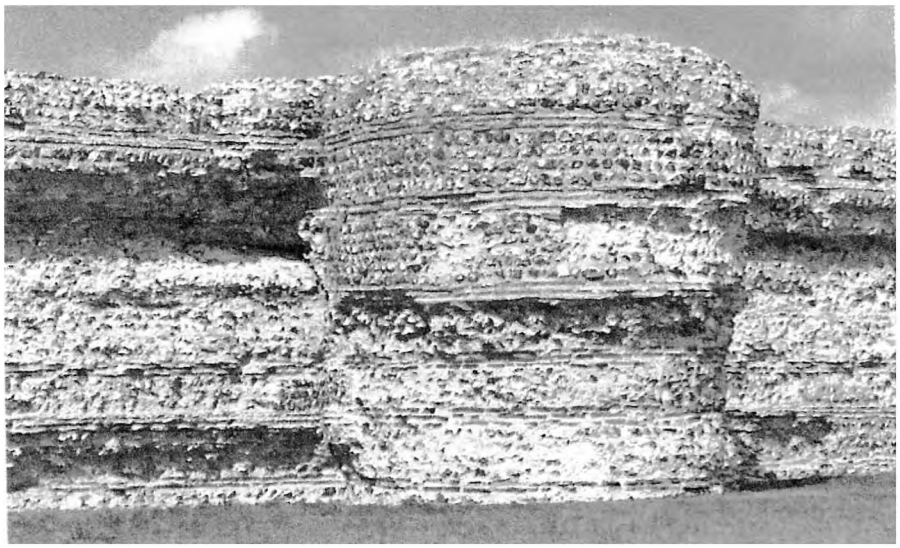


Fig.4 The late Roman walls of Burgh Castle, Norfolk, one of the Saxon Shore forts of late Roman Britain. Brick, more specifically large flat tiles, was here used as horizontal binding material above each section of six courses of flint walling but fallen sections of the walls make it clear that brick did not go all the way through the thick walls.

FROM ROMAN BRITAIN TO TUDOR ENGLAND

This reviewer wishes that he could be quite so approving of the first three historical chapters — 'A Roman Holiday' (pp.30-43), 'An Influx of Religion' (pp.44-49), and 'One Last Invasion' (pp.50-61). They are beset by too much potted history of England, one, moreover, derived from out-dated secondary sources: glaringly so in respect of R.G. Collingwood and J.N.L. Myres, *Roman Britain and the English Settlements*, 1936, a volume which itself has been superseded in the 'Oxford History of England' series by Peter Salway, *Roman Britain*, and J.N.L. Myres, *The English Settlements*, but even these were published over a generation ago, in 1984 and 1986, respectively.[57]

Tighter editing by the publisher would have removed some of the unnecessary background noise of general history which is all too prevalent in these three chapters. Equally, better proof reading would have

eliminated the misspelling of *tegulae* on pages 32, 34, and 38.[58] As Ms Haynes observes (page 32), Roman bricks were more like modern tiles than modern bricks, having a larger area and in the case of *tegulae* a flange. *Tegulae* were used as roofing tiles, with the flange covered by another tile, an *imbrex* (plural *imbrices*), a half-round tile. As bricks, *tegulae* were frequently employed as bonding courses in a mainly stone-built wall: members of the British Brick Society saw this feature at the third-century Saxon Shore fort at Burgh Castle, Norfolk (formerly in Suffolk) (fig.4).[59] Equally, with the flange chopped off, in Roman upper-class housing they could be used to support a mosaic floor over a hypocaust, the Roman form of central heating.[60] In Roman Britain, wedge-shaped bricks were used to create arches as *Brick: A Social History* demonstrates with an example from Bath (pages 40-41).

It should be emphasised that brick was employed far more sparingly in Roman Britain than it was in parts of Roman Iberia or late Roman Germany. The aqueducts of Merida, Spain, the capital of the Roman province of Luisitania, and the city's amphitheatre are brick-built in an area with good building stone. Good building stone would also have been available in Trier, Germany, witness the city's Black Gate, but the Constantinian Audience Hall of the first quarter of the fourth century and the earlier baths complex and amphitheatre are evidence of Roman brickmaking and the use of brick in the Moselle valley. In late Roman Ravenna as in first century Rimini, brick was used extensively: for churches in the former and the surviving city gate at the latter. Roman Italy made much use of brick.

The discussion of brick in Anglo-Saxon England omits the important use of brick in the arches of the church dedicated to All Saints at Brixworth, Northants.,[61] although there is discussion of re-use of Roman brick in the central tower and elsewhere in the rebuilding of St Albans Abbey by the early Norman abbots (p.49).[62] The skilled workman and labourers were almost certainly of Anglo-Saxon stock. The question from both the eighth century and the late eleventh is whether actual brickmaking was attempted.

The chapter on the Hull brickyard (pp.62-75) is worthwhile but the consideration of Tattershall Castle (pp.82-89) misunderstands the totality of the information presented in the published building accounts.[63] The first available year's accounts, for 1434-35, are clearly *not* those of a first year of construction: there is reference to bricks being retained from production in 1430-31. The first available accounting period refers to the glazing of the parlour, the ground-floor room in the great tower directly accessible from the now demolished great hall, and to the timbers of its ceiling, both joists and boards. This alone would suggest several years of previous construction before 15 February 1434, when the accounts begin. From the quantity of surviving bricks at the end of the 1445-46 accounting period, it is clear that at least one further season of building was involved in the construction of the great tower at Tattershall Castle, even though the plumber seems to have completed his work of sealing the roof in lead sheets. Tattershall Castle was a twenty-year building project.[64]

Using the discontinuous Tattershall Castle accounts might not have been the wisest choice. Those for 1433, 1434, and 1435 for Caister Castle begin at the start of building operations[65] but do not see the building to completion: that was probably in 1444. The Caister Castle accounts, like those for Tattershall Castle, are summary accounts for the year. If one wishes to examine the fragility of the situation of the workers in fifteenth-century England,[66] one needs to study 'The Building Accounts of Kirby Muxloe Castle 1480-1484', transcribed and edited by Alexander Hamilton Thompson more than a century ago and published in two parts either side of the Great War. The drama of the workmen leaving *en masse* when news of the murder of Lord Hastings reached the castle on Monday 16 June 1483 would have been worthy of mention: the murder had taken place on the previous Friday. The weekly accounts run from 20 October 1480 to 8 December 1484.[67]

The patronage of brick from Henry of Essex at Polstead church in the 1150s and early 1160s to Ralph Cromwell at Tattershall Castle and his contemporaries in the fifteenth century was very much concentrated in the very richest stratum of society, far fewer than the top one per cent of whom we have heard so much at the beginning of the last decade. Systematic patronage of our material in the fifteenth century begins at the very apex of society: Henry V at Richmond Palace from 1415 onwards set the tone, his three brothers — John, Duke of Bedford, at the demolished Fulbrooke Castle, a brick quadrangular house outside Warwick; Humphrey, Duke of Gloucester, at Greenwich Palace; and Thomas, Duke of Clarence, at Woking, Surrey[68] — followed and with them about half of the better off members of the nobility.[69] It is not really until the early sixteenth century that income level of the patrons of brick begins to drop below £200 a year.[70]

CONCLUDING REMARKS

Some months after writing the majority of this Review Article, reading William Whyte, *Redbrick: A Social and Architectural History of Britain's Civic Universities*,[71] this reviewer was struck by the citation of a quotation from J. Mordaunt Crook, *The Rise of the Nouveau Riches*:[72]

> Architectural history is a fairly new discipline; the social history of architecture is newer still.[73]

The social history of building materials is even more recent.

Perhaps, the next author to attempt a social history of brick in England or in the British Isles might do so thematically. Potential chapters might consider first 'Raw Materials', 'Brickmaking', and 'Transport' before looking at 'Patronage', 'Finance', 'Building Workers: Craftsmen and Labourers', the latter obviously to include bricklayers but also their relationship to other trades, and 'Masters and Men', the relationship between those who paid for the buildings and those who actually erected them,[74] and then going on to examine 'Taxation'[75] and 'Regulation'.

On some of these topics, Carolyne Haynes has written well and is informative — particularly raw materials, brickmaking, transport, and the social conditions of brick workers in the nineteenth and twentieth centuries[76] — but on others, especially regarding brickmaking and brick buildings of the medieval centuries, sadly, her account is rather more limited. But one should not end on a disappointing note, writing this review article — not least in considering those matters where much had been left undone which ought to have been considered — has stimulated this writer into revisiting old research and initiating potential new strands to that inquiry.[77]

DAVID H. KENNETT

NOTES AND REFERENCES

1. G.M. Trevelyan, *English Social History*, London: Longmans, 1942 and many subsequent editions. G.M. Trevelyan (1876-1962) was the third son of Sir George Otto Trevelyan, baronet; he was educated at Harrow School and Trinity College, Cambridge, of which he subsequently became Master, as well as being Regius Professor of History at the University of Cambridge. Unlike Oxford, Cambridge allows a person both to hold a chair and be head of a college. See nn.2, 13, and 57 for further examples of the education of historians and one building historian.
2. E.P. Thompson, *The Making of the English Working Class*, London: Victor Gollancz, 1963; paperback edition, Harmondsworth: Penguin Books, 1966 and 1970; re-issued, 2013. E.P. Thompson (1924-1993) was the son of a Methodist missionary, then resident in Oxford; he was educated at the Dragon School, Oxford, and Kingswood School, Bath (a Methodist foundation), and, after serving in the Italian campaign in the Second World War, at Corpus Christi College, Cambridge. By his paternal occupation, E.P. Thompson would be a member of the upper middle class.
3. S. Hall and R. McWilliam, 'Obituary: Malcolm Chase', *The Guardian, Journal*, 20 April 2020. A similar condescension towards the children of the working class was not exactly unknown in the late 1950s; the writer well remembers the remark made to him when he enquired of his school's 'careers master' about the steps needed to pursue a possible legal career and was firmly told, 'Boys from Tintown do not become lawyers': the writer was a scruffy kid with even scruffier writing.
4. Emma Griffin *Liberty's Dawn: A People's History of the Industrial Revolution*, New Haven and London: Yale University Press, 2013. Unfortunately, this has neither extracts from nor references to manuscript or printed reminiscences or diaries of persons involved in the building trades or the brick industry.
5. C.W. Mills, *The Power Elite*, New York and Oxford: Oxford University Press, 1956; *ibid.*, new edition, New York: Oxford University Press, 2000.
6. C.W. Chalkin, *English Counties and Public Building 1650-1830*, London and Rio Grande OH: Hambledon Press, 1998, *passim*. The writer was thinking of Stafford, where each of the prison, the hospital, the lunatic asylum, and the workhouse were built of brick, but the shire hall was constructed of good quality stone, see D.H. Kennett, 'The Bad, The Mad, and the Sad: Buildings for the Re-Formation of Character in Stafford', *BBS Information*, forthcoming. See also D.H. Kennett, 'Court, Castle, and Prison: Brick Buildings at Lincoln Castle', *BBS Information*, forthcoming, for the contrast between the place of incarceration and the building whereat people were condemned to that incarceration.

7. N. Bingham, *Masterworks: Architecture at the Royal Academy of Arts*, London: Royal Academy of Arts, 2011. This volume is the catalogue of an exhibition which displayed the diploma works of all 87 architect Royal Academicians elected between 1785 and 2010 plus a work by two of the five Foundation Members who were architects. Looking at Scott's superb draughtsmanship and colouring, he intended the Foreign Office to be constructed of brick with stone rather than only of stone. For the building and the controversy over which style should be applied to the façades see M.H. Port, *Imperial London: Civil Government Building in London 1850-1915*, New Haven and London: Yale University Press, 1995, pp.198-210. For a summary see S. Bradley and N. Pevsner, *The Buildings of England: London 6: Westminster*, New Haven and London: Yale University Press, 2003, pp.265-270.

8. C. O'Brien and N. Pevsner, *The Buildings of England: Bedfordshire* ..., New Haven and London: Yale University Press, 2014, p.91.

9. From the Bibliography, Ms Haynes' reading does not appear to extend to works on Tudor buildings and particularly the place of brick in buildings of the sixteenth century by Malcolm Airs, Nicholas Cooper, Mark Girouard, Maurice Howard. John Summerson with a single exception, and Simon Thurley; see M. Airs, *Tudor and Jacobean: A Guide and Gazetteer*, London: Barrie & Jackson, 1982; M. Airs, *The Tudor & Jacobean Country House: A Building History*, Stroud: Alan Sutton, 1995; N. Cooper, *Houses and the Gentry 1480-1680*, New Haven and London: Yale University Press, 1999; M. Girouard, *Robert Smythson and the Elizabethan Country House*, New Haven and London: Yale University Press, 1983; M. Girouard, *Elizabethan Architecture: Its Rise and Fall 1540-1640*, New Haven and London: Yale University Press, 2009; M. Howard, *The Early Tudor Country House: Architecture and Politics 1490-1550*, London: George Philip, 1987; M. Howard, *The Building of Elizabethan and Jacobean England*, New Haven and London: Yale University Press, 2007; J. Summerson, *Architecture in Britain 1530-1830*, Harmondsworth: Penguin Books, 1953, first paperback edition, 1970 based on the 5th edition, and subsequent editions, most recently the 9th edition, New Haven and London: Yale University Press, 2014; S. Thurley, *The Royal Palaces of Tudor England: Architecture and Court Life 1460-1547*, New Haven and London: Yale University Press, 1993; S. Thurley, *Houses of Power: The Palaces That Shaped the Tudor World*, London: Bantam Books, 2017. Writing this short booklist of works relevant to Tudor and early seventeenth-century brick buildings, I was reminded of the words of the sometime Disney Professor of Archaeology in the University of Cambridge, the late Graham Clark, who wrote that it is only by wide reading that a [person's] work can be validated (I paraphrase from memory); G. Clark, *Archaeology and Society*, London: Methuen, paperback edition, 1957, p.1. The writer should point out that, having ceased to work and publish in any strictly archaeological field after 1980, he no longer owns a copy of Clark, 1957; it also worth recalling that the sixth form of Luton Grammar School in the early 1960s on the Arts side was predominantly geared towards modern languages rather than History, especially for those who had been fast-tracked to do GCE 'O' levels at 15, for whom two languages other than English was standard and learning at least one other European language in the Arts sixth form was encouraged.

10. L. Toulmin Smith, ed., *The Itinerary of John Leland in or about the years 1535-1543*, 1907-1910, republished, London: Centuar Press in 1964, in five volumes, comprising ten parts. Ms Haynes' reference to 'VII' is to Part Seven.

11. Apart from Leland, *Itinerary*, Ms Haynes uses an internet source for *inter alia* Richard Carew, *The Survey of Cornwall*, of which a second edition with comments by Thomas Tonkin appeared in 1811, republished by the Devon and Cornwall Record Society in 2004; and Edward Dobson, *A Rudimentary Treatise on the Manufacture of Bricks and Tiles*, London: John Weale, 1850, has been republished with two pages to an A4 side.

12. King James I had been and continued to be King James VI of Scotland; Elizabeth's councillors when deciding whom to approach as to succeeding the queen referred to him as 'the King of the Scots'.

13. E. Mercer, *English Art 1558-1625*, Oxford: Clarendon Press, 1962. The enforced closure of libraries from late March to September 2020 has meant that this reviewer has been unable to check the volume for the page reference. After university and war service, Eric Mercer (1918-2001: obituary, *The Guardian*, 21 September 2001) was employed by the Royal Commission on Historical Monuments (1948-81), for whom he wrote *English Vernacular Houses: A Study of Traditional Farmhouses and Cottages*, London: HMSO, 1975. Subsequently, he prepared a volume on the buildings of Shropshire for the *Victoria County History* of that county, which was not proceeded with by the *VCH*. At the time of his death, the possibility of independent publication was being pursued; the volume was published posthumously as *English Architecture to 1900: The Shropshire Experience*, Little Logaston: Logaston Press, 2003. The point of this excursus to ask what influence the buildings of the county to which Eric Mercer retired had on his earlier work. For example, checking the plates of J. Newman and N. Pevsner, *The Buildings of England: Shropshire*, New Haven and London: Yale University Press, 2006, we find that of pls.147-60 devoted to secular buildings erected between 1560 and 1630, seven are timber-framed, five are of stone and only two are of brick: pl.56, the gazebo at Harnage Grange, Cound, a late-sixteenth-century survivor from a previous house, and pl.58, Ludstone Hall, an early-seventeenth-century house. The brick-nogging of the barn at Hodnet, pl.49, was inserted later into the timber-framed structure of 1619. Like Robin Collingwood and J.N.L. Myres (note 54 *infra*), Eric Mercer was an Oxford man (Jesus College, 1936-39, with a double first in History) but unlike them his schooling was at Battersea Grammar School and not at a Public School.

14. Ms Haynes quotes R. Porter, *London: A Social History,* Cambridge MA: Harvard University Press, 1998, p.41 as her source. With libraries being closed, the writer been unable to check this: the book is not on his shelves.

15. The work of John Schofield, points to the veracity of the first part of King James' comment but not necessarily to the second. See J. Schofield, *The Building of London from the Conquest to the Great Fire,* London: British Museum Press in association with the Museum of London, 1984, and 2nd edn, 1983; Stroud: Sutton Publishing Limited, 3rd edn, 1999, all *passim*; and J. Schofield, *Medieval London Houses,* New Haven and London: Yale University Press, 1995. One way to verify the second part of the comment is to examine the 1666 Lady Day Hearth Tax, see [no editor known to this writer], *London Hearth Tax: The City of London and Middlesex, 1666,* London: Centre for Metropolitan History, 2011, available digitally: *https://www.british-history.ac.uk/london-hearth-tax/london-mddx/1666* I owe knowledge of the digital version to the kindness of Charlotte Hopkins of London Metropolitan Archives.

16. For the houses used and maintained by Elizabeth I see Thurley, 2017, *passim*, but especially pp.321-413.

17. For New Hall, see Girouard, 2009, p.18 and fig.24, also fig.339, Howard, 1987, p.205, and J. Beetley and N. Pevsner, *Buildings of England: Essex,* New Haven and London: Yale University Press, 2015, pp.155-159 with plan and pl.60. For Hatfield see Beetley and N. Pevsner, *Buildings of England: Hertfordshire,* New Haven and London: Yale University Press, 2019, pp.246-247. For Greenwich Palace see Thurley, 1993, pp.34-36, 45-50, 55-56, and 73-80, plans 2-4; also J. Wight, *Brick Building in England from the Middle Ages to 1540,* London: John Baker, 1972, p.310. The Anthonis van den Wyngearde 1558 view of Greenwich is reproduced Thurley, 2017, p.104. For convenience, this reviewer has adopted the practice of quoting only the most recent edition for each county of *The Buildings of England.*

18. Howard, 1987, p. 210; B.K. Cherry and N. Pevsner, *Buildings of England: London 2: South,* London: Penguin Books, 1983, pp.521-526 with pl.14; N. Pevsner, rev. B.K. Cherry, *The Buildings of England: Surrey,* Harmondsworth: Penguin Books, 1971, pp.435-438, with pl.29.

19. For Wimbledon House see Girouard, 2009, p.82 with figs. 75 and 76 supplementing Girouard, 1983, pp.36, 168-170 and 291, with pl.16, and C. Knight, 'The Cecils at Wimbledon', in P. Croft, ed., *Patronage, Culture and power: the Early Cecils.* New Haven and London: Yale University Press, 2002, pp.47-66. Wimbledon House had 70 hearths: C.A.F. Meekings ed., *Surrey Hearth Tax 1664,* Guildford: Surrey Records Society, 1940. This volume is an index to the tax return and the house is listed under 'Earl of Exeter' as 'Wimbledon 1'. J. Summerson, 'The Building of Theobalds 1564-1585', *Archaeologia.* **97,** 1959, pp.107-126, is the fundamental starting point for all discussions of Theobalds but see also M. Airs, '"Pomp or Glory": The Influence of Theobalds', in Croft, ed., 2002, pp.3-19, and for a plan Girouard, 2009, fig.212. Summerson, 1959, is summarised Summerson, 1970, pp.73-74 with reconstruction, fig.41.

20. Beetley and Pevsner, 2019, pp.246-247 and pl.35 for the Old Palace; *ibid.*, pp.241-248 with plan and pls.46-49 for Robert Cecil's Hatfield House. The fundamental sources for Hatfield House are Lawrence Stone, 'The Building of Hatfield House', *Archaeological Journal,* **112,** pp.100-128, and the essays in L. Stone, *Family and Fortune: Studies in Aristocratic Finance in the Sixteenth and Seventeenth Centuries.* Oxford: Clarendon Press, 1973.

21. O'Brien and Pevsner, 2014, pp.427-450 with plan and pls.96-99 and 108. See also the two articles in *Country Life.* 10 and 17 June 2020.

22. M. Bullen, J. Crook, R. Hubbock, and N. Pevsner, *The Buildings of England: Hampshire: Winchester and the North,* New Haven and London: Yale University Press, 2010, pp.46-47. See also C. O'Brien, B. Bailey, N. Pevsner, and D. Lloyd, *The Buildings of England: Hampshire: South.* New Haven and London: Yale University Press, 2018, p.35. Brief details are given of the houses cited in the paragraph in either of these volumes. For a contemporary indication of the location of the parks surrounding the Hampshire houses mentioned in this review article see the map of the county in John Speed, *The Theatre of the Empire of Great Britain,* London: 1612, conveniently N. Nicholson, introduction, *The Counties of Great Britain: A Tudor Atlas by John Speed,* London: Pavilion Books in association with the British Library, 1988, pp.85-88. It is valuable to compare the location and number of parks marked on Speed's map with that of Thomas Moule in 1830: see R. Barron, introduction, *The County Maps of Old England: Thomas Moule,* London: Studio Editions, 1990, pp.50-51, or A. Baynton-Williams, introduction, *Moule's County Maps: The West of England,* London: Bracken Books, 1994, pp.42-43.

23. E. Hughes and P. White, eds, *The Hampshire Hearth Tax Assessment 1665,* [being *Hampshire Record Series,* **11,** 1991]; G.R. Davey, ed., *The Hampshire Lay Subsidy Rolls, 1586,* [being *Hampshire Record Series,* **4,** 1981]. Research on the Hearth Tax and the Subsidy Roll was initially undertaken to determine the comparative economic and social position of the owners of Chawton Manor, John Knight in the 1580s and Richard Knight in the 1660s. For the political background to late-seventeenth-century Hampshire see A.M. Coleby, *Central Government and the Localities: Hampshire 1649-1689.* Cambridge: Cambridge University Press, 1987, pbk 2002, *passim.*

24. A similar cross-referencing exercise using a late-seventeenth-century Hearth Tax return and an Elizabethan or Jacobean Subsidy Roll can be conducted for both Bedfordshire and Suffolk. With Dorset these counties were to have formed the basis of a potential book on the Seventeenth-Century Gentry and their Houses, for which much work was accomplished in the mid-1980s. The author may return to this study with Hampshire replacing Dorset as one of the three counties.

25. [Space considerations meant that the constructed table had to be shelved from this issue of *BBS Information*. (Ed.)] Any member who would like a copy should apply to David Kennett with an email address to which to send the document as an attachment.

26. Girouard, 2009, p.48 and fig.45 for the Agas map with fig.80 for a plan, and p.267 and fig.322 for John Thorpe's drawing of the façade. O'Brien and Pevsner, 2014, p.313, reproduces the Agas map but limited is in the extent of the building shown.

27. Howard, 1987, pp.69-72 and 208 with fig.13 and colour plate 3.

28. O'Brien and Pevsner, 2014, p.312.

29. Private collection; reproduced Cooper, 1999, pl.1, with detail showing the brick porch opp. p.3.

30. Cooper, 1999, pp.3-4 describes Tichborne House as shown in the painting and makes the point that 'at any one time very few houses were modern'.

31. The figures derive from comments in the introductions to three revised volumes in *The Buildings of England* series: M. Bullen *et al.*, 2010, pp.46-47; O'Brien *et al.*, 2018, p.35; and G. Tyack, S. Bradley and N. Pevsner *Buildings of England: Berkshire*, New Haven and London: Yale University Press, 2010, p.35. Examination is in progress of the entries in *Victoria County History of Hampshire*, 5 volumes, 1900-1912, on the individual parishes where the larger houses are. Digital examination will be checked against the printed page once larger reference libraries reopen.

32. Cooper, 1999, pp.79, 268, and 296 with pls. 63, drawing of original appearance; 64, photograph of present appearance; and 65, plan, from inventory of 1620. See also Tyack *et al.*, 2010, pp.505-507 with plan, and pl.37. G. Tyack, 'Country Houses before 1750' in J. Dils and M. Yates, *An Historical Atlas of Berkshire*, Reading: Berkshire Record Society, 2nd edn, 2012, pp.76-77 with p.163 note 38.1, records Shaw House as having 16 hearths in 1662.

33. Two contrasting introductions to the economic and social history of the late sixteenth century are D.M. Palliser, *The Age of Elizabeth: England under the later Tudors 1547-1603*, London and New York: Longman, 1983, and P. Williams, *The Later Tudors: England 1547-1603*, Oxford and New York: Oxford University Press, 1995, superseding J.B. Black, *The Reign of Elizabeth, 1558-1603*, Oxford: Oxford University Press, 1959. Both the two last-named volumes concentrate on political rather than social history.

34. The 'Kuznets cycle' postulates that across the nineteenth century in the USA and to a certain extent in Britain, there are peaks and troughs in housebuilding with about 15 to 25 years between each peak and similarly between the nadir of two successive troughs. Each period of the highest production lasts between ten and fifteen years. The 1570s and early 1580s were such a period in the construction of larger houses in England. A brief explanation of the Kuznets cycle is given A. Tylecote, *The Long Wave in the World Economy*, London and New York: Routledge, 1991, p.8. The classic exposition is S. Kuznets, *Secular Movements in Production and Prices*, New York: Houghton Muffin, 1930, *passim*. See also J.A. Schumpter, *Business Cycles, I and II: A Theoretical, Historical and Straistical Analysis of the Capitalist Process*. Hew York: McGraw-Hill, 1939. J. Parry Lewis, *Building Cycles and Britain's Growth*, London: Macmillan, 1965, uses a similar methodology for Great Britain.

35. Bullen *et al.*, 2010, pp.521-522.

36. In approximate order of construction, the eight houses were Symonton Court, *c.*1545-65; Abbotstone, 1562; Steventon Manor, *c.*1570; Farleigh House, *c.*1575-76; Hurstbourne Park, probably 1570s; Berry Court, *c.*1580; Wield House, *c.*1580-85; Elvetham Hall, before 1591. Brief notes on what is known about these in the entries in Bullen *et al.*, 2010, in individual parishes. See also the parish entries in *Victoria County History: Hampshire*, London: Constable, 1900-1912, 5 volumes; reprinted London: Dawson, in the 1970s and also available online.

37. Z. Dovey, *An Elizabethan Progress: The Queen's Journey into East Anglia, 1578*, Stroud: Alan Sutton, 1996.

38. Beetley and Pevsner, 2019, pp.529-530 (Standon); Howard, 1987, p.215, and J. Beetley and N. Pevsner, *Buildings of England: Suffolk: West*, New Haven and London: Yale University Press, 2015, pp.392-396 with plan (Long Melford); N. Pevsner and B. Wilson, *Buildings of England: Norfolk: North-West and South*, London: Penguin Books, 1999, p.451, Wight, 1972, pp.326-327, and fieldwork by the writer in 1978 (Kenninghall). Both Standon and Melford Hall were built in the 1540s and therefore do not appear in Wight 1972.

39. Bullen *et al.*, 2013, pp.431-433 with plan and pl.57.

40. Bullen *et al.*, 2013, pp.218-220 and pl.59.

41. Hearth Tax assessment: Hughes and White, 1991, p.110, section 191; subsidy roll, Davey, 1981, p.13, section 2.

42. L.M. Marshall, *The Rural Population of Bedfordshire 1671-1821* [being *Bedfordshire Historical Record Society Publications*, **16**, 1934] with the Hearth Tax returns for the county in 1671, reprinted as L.M. Marshall, *The Bedfordshire Hearth Tax Return for 1671*, Bedford: Bedfordshire Historical Record Society, 1990. M.S. Frankel and P.J. Seaman with P.T.R. Palgrave-Moore, *Norfolk Hearth Tax Assessment Michaelmas 1664*, [being *Norfolk Genealogy*, **15**, 1983]. S.H.A. Harvey, ed., [L. Redstone, compiler], *Suffolk in 1674*, [being *Suffolk Green Books*, no.11, vol.**13**, 1905], with a partial analysis of the larger dwellings, D.H. Kennett, 'Suffolk Houses in 1674', *BBS Information*, **37**, November 1985, pp.4-11.

43. Pevsner and Wilson, 1999, pp.193-194; Wight, 1972, p.319. For the return in the Hearth Tax see Frankel *et al.*, 1983, p.25.

44. Howard, 1987, p.201 (both houses); O'Brien and Pevsner, 2014, p.325-326 (Willington Manor); pp.262-263 with pl.25 (Old Warden Abbey); with entries in Marshall, 1934/1990, p.95. Willington Manor is best-known for its surviving stables and round dovecote, both of stone, while the small portion of the house at Old Warden Abbey has been taken over by the Landmark Trust.

45. Wight, 1972, pp.333-334 and Pevsner and Wilson, 1999, pp.540-541 and pl.57 for Methwold. Pevsner and Wilson, 1999, p.599 for Raveningham. The Castell's main house at Raveningham occupied a moated site, with the inner wall of the moat in stone, beside a right-angled corner in the road, much nearer the church than the surviving secondary dwelling. The medieval house was pulled down after the last Castell heiress married a member of the Bacon family from nearby Gillingham in 1735 and later a new house was built adjacent to the church, see Pevsner and Wilson, 1999, p.599 for the late eighteenth-century house. The two earlier houses in Raveningham were rated at 15 and 7 hearths respectively in 1664, Frankel *et al.*, 1983, p.8. Several persons given the prefix 'Mr' or the suffix 'gent' in the Methwold assessment lived in houses of 4 or 5 hearths but which person was the village priest is unknown to this writer.

46. Personal observation, unremembered date in the mid-1980s. For houses in Lavenham see J. Beetley and N. Pevsner, 2015, pp.355-362.

47. William Harrison, ed. F.J. Furvinal, *The Description of England,* London: New Shakespeare Society, 1876; more recent edition, G. Edelen, ed., *The Description of England: The Classic Contemporary Account of Tudor Social Life,* Ithaca NY: Cornell University Press, 1968. Ms Haynes cites the text from J. Whittle and E. Griffiths, *Consumption and Gender in the Early Seventeenth-Century Household — the World of Alice Le Strange,* Oxford: Oxford University Press, 2012, p.117. I have reproduced Ms Haynes' transcription without its infuriating internal quotation marks.

48. I owe this observation to Terence Smith; see T.P. Smith, 'Brick-Tiles (Mathematical Tiles) in Eighteenth- and Nineteenth-Century England, *Jnl British Archaeological Association,* **138,** 1985, pp.132-164, building on the various contributions to M. Exwood, ed., *Mathematical Tiles: Notes of the Ewell Symposium 14 November 1981,* Ewell: M. Exwood, 1981.

49. D.H. Kennett, 'Mathematical Tiles and the Great House: Height and Proportion', *BBS Information,* **34,** November 1984, pp.12-13, with reply M. Exwood, 'More on Mathematical Tiles', *BBS Information,* **37,** November 1985, p.18. Other issues of *British Brick Society Information* from the 1980s and 1990s have articles and notes on Mathematical Tiles (= Brick Tiles).

50. I thank Terence Smith for pointing this out to me.

51. Notably in the European half of exhibition of contemporary Architecture curated by H.-R. Hitchcock and P. Johnson at the Architecture Department of the Museum of Modern Art, New York, in 1937; for the catalogue see H.-R. Hitchcock and P. Johnson, *The International Style,* New York and London: W.W. Norton & Company, 1937; reprinted with new introductions (Hitchcock in 1966, Johnson in 1995), *The International Style: Architecture since 1922,* New York: W.W. Norton, 1966 and 1995. The catalogue omits all except two of the American contributions to the exhibition including those of Frank Lloyd Wright. The late Sir Nicholas Pevsner was an ardent advocate of the style and frequently bemoaned its limited take up in Britain.

52. A. Foyle and N. Pevsner, *The Buildings of England: Somerset: North and Bristol,* New Haven and London: Yale University Press, 2011, pp.273-274 (Bristol Council House); B.K. Cherry and N. Pevsner, *The Buildings of England: Devon,* London: Penguin Books, 1989, pp.401-402 (Devon County Offices, Exeter); M. Hill, J. Newman, and N. Pevsner, *The Buildings of England: Dorset,* New Haven and London: Yale University Press, 2018, pp.250 (Dorset County Hall, Dorchester); J. Orbach and N. Pevsner, *The Buildings of England: Somerset: South and West,* New Haven and London: Yale University Press, pp.619-620 and pl.125 (Somerset County Hall, Taunton); Bullen *et al.*, 2013, pp.657-658 and pl.118 (Elizabeth II Court, Winchester).

53. N. Pevsner, rev. B.K. Cherry, *Buildings of England: Wiltshire,* Harmondsworth: Penguin Books, 1975, p.534.

54. G. Tyack *et al.*, 2010, p.452.

55. P. Beacham and N. Pevsner, *Buildings of England: Cornwall,* New Haven and London: Yale University Press, 2014, p.669-670 with pl.122.

56. See notes 54 and 55, respectively, for the newish county halls in Reading and Truro.

57. R.G. Collingwood and J.N.L. Myres, *Roman Britain and the English Settlements,* Oxford: Clarendon Press, 1936; Peter Salway, *Roman Britain,* Oxford: Clarendon Press, 1984; J.N.L. Myres, *The English Settlements,* Oxford: Clarendon Press, 1986. Each of these men has an entry in both *Who Was Who* and *The Oxford Dictionary of National Biography.* Incidentally, no one ever called Dr Myres (1902-1989) 'John', that was his father, Sir John Myres (1869-1954), the sometime Wykeham Professor of Ancient History in the University of Oxford; in the 1930s Nowell Myres was Student (= Fellow) and Librarian of Christ Church and from 1946 Bodley's Librarian, whilst remaining a Student of the House. Father and son were both educated at Winchester College and New College, Oxford. Robin Collingwood (1889-1943) was the son of W.G. Collingwood (1854-1932), artist and art historian, with particular expertise on the sculpture of later Anglo-Saxon period especially in Cumbria, and sometime secretary to the art critic John Ruskin (1819-1900). Robin Collingwood, elected a Fellow of Pembroke College, Oxford, prior to graduation in 1912 with a congratulatory

first, became the Waynflete Professor of Metaphysical Philosophy at Oxford University in 1927 but had spent his vacations conducting excavations; he was the leading exponent of Roman Britain's history and archaeology. Robin Collingwood had attended Rugby School from 1902 to 1908 before proceeding to University College, Oxford, and his distinguished career in the university.

58. I owe observation of the poor use of Latin to T.P. Smith, which he commented *in littore* extends to misuse of the singular, *imbrex*, to represent the plural, *imbrices*, also on page 32.

59. J. Beetley and N. Pevsner, *The Buildings of England: Suffolk: East*, New Haven and London: Yale University Press, 2015, pp.160-163 with plan and pl.3.

60. For an illustration of a hypocaust, that at the Roman villa at Newport, I.o.W., see D.W. Lloyd and N. Pevsner, *The Buildings of England: Isle of Wight*, New Haven and London: Yale University Press, 2006, pl.8, with text at p.189.

61. For Brixworth church see H.M. Taylor and J. Taylor, *Anglo-Saxon Architecture I*, Cambridge: Cambridge University Press, 1965, pbk 1980, pp.108-114 with plan and figs.410-412; also B. Bailey, N. Pevsner, and B.K. Cherry, *The Buildings of England: Northamptonshire*, New Haven and London: Yale University Press, 2013, pp.139-142 with plan and pls.6 and 7.

62. Taylor and Taylor, 1965/1980, p.528; Beetley and Pevsner, 2019, pp.456-478 esp. p.462 with pl.11 for the crossing tower.

63. W.D. Simpson, ed., *The Building Accounts of Tatershall Castle 1434-1472* [being *Lincoln Record Society*, **55**, 1960], reprinted Woodbridge: The Boydell Press, 2010, *passim*.

64. D.H. Kennett, 'How Many Bricks were there at Tattershall Castle?', *BBS Information*, forthcoming.

65. H.D. Barnes and W.D. Simpson, 'The Building Accounts of Caister Castle, A.D. 1432-1435', *Norfolk Archaeology*, **30**, 1952, pp.178-188. For discussion of the building see H.D. Barnes and W.D. Simpson, 'Caister Castle', *Antiquaries Journal*, **32**, 1952, pp.35-51, and A. Hawkward, 'Sir John Fastolf's "Gret Mansion by me late edified": Caister Castle, Norfolk', in L. Clark, ed., *The Fifteenth Century V: Of Mice and Men: Image, Belief, and Regulation in Late Medieval England*, Woodbridge: The Boydell Press, 2005, pp.39-68. Building materials are considered in D.H. Kennett, 'Contrasts in Procurement, Contrasts in Transport: Caister Castle and Cow Tower [Norwich]', *BBS Information*, **134**, September 2016, pp.13-26. See also T.P. Smith, 'Picturing the Past: A Demolished Medieval Brick Castle in the Netherlands, its Seventeenth-Century Depiction, and its Relevance to England', *BBS Information*, **134**, September 2016, pp.6-12.

66. Published sixteenth-century building accounts are J. Evans, ed., 'Extract from the Private Account Book of Sir William More of Loseley [Surrey] in the time of Queen Mary and Queen Elizabeth', *Archaeologia*, **36**, 1855, pp.284-310, and Mrs Baldwin-Childe, 'The Building of the Manor House of Kyre Park, Worcestershire (1588-1618), *The Antiquary*, **21**, May and June 1890, pp.202-205 and pp.261-264, and *The Antiquary*, **22**, July and August 1890, pp.24-26 and 50-53. I thank the staff of the local history section of the old Birmingham Central Library for access to these volumes. For Jacobean building accounts see the works cited in note 20 for Hatfield House; Summerson, 1959 for Theobalds; and H.L. Bradfer-Lawrence, 'The Building of Raynham Hall, *Norfolk Archaeology*, **23**, 1927, pp.93-146 with the accounts printed *ibid.* pp.106-136.

67. A.H. Thompson, 'The Building Accounts of Kirby Muxloe Castle 1480-1484', *Trans. Leicestershire Archaeological and Architectural Society*, **11**, 1913-20, pages 193-345.

68. Henry V's three brothers all died without legitimate heirs of the body and their property automatically reverted to the crown but retaining a life interest for any surviving wife. The Duchess of Clarence continued to live at Woking Palace until her death in 1439. She was then buried with both husbands under a magnificent tomb chest with alabaster effigies in St Michael's Chapel, Canterbury Cathedral.

69. D.H. Kennett, 'Early Brick Houses in England: Patrons and Incomes', *BBS Information*, **98**, November 2005, pp.6-13, using H.L. Gray, 'Incomes from Land in England in 1436', *English Historical Review*, **49**, 1934, pp.607-639, for assessments from the 1436 Income Tax.

70. £200 a year in 1436 would be the approximate equivalent of an annual income of £3,500,000 in 2020.

71. W. Whyte, *Redbrick: A Social and Architectural History of Britain's Civic Universities*, Oxford: Oxford University Press, 2015, pbk. 2016.

72. J. Mordaunt Crook, *The Rise of the Nouveau Riches*, London: John Murray, 1999, pbk, 2000.

73. Whyte, 2015/2016, p.13, citing Crook, 1999/2000, p.2. Whyte, 2015/2016, pp.13-14 provides an introduction to the literature of how buildings were used as opposed to the more usual descriptions and plans of buildings.

74. Airs, 1995, is pertinent here, so too is a somewhat rare volume: D. Knoop and G.P. Jones, *The Medieval Mason: an Economic History of English Stone Building in the later Middle Ages and Early Modern Times*, Manchester: Manchester University Press, 1933. Despite its title and sub-title, the latter also cites evidence from a number of brick buildings. In 2017, this reviewer gave a paper at Leeds IMC 2017 entitled 'Patron and Brickworker: Shared Assumptions or Conflicts of Interest', of which a revised version is in progress for inclusion in a future issue of *British Brick Society Information*.

75. In her text, Ms Haynes makes a brief reference to the Brick Tax (p.186) and the ways in which some brickmakers tried to get round it. Her Bibliography notes all three articles by T.P. Smith on the Brick Tax, levied 1784-1849: see T.P. Smith, 'The Brick Tax and Its Effects: Part I', *BBS Information,* **57,** November 1992, pp. 4-9; '... Part II', *BBS Information,* **58,** February 1993, pp.14-20; '... Part III', *BBS Information,* **63,** October 1994, pp.4-13. The subject of consumption taxes on building materials and the effect of such taxes on the level of construction at any one time, both nationally and in specific localities, needs further exploration. This writer's impression is that like modern VAT, the actual tax made very little difference to the level of construction activity. The tax was paid by the producer before the bricks were sold and passed on to the customer in the price charged per thousand bricks. Builders paid the Brick Tax just as today we pay VAT on practically everything which we buy from windscreen wipers to a washing machine.

76. It is for these chapters (the majority of the pages in the book) that other reviewers have rated it highly: see James Campbell in *Current Archaeology,* December 2019, or Peter Hounsell, this issue of *British Brick Society Information.* pp.5-7.

77. [At one point, it was possible that this review might have been included in *BBS Information,* **145,** May 2020, the recent 'Brick in South West England' issue, hence the use of examples from south-west England. (Ed.)]

BRICK AT RISK:
CHAWTON COTTAGE: JANE AUSTEN'S HOME

The great English writers are often commemorated by the preservation of a house or houses connected with them and their work. Such preservation is usually vested in a relatively impecunious charitable trust whose aim is to preserve the house and its contents and where possible to add significant items to the collections. The house may contain the situation under which they worked whether at a small table or a large desk. It will also have their writing materials and implements and, most significant, manuscript collections of the drafts of their writings, their letters, and correspondence to and from publishers.

In 1947, the Jane Austen Society had raised sufficient funds to purchase Chawton Cottage, the novelist's home from 1809 to her death in 1817, where she wrote all six of her famous novels. But lacking visitors to the house due to the restrictions imposed by the presence of Covid-19, the society is struggling to survive and the future of the house and its collections are in doubt. However, in late September 2020, the Jane Austen Society's website announced the reopening of Chawton Cottage.

Chawton Cottage was probably built *circa* 1700 and the five-bay brick building became an inn *circa* 1769 before being provided by Edward Knight, Jane's brother, for his sisters, Jane and Cassandra, and their mother: Edward Austen had taken the surname Knight on inheriting the Chawton estate in 1794.

Part of the exterior of Chawton Cottage was modernised using mathematical tiles (brick tiles). Part is an L-shaped rear wing of brick and clapboarded outbuildings, including a brewhouse and washhouse, stables, and granary.

After the death of Cassandra Austen, Chawton Cottage was divided into three farmworkers' cottages, which was the state in which it was purchased by the Jane Austen Society.

D.H. KENNETT

Spanish Practices: Dustbin Rubbish and the London Stock Brick

Peter Hounsell

In *British Brick Society Information*, **137,** November 2017, there was a multi-authored article, to which I contributed, responding to an enquiry from a BBS member about the dust heap at King's Cross whose contents were exported to Russia to assist in the rebuilding of Moscow. There is no doubt that this dust heap, and others like it, existed in London in the first half of the nineteenth century, but the link to Moscow is more tenuous.[1]

As the article explained, there was a close relationship between the rubbish that was collected from London houses, and the style of brickmaking prevalent in the London area throughout the nineteenth century. This article explores that relationship further. My researches have led me to investigate both the rubbish business in London, and stock brick manufacturing in the London area, and particularly in the western part of Middlesex known as the Cowley district, so this is an attempt to look at the way the two occupations interacted.[2]

We might start with two quotations:

> The ashes which daily accumulate in the houses of the metropolis, from the constant use of coal as fuel, are removed from time to time, by a class of men, in the employ of those persons who farm of the different parishes the right of collecting this rubbish... Formerly each parish paid a sum annually to anyone, who would engage to collect the ashes; but as building has of late years been carried to a great extent, and as the ashes are essentially necessary in the manufacture of bricks, they are now of great value, and the parishes obtain a considerable sum of money for the grant of the privilege of collecting them. They are conveyed to appropriate places on the outskirts of the town, where they are sifted, and prepared for the brick-makers.[3]

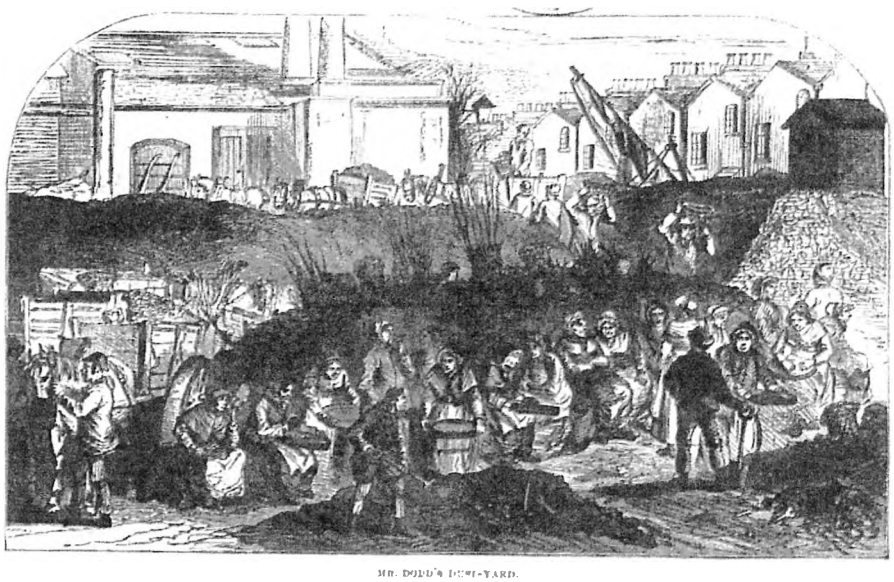
> The most valuable of these items are the waste pieces of coal, and what is termed the "breeze," or coal-dust and half-burnt ashes. The amount of waste that goes on in London households in this item of coal can hardly be conceived, unless the spectator sees the quantity that is daily rescued in these yards. It may be measured by the fact, that after selling the larger pieces to the poor, the refuse "breeze" is sufficient to bake the bricks that are rebuilding London. Most of the dust contractors are builders as well, and the breeze is used by them for the purpose of embedding the newly-made bricks into compact square stacks, which are seen everywhere in the suburbs of London. The breeze having been fired, the mass burns with a slow combustion, aided by the circulation of air, which is kept up by the method of stacking; and in the course of two or three weeks the London clay is converted into good building material. Thus, our houses may be said to arise again from the refuse they have cast out...[4]

The two quotations are over fifty years apart in date, but both convey the same message, that is the importance of ashes from coal fires in the style of brickmaking in the vicinity of London. In the second one from 1870, Andrew Wynter was describing the system of refuse recycling then current in the London area; that after removing the paper, metal, glass and food scraps, what remained were the ashes and cinders. Much of this material was sold to brickmakers. Coal fires until the beginning of the twentieth century were the main means of heating homes, and coal, until the development of gas cooking stoves, the main fuel used for cooking. A prodigious amount of coal was used in London homes and commercial premises, resulting in a similarly large quantity of ashes being cleared from the grates. These ashes found their way into the dustbins of the capital. Ashes made up by far the largest proportion of domestic refuse until the twentieth century, still more than half in the 1920s.[5] When the composition of domestic refuse was first scientifically measured in 1887 the ashes accounted for 84 per cent of the dustbin contents, and in 1890 it was said that fine ash constituted 53 per cent by weight of London's rubbish, and larger pieces of partly burnt or unburnt coal a further 29 per cent.[6]

The sorting process that separated the valuable ashes and breeze from the rest of the rubbish took place at the dust contractors' yards. In some places the unsifted refuse was allowed to accumulate sufficiently to create the refuse mountains that were the subject of the earlier article. What would not be immediately apparent from the illustrations that accompanied that article are the tiny figures near the base of the mountains who are

engaged in the sorting process. These gangs of sorters, mostly women, were employed, often by a sub-contractor, to sift the refuse and to recover the different items of material, each of which had a potential sale. The women used large sieves, and wore padded clothing to protect themselves from injury when the sieves hit their bodies. These 'hill-women', as they were often known, can be seen at work more clearly in illustrations, from books by Henry Mayhew, and John Greenwood, shown here (figs.1 and 2).[7]

VIEW OF A DUST YARD.
(From a Sketch taken on the spot.)



MR. DODD'S DUST-YARD.

Fig.1 (above) 'View of a Dust Yard' from Henry Mayhew, *London Labour and London Poor*, 1861-62.
Fig.2 (below) 'Mr Dodd's Dust Yard', from John Greenwood, *Journeys through London: or Byways of Modern Babylon*, 1873.

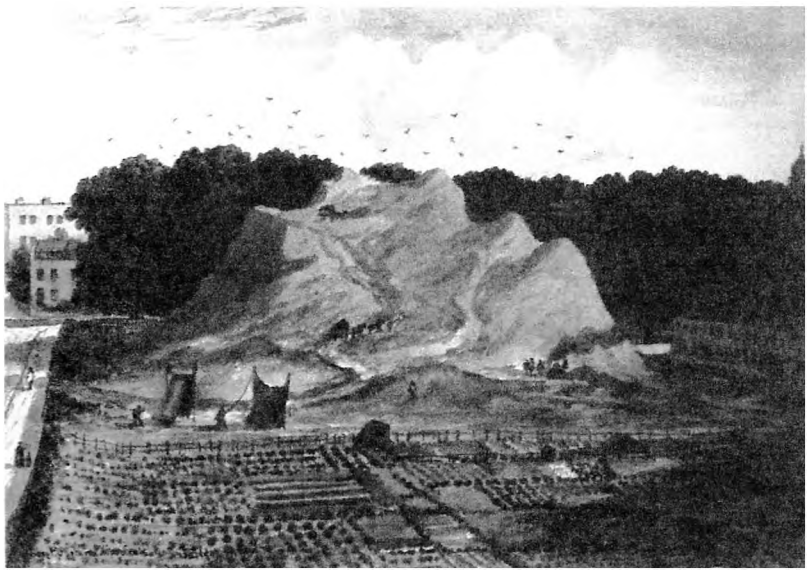


Fig.3 The Great Dust Heap, next to Battlebridge, by E.H. Dixon, 1837 (Wellcome Trust)

There is no way of ascertaining how many of these dust mountains existed in the London area. There are illustrations and descriptions of about half-a-dozen, but there may have been more, and smaller heaps as well. These very large accumulations date from the first half of the nineteenth century. It is easy to see why. Demand for the breeze and ashes was not steady, but fluctuated in line with the building cycle. When demand for bricks was low, brickmakers took less material from the dust contractors, whilst the volume of refuse being produced did not fluctuate in the same way. This could account for the attraction of sending a dust heap to Moscow in the 1820s when local demand was low; there was a marked reduction in the number of bricks produced in the London area after 1825, and output did not return to the levels experienced in the post-Napoleonic war boom until the 1840s.[8]

By the mid-century nuisance legislation effectively outlawed these major accumulations of refuse, although it can never have been pleasant to live near to one of them – look at the proximity of the houses to the heap in the watercolour 'The Great Dust Heap at King's Cross 1837' (fig.3) which accompanied the earlier article and is reproduced on the cover of this issue of *British Brick Society Information*.

As well as the smells from the decomposing organic material, and the dust that blew off them, there was the possibility that the heap would collapse and engulf nearby properties.[9] In the wake of sanitary concerns that arose with a series of cholera epidemics in 1831-32, 1848-49, 1853-54 and 1866-67, there was a focus on cleaning up cities, and whilst the miasmic theory of the spread of cholera and other contagious diseases held sway, on removing offensive smells. Legislation in the form of the Nuisance Removal Act of 1846 was introduced (followed by several further acts) and it contained powers that prevented large accumulations building up. Magistrates were able to respond to complaints by issuing abatement orders if two medical practitioners certified that 'the accumulation of any offensive or noxious matter, refuse, dung or offal' was 'likely to be prejudicial to the health of the occupiers, or of any persons whose habitations are in the neighbourhood'.[10]

Many of the dust contractors had wharves beside the Thames or at places like Paddington basin on the Grand Junction Canal, to which the refuse was conveyed, and where it was sifted prior to being loaded into barges for disposal. The incoming loads of refuse were supposed to be dealt with immediately on arrival and moved on so that offensive material did not accumulate, but this did not always happen. Inevitably dustyards were even less pleasant places in warmer weather, and so, in the summer of 1850, Paddington Vestry invoked the sanitary laws against six dust contractors, one of whom was eventually fined the large sum of £300. One of these contractors, John Gore, is known to have sold his ashes to a Mr Tildersley, a Southall brickmaker.[11]

Why did brickmakers choose to use these waste materials? The residues of burning coal in domestic hearths or stoves still retained some calorific value, as combustion tended to be incomplete. Generally described in the literature of the times as ashes and breeze, the finer material was incorporated in the clay mix, whilst the coarser material was used as a fuel in the clamp, mixed with a proportion of coal dust as necessary to get the fire started. Ashes made up a surprisingly large proportion of the clay mix. One estimate is that a

Kent stock brick contained 64 per cent clay, 11 per cent chalk, and 25 per cent fine ash.[12] The ashes were sieved, and the finer material was mixed with the brickearth, a process known as "soiling" or "tempering", whilst the coarser residue was reserved as fuel for the clamps.[13] There were dangers in over-soiling, and the proportions of ash had to be varied according to the "strength" of the clay. The well-known authority on nineteenth century brickmaking, Edward Dobson, concluded that 'the proportion of ashes depends very much on the quality of the earth, but may be stated approximately at about 35 chaldrons for every 100,000 bricks'.[14] A contemporary of Dobson observed that

> Breeze or ashes constitute a very important element in the manufacture of bricks, for if carefully managed according to the quality of clay, it may be made to produce very effective results both with reference to colour and quality.

He thought that typical proportions of raw materials were 65 per cent clay, 20 per cent breeze and 15 per cent chalk on heavier clays, or 75 per cent clay, 15 per cent breeze and 10 per cent chalk on lighter soils. In some cases, a small quantity (2 – 5 per cent) of sand might also be added.[15]

Henry Mayhew's estimate was that 'the fine ashes are added to the clay in the proportion of one fifth ashes to four fifths clay [i.e. 20 per cent ashes], or 60 chaldrons to 240 cubic yards is sufficient to make 100,000 bricks', clearly a much larger proportion than the 35 chaldrons that Dobson suggested.[16]

The use of ashes had a two-fold objective: it both extended the clay and incorporated a certain amount of fuel within the brick helping to ensure that it burnt fully through, when, as on many fields in the London area, the brick was burnt in a clamp rather than in a kiln. In this way the bricks acquired a fuel element otherwise lacking in the brickearth of the London area, although present in brick clays elsewhere in the country, such as the Lower Oxford clay from which the Fletton brick is produced. One of the visual characteristics of the yellow stock brick of the nineteenth century is the black spots from the combusted ash and small holes caused where the ash has burnt away completely.

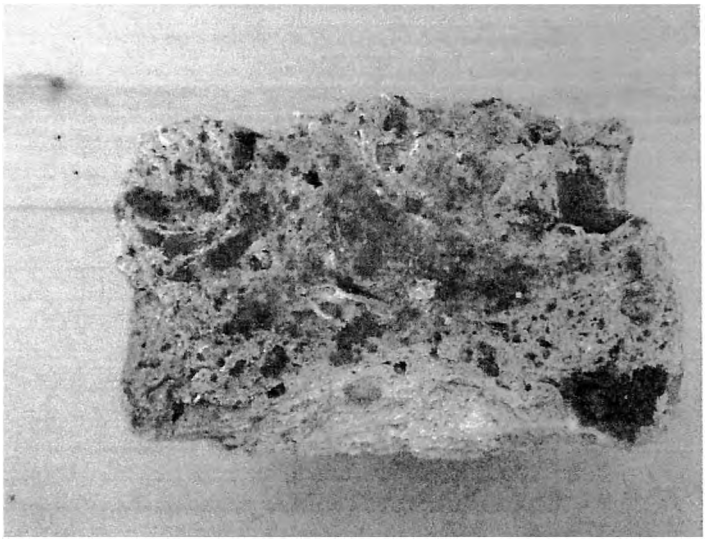


Fig.4 Cross-section of nineteenth-century stock brick (Author's collection)

The advantage to brickmakers of using fuel recovered from the refuse was that it was cheaper than buying new coal or coke. The government had imposed an excise duty on coal in the eighteenth century which at its highest level in 1809 was 12*s.* 6*d.* a chaldron, before being lowered to 6s in 1824 and finally abolished in 1831. A further duty was levied on coal sold in the London area. This had been introduced in the wake of the Great Fire to pay for the building of St Pauls, but was continued in the following centuries for other public works and charitable purposes. By the Coal Duties Act (1842) the area covered by the London coal duties was extended to 20 miles from the General Post Office. The duty was finally abolished in 1889. [17]

There is little information about what brickmakers paid for the ashes and breeze supplied to them by the dust contractors, but given the quantities required, it must have been a significant element of their overall costs. Using Dobson's cost estimates from his 1851 edition, the cost of soiling together with the cost of breeze

per thousand bricks was 4*s.* 6*d.*, or 18 per cent of the production costs. By the 1899 edition, this cost seems to have reduced to about 9 per cent.[18] Finding real costs rather than estimates is difficult. The bankruptcy of Henry Hickman in 1831 provides a clue. The total costs of his business over the period 1825-31 were £8,649 12*s.* 9*d.*, of which the ashes and breeze he had purchased from George Stapleton amounted to £1,473 17*s.* 11*d.*, which is 17 per cent of the total, and close to Dobson's estimate.[19]

The brickmakers acquired the ashes and breeze in one of two forms: in a state where it had already been separated out from the rest of the refuse, or as part of a consignment of unsifted domestic refuse. The London dust contractors had their own dustyards where the sifting process took place; in these the ashes and breeze were separated out from the other material in the waste stream - the paper, fabric, glass, metal, food, broken crockery and the like – and all the different elements sold on to dealers. Broken crockery and the ubiquitous oyster shells would be used as hardcore in building foundations and for roads, glass could be melted down and recycled. Food waste could always be used as a fertiliser or soil conditioner. However, it is unlikely that the ashes, even after the sifting process, were always completely unadulterated with food material which would begin to rot down and become smelly. This was the occasion of many complaints.

Sometimes however, brickmakers took the refuse from the dust contractors in its rough, unsifted state. Carts would carry it to the brickfield if it was close to the area where the refuse had been collected; for example, in the 1890s in Acton, brickmakers used ashes from Acton and Chiswick.[20] Much of the refuse created by the inner London vestries was taken to Thameside wharves or to places like Paddington Basin, or other wharves on the Regent's Canal. Barges or canal boats were used to transport the refuse to the brickfield, where it was piled up. In the jargon of the time, this unsifted refuse was known as 'rough stuff' and was generally an unpleasant cargo for the crews, as the boats were accompanied by swarms of flies. Rough stuff was also a dangerous cargo; as the rubbish decomposed it released methane gas that presented a risk of accidental combustion, although the absence of reports of fires on boats suggest such occurrences were rare. Ashes or unsifted refuse was the logical return cargo for a consignment of bricks. Thames sailing barges would take up a freight of bricks from the Kent or Essex brickfields and collect rough stuff from a number of Thameside wharves such as Kensington Vestry, Clarkson's, Vauxhall, Lime Kiln Dock, Murrells Wharf, Blackfriars, Battersea, Hermitage wharf, Putney and Chelsea. There would be a freight charge on these cargoes, but many of the brickmakers around the Thames estuary, the Swale and the Medway, operated extensive fleets of spritsail barges, of which those belonging to Smeed Dean and Eastwoods are probably the best known. Many of the brickmakers in the Cowley district similarly had their own canal boats.[21] On arriving back at the brickfield the rough stuff was unloaded, carted to a vacant site and tipped in huge mounds, as one writer put it, 'to smoulder, smell and breed rats'. There it was left for about a year during which much of the vegetable matter rotted away, after which it was sifted and graded.[22] Before it was sifted the larger stuff – paper, rags, iron and wood - were removed; young boys were employed at 2*s.* 6*d.* a week in the 1900s to pick out the hardcore off the barrows. The remainder was then passed through screens of various mesh. The finest material was called 'soil' and this was the material added to the brick clay in the process known as 'soiling'. The next grade comprised the breeze which would also be added to the clay mix. The last category was the cinders – material that would pass through a 1 to 1½ inch screen – and this was the fuel for the clamps. However, some broken glass and crockery would also pass through this screen, and this had to be removed by hand, by so-called platter boys and was a job for the winter months.[23]

Even when the ashes and cinders were received in a partially sorted state, there was still a need for further sifting to grade the material. James Reed, born in 1848, started work as a child in a Yiewsley brickfield where his father was a setter (the man who supervised the building of the clamps). Screening ashes was his first job:

> I began my apprenticeship by screening breeze - that is separating the ashes, the rough from the fine. Part of my job was to carry some of it in a basket – made for that purpose – on my shoulder, up a ladder to the top of the kiln. When screening the breeze, we often found coppers; occasionally silver, and even gold coins, and small jewellery, that had escaped the refuse sorters in London. We salvaged small pieces of brass and copper, and sold them to rag and bone men.[24]

The brickmakers were dependent on the refuse contractors for their source of fuel, but similarly the refuse contractors relied on brickmakers as an outlet for all or part of their refuse. This seems to have been highly lucrative for the refuse contractors, and in the first half of the nineteenth century the income from brickmakers was sufficiently large to underpin the refuse economy of London. During this period the contractors who took

up contracts with the metropolitan vestries to collect and dispose of the household refuse were able to pay the vestries for the privilege, rather than expecting to be paid for it. Dust contracts were tendered by the vestries on an annual basis, and the contract was usually awarded to the contractor which offered the vestry the largest sum. So, from the vestries' point of view, refuse collection was a source of profit rather than a burden on their ratepayers. Contemporaries commented on the large sums that the vestries enjoyed.

> The transformation of earth into the precious metals is carried on with wonderful facility in this metropolis: the very dirt of some of the parishes is eagerly sought for as place and profit. In St Marylebone the present contractor has paid £1,890 per annum for the dust! In St George's, Hanover Square, the contractor gives £1,230 for the privilege of sweeping the streets; St Martin's parish received last year, from the contractor, £250, and he swept the streets into the bargain! St James's parish paid £100 for sweeping, and received £200 for the breeze, being a balance in favour of the parish of £100. St Paul's, Covent Garden, received £150 from the contractor last year, and this year will receive £210. So, by a species of mercantile legerdemain, or modern alchymy [*sic*], the enormous sum of £3,780 yearly is received alone for the accumulated dirt of five parishes.[25]

What might seem like journalistic exaggeration is confirmed by an examination of the accounts of the vestries at this period. Between 1803 and 1812 St Marylebone vestry received as much as £5,000 a year from its contractors, but this dropped away in the following years because of a slump in house building, and a reduced demand for ashes.[26] In 1853 the successful tender for the rubbish of St James Clerkenwell vestry, that provided by George Tilley, offered the huge sum of £1,051 for the annual contract to collect and dispose of the refuse and to clean the streets.[27] However, by mid-century such sums were no longer routinely achieved. When in 1856 six contractors bid for Paddington vestry's annual refuse contract only one offered to pay anything - whilst all the others expected to be paid by the vestry - and his tender for £50 was accepted.[28] Whilst some of the material sorted from the refuse was the purview of the man who employed the hill-women and supervised the sorting process, the income from the sale of the ashes and breeze was usually reserved for the dust contractor and provided his main source of income, from which he paid the vestry.

However, the close ties between brickmakers and refuse contractors had its dangers. Whilst the volume of refuse from London homes was generally constant – although there was a seasonal variation as more coal was used in the winter months than in the summer – the demand for bricks fluctuated in line with the building cycle. So, when the construction sector was active, the demand for bricks rose, and brickmakers responded by increasing their output. The close relationship between dustmen and brickmakers had become established during a busy period of building. Increased production naturally increased the demand for ashes, and allowed dust contractors to charge more. Troughs in the building cycle had the opposite effect causing brickmakers to cut back on production, leaving the market with a glut of ashes. Dust contractors bidding for vestry contracts always had to anticipate the likely level of demand, otherwise they could price their tender too high, and find themselves exposed by falling demand. In 1856 William Stapleton had to explain to Paddington vestry that he had been unable to pay the expected sum, 'owing to the very low price of ashes and the loss sustained in working the dust contract'.[29] By mid-century a larger problem developed that destroyed the profitable situation that vestries had enjoyed for decades, as Henry Mayhew explained:

> Of late years, however, the demand [for ashes] has fallen off greatly, while the supply has been progressively increasing, owing to the extension of the metropolis, so that the Contractors have not only declined paying anything for the liberty to collect it, but now stipulate to receive a certain sum for the removal of it.[30]

William Thorn, Stapleton's business partner, explained that in the 1840s there had been a drastic fall in the price they could get for breeze.

> Three years ago I sold the ashes and breeze at 10s on board [loaded in a canal boat] at Paddington. I have not sold any this year on board, but I am selling them at Battle Bridge [near Kings Cross] for 3*s*.

Asked what had caused this fall off in demand, he replied:

> I attribute it to the depression in trade generally, and to the builders who were substantial men 3 or 4 years ago now using a great deal of flying paper, so that if I send in 100,000 bricks to a man, I get a bill from him, and I feel very nervous about its being taken up, and the we have been obliged to keep our bricks back rather than sell at all.[31]

Mayhew suggests that at the height of demand for ashes the dust contractors were able to get £1 per chaldron for their ashes, but with supply exceeding demand, the price had fallen to only 2*s.* 6*d.* per chaldron.[32]

From that period the vestries generally had to pay contractors for refuse collection. Nevertheless, this did not break the link between dust contractors and brickmakers, only now the sales of ashes offset the contractors' costs rather than covering them all. Even when the London vestries began to take over direct responsibility for the collection and disposal of their residents' refuse rather than put it out to contract, sales to brickmakers still made up a useful source of income. In 1882 Clerkenwell vestry's gross expenditure on refuse collection was £5,460 offset by £1,295 from the sales of ashes, breeze and other recyclables.[33] However, the demand for ashes was still volatile as Paddington vestry found in 1879. With the demand for ashes low, and consequently the price paid for them, it was faced with the problem of large quantities of rubbish accumulating at its wharf at Paddington Basin. The vestry decided to stockpile the unwanted ashes against a rise in demand, and purchased a piece of canalside land at Alperton to which the ashes could readily be shipped.[34]

There was a major problem in 1890 when a strike by the bargemen who transported bricks to London from the Medway area prompted the owners to shut their brickfields, causing a problem for the dust contractors of several inner London parishes. Since the usual route for disposing of the ashes had dried up, at least one London dust contractor had to inform Bermondsey vestry of the increased costs he was incurring, and consider the expedient of dumping the refuse at sea.[35]

Sales of ashes continued into the twentieth century. The refuse contractors in Willesden in 1901 were said 'to depend for the disposal of their refuse on brickfields in the neighbourhood and outlying parts. With the exception of about two months the whole of the refuse during the year from these two districts has been deposited at the Brent brickfields, Acton Lane, and for the other two months it was deposited at the Grange brickfields, Chambers Lane.' [36]

Despite changes in the brickmaking industry in the early twentieth century which saw a reduction in the number of businesses and brickfields as competition from the Fletton bricks north of London began to have an effect, in the 1920s brickmakers were still important users of ashes and breeze from the London waste stream. A survey made in the mid-1920s, identified forty-one brickfields in the five counties surrounding London which between them manufactured 249 million bricks annually, and these brickfields took 15 per cent of the crude or separated rubbish out of a total of 1,202,000 tons produced in London.[37] In 1928-29 Marylebone Borough Council sold 5,250 tons of ashes to two brickmaking concerns and was paid £2,531.[38] The last brickfield in the Cowley district closed about 1960, and in the 1950s it was holding an accumulation of 20,000 tons of ashes and breeze.[39] It was only the reduction in the number of coal fires as a result of Clean Air legislation that ash from household refuse no longer provided sufficient fuel for the remaining stock brickmakers. It was claimed that in the 1980s the long-established Kent brickmaker Smeed Dean was using old deposits of ashes stored at the brickfield, some of which had been brought from London by sailing barge over a century before! [40]

Although there was a gradual reduction in the volume of ashes coming from London households as a result of alternative methods of heating and cooking, there was another specific factor affecting the supply in the 1890s. This was the introduction of so-called 'dust destructors' – incinerators for burning refuse employed by many London vestries and Metropolitan Boroughs. To make these incinerators worked effectively the retention of the ash within the refuse was important to ensure that sufficiently high temperatures were achieved to burn off the vegetable matter. By 1904 about half of the metropolitan boroughs had refuse incinerators, and by 1914 a further twenty outer London districts also did.[41] It is difficult to quantify how big a problem this was for brickmakers, but it was prompting discussions about alternatives in the professional press. An article in the *British Clayworker* in 1898 suggested that not only was there a shortage of ashes and breeze, but that which was still available was of a lower quality, as much as seven per cent less value than twenty years earlier, because the quality of house coal had itself deteriorated. The proposed alternatives were coke breeze (presumably from gasworks) or coal dust. There were some useful comparisons. London dust would cost 3 shillings a ton and each ton would provide 7 cwt of large refuse which was useless, 3 cwt of cinders for use in the clamps, and 10 cwt of soil which was used in the clay mix. Costs of screening the refuse would add an additional shilling to the overall cost. Each batch of 1,000 bricks would require 7 cwt of soil and 3 cwt of cinders, which meant the

fuel costs were 3 shillings. By comparison 1 ton of coke breeze would yield 5 cwt of cinders and 15 cwt of soil with no wastage. Screening would account for an additional 4d per ton. With a higher calorific content the fuel for 1,000 bricks would cost 2 shillings. A mixture of coke and coal dust would cost 2*s* 10*d*. As with many such reports there is no way of knowing how many brickmakers adopted what appeared to be the most cost-effective option.[42] But even in the 1840s alternatives to the use of recovered ash and breeze was being proposed. William Rhodes, the well-known brickmaker and estate developer in north London, lodged a patent application for the use of coke rather than breeze in brickmaking, presumably because coke itself was a relatively cheap by-product of the town gas industry. [43]

The interdependence between rubbish contractors and brickmakers resulted in some vertical integration of businesses, although it is only possible to identify a few contractors operating in both sectors. When Henry Mayhew wrote about dustmen around 1860, he identified the dust contractors for each of the London parishes; so for Islington he lists 'Stroud, Brickmaker' and for St Luke's and St James Clerkenwell 'H. Dodd' who is not identified as a brickmaker.[44] James and Alfred Stroud had brickfields in Stoke Newington, and at Southall in the 1860s and the business was a long running one, still in operation in the 1890s. Dodd, who described himself in 1863 as a 'barge and canal boat owner, brickmaker, merchant and salesman, carman, road and general contractor and wharfinger' had brickfields in Hackney and at Yeading (in the parish of Hayes, Middlesex). [45]

Later in the century William Mead & Co Ltd was the dust contractor for Paddington parish, and operated brickfields close to the Slough arm of the Grand Junction Canal at Shredding Green, Iver.[46] John Culverhouse was both a brickmaker in Hampstead and the local vestry's refuse contractor in the 1850s, but he also took in dust and ashes from the adjacent parishes of St Marylebone and St Pancras on his brickfield in Finchley Road. [47]

It is likely that many metropolitan vestries had more than one customer for their ashes, but a Mr Collins, brickmaker of Wood Lane, Shepherd's Bush, offered in 1876 to take and dispose of all of the unsifted refuse from Paddington parish. This was not without its problems for Mr Collins, as he presumably hoped to benefit from selling anything of value from the refuse as well as utilising the ashes in his brickmaking business.[48] When the vestry later advertised for contractors with wharves at Paddington Basin to take the refuse from the parish, they received offers from Mead, and Pocock, both of whom were brickmakers in the Cowley district, but finally accepted the one from the brickmakers Tildersley & Minter, whose brickfield was in Southall. The contract was that the vestry would pay them 1s per load for not less than 6,000 loads, but this arrangement appears to have been operating concurrently with the one made with Collins. [49]

As the brickfields began to be worked out so a different relationship with regard to domestic rubbish developed between gravel digging firms and London borough councils. Gravel digging in west Middlesex often took place in brickfields where the clay had been exhausted. Gravel digging usually resulted in much deeper excavations than those caused by clay digging, and these found a use as landfill sites for domestic refuse. Sabey & Co Ltd of Paddington dug gravel in the Yiewsley area in the 1920s and received refuse from Kensington and Willesden which was barged down the canal.[50] Odell Ltd, a company involved in both gravel digging and brickmaking, held an exclusive contract with Paddington Borough Council to dispose of all its rubbish from 1898 for upwards of 20 years, latterly in the name of Thomas Clayton (Paddington) Ltd, which had acquired Odell's assets in 1911. This rubbish was dispatched from Paddington basin along the Grand Junction Canal.

But at a time when much London refuse was being burnt in incinerators or dumped in landfill sites in Middlesex and in Essex, some London councils were still supplying sifted refuse to brickmakers. Between 1917 and 1923 St Marylebone Council disposed of 5,000 tons of ashes, 2,500 tons of breeze and 600 tons of clinker to brickmakers including Reed and Co. of Iver Court brickworks, Broad & Co. Ltd and W.D. Smith, their orders accounting for all the available ashes and breeze. This earnt the council nearly £2,000. As late as 1927 the council was still receiving orders from five brick companies, now mostly working by the Slough arm of the canal, for a total of 7,760 tons of ashes and 3,655 tons of breeze.[51]

Refuse, dust and ashes made up a significant amount of traffic on the Grand Junction Canal. In 1904, 100,249 tons of ashes and roughcast came down the canal from Paddington, whilst 104,467 tons of bricks moved in the other direction. As the brickfields in the Cowley district closed down so the tonnage of bricks fell away very sharply to only 797 tons in 1928, whilst the volume of ashes and rough dust had increased to 163,540 tons, much of it by then ending up in landfill.[52] The canal company's main source of income was the tolls charged on the goods carried along it, which added both to the price of bricks delivered to customers, but also to the cost of the ashes and breeze being sent in the other direction. The maximum toll rates per mile were

set in the legislation authorising the building of the canal, but the Canal Company could set lower charges, if they wished, in order to encourage certain types of cargoes on particular stretches of the canal. Bricks, and ashes, like coal, were important bulk cargoes using the lower stretches of the canal nearest London. In 1866 the company decided that 'ashes, breeze, bricks and manure carried on the Paddington level [that is the stretch without locks between Paddington Basin and Cowley] be charged the Parliamentary tolls per mile, but not to exceed 1*s.* 1*d.* on ashes and breeze, and 1*s.* 2*d.* on bricks and manure. [53]

The use of ashes and cinders extracted from the refuse had the advantage of providing a cheaper source of fuel than coal, but it was not without its disadvantages. Brickfields regularly caused nuisances in built-up areas on account of the smoke produced when the bricks were being burnt, particularly when this was in a clamp rather than a kiln. This was a widespread concern but the accumulation of unsifted refuse on brickfields, and the use of fuel which might still be contaminated by vegetable or other organic refuse compounded the issue. The Medical Officer of Health for Kensington reported a case in 1884:

> The nuisance, it may be mentioned, does not arise from burning clay per se, but is due to the combustion of refuse matter obtained from dustbins, and used in the manufacture of the bricks and as fuel for the baking of the bricks. The "dust" is sifted to remove matter of an organic nature, animal and vegetable, but no amount of sifting will prevent putrid emanations when the refuse is burnt. In the Hampstead case the Vestry officials compelled the removal of all "soft core" from the fields, and it was admitted that the defendants conducted their business with due care, sifting the refuse repeatedly, &c. Still the nuisance continued. Dustbin refuse, it may be mentioned, is left a year to "mellow", exposed to wind and rain, and the ashes become saturated with organic matter. The clay of which the brick is moulded is usually incorporated with dustbin ashes.[54]

The problem continued for a number of years as vestries tried to have brickburning classified as an offensive trade. The case that aroused the greatest publicity was when Chiswick Local Board took action against brickmaker Thomas Hussey in respect of his brickfield at Bedford Park in 1889, a case that ended up in Chancery. The ruling handed down in this case was that Hussey was not to burn any breeze or core containing any vegetable or organic matter.[55]

Most offence was caused by large accumulations of unsifted rubbish remaining for long periods on the brickfields, yet even the sifted ashes and breeze could also pose a nuisance if they were still contaminated by organic matter. The smell was most likely to come from the fuel used in the clamps, but one Medical Officer of Health also believed that the ashes within the brick were a problem. The Hampstead's MOH, sought an injunction to prevent Messrs Ellt continuing to use traditional methods of brickmaking, even though the company started using coal or coke breeze to fire its clamps. He noted in his report

> It appears to me, therefore, that the nauseating fumes are largely caused by slow distillation or baking of the organic matter in the bricks themselves, and that as long as this class of brick is produced and burnt in open clamps the nuisance must continue.[56]

Brickmakers may have tried to avoid the worst aspects of the problem, by not taking ashes from dustmen at times of the year when they were most likely to be contaminated with difficult-to- remove vegetable matter, which generally coincided with the warmer weather. One dust contractor singled out 'cabbage leaves and pea-shells; the brickmakers will not buy breeze at this season [July] in consequence'. [57, 58]

The addition of ashes to the clay mix was usually referred to as 'soiling', but substances added to the clay mix were sometimes known as 'Spanish'. But where does the term 'Spanish' come from? There is no obvious derivation of the name, but the term was in use by 1725.[59] It may have been a derogatory term, implying that the addition of ashes to the clay mix was a suspect process. It is often reported that in the aftermath of the Great Fire, when demand for bricks was at its height, that as a result of shortages, particularly of coal for fuel, brickmakers may have resorted to the practice of 'soiling', using earth that was impregnated by ash from destroyed buildings. The advantages of soiling may have been discovered by accident. It was later said that the practice originated in the manufacture of bricks for the new Royal Exchange, where 'clear sea-coal ashes' were used. The Company of Tilers and Bricklayers took this view in 1714 when it noted that 'the practice of using ashes commonly called Spanish in making bricks began about 40 years since, occasioned by

Fig. 5 Modern Smeed Dean brick.

digging up several fields contiguous to the city after the Great Fire which fields having been much dunged [*sic*] with ashes, it was observed the bricks made with earth in those fields would be sufficiently burned with one half of the coles [*sic*] commonly used'. This practice of soiling carried an economic advantage, as the surveyors working for the Commission for building fifty new churches in Queen Anne's reign were aware; they estimated that if six loads of Spanish were added for every 100,000 bricks then the price would fall by almost 14 per cent. [60]

The use of ashes in the clay mix and breeze as a source of fuel for the clamps quickly became established at the end of the seventeenth century and was encouraged by the excise duty on coal. However, the use of ashes in the clay mix was not without its critics, probably as a result of excessive use. During the course of building the fifty new London churches in the second decade of the eighteenth century, the Commissioners frequently complained about the quality of bricks being offered to them on two grounds; the first was that under-burnt bricks were being supplied, that is, bricks from the outside of the clamp furthest from the source of heat; the second that many bricks had been oversoiled by the addition of too much ash. In December 1713 the surveyors employed by the Commission were instructed to get prices for bricks with and without Spanish, a reflection of their concern about quality.[61]

Such seems to have been the concern about the over use of soiling that a bill introduced in 1726 was designed to eliminate the use of Spanish altogether within the City of London and 15 miles around it. It was argued that

> several persons... continue to make bricks of bad stuff and unsizeable dimensions, and do not well burn the same, and in making thereof mix great quantities of soil, called Spanish, and in burning thereof use small ashes and cynders, commonly called breeze instead of coals, and burn the bricks commonly called grey-stock bricks in clamps and the bricks commonly called place bricks in the same clamps, on the outside of the said grey-stock bricks, by means whereof great part of the bricks now usually made are hollow and unsound... No Spanish shall be mixed with brickearth, nor any breeze used in the burning, and all bricks shall be burnt in kilns or distinct clamps, the place bricks by themselves and the stock bricks by themselves.[62]

This decision was predictably opposed by brickmakers who complained that

> Some Spanish is altogether necessary for some sorts of brick-earth, which will not make bricks without, but will make very good grey stocks and place bricks with; and Spanish is proper for all brick-earth, as it helps bricks in drying and burning, and prevents their cracking, so that they dry and are burnt sooner, and consequently sounder, with Spanish than without..[63]

The complaints by brickmakers seem to have had an impact, for a few years later a new act of Parliament allowed the use of sea-coal ashes mixed with the clay, although the maximum proportion that could be used was specified as not more than 20 loads into the making of 100,000 bricks; each load not exceeding 36 bushels. The act also laid down that the ash so used must go through an ½ in wide sieve. Finally, the mixing of breeze with coal in the clamps was also allowed.[64]

Thereafter, it would seem that the process of soiling with ash became an accepted and established part of the manufacture of London stock bricks for as long as this style of brick continued to be produced, and as long as ash from domestic fires continued to be available from refuse collectors. Some modern bricks use clays which have a greater proportion of carboniferous material, reducing the amount of fuel required to burn them. This was one of the main advantages enjoyed by the Fletton brick manufacturers which enabled them to compete with stock brick makers in the 1890s. [65]

The principle of adding some fuel element to the clay mix continues into modern handmade brick production and W.G Matthews add powdered anthracite to their clay mix. [66]

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BRICK IN THE NEWS: FACING THE FIRST USE OF A NEW BUILDING TECHNOLOGY: DITHERINGTON MILL, SHREWSBURY, SHROPSHIRE

Both the buildings with the earliest use of a completely iron-framed interior and the first fully steel-framed building in the British Isles have been in the news in the early part of 2020, the former with good news, the latter for a less favourable reason. This note concerns the first iron-framed interior and its brick exterior walls.

Ditherington Mill, Shrewsbury, Shropshire, was built between 1795 and 1797 as a flax mill, beside the Shrewsbury Canal, and in response to the demand for linen in the war against the French (1793-1801, 1803-1815); lined was the fabric for soldiers' uniforms. It was designed by Charles Bage, a Shrewsbury surveyor and wine merchant, who went into partnership with the Benyon brothers of Shrewsbury and John Marshall of Leeds, a pioneer in the mechanisation of the flax industry in 1795. Benyon had a serious interest in iron and its structural qualities and knew both William Strutt of Belper, Derbyshire, whose mill had iron columns and William Reynolds of Coalbrookdale, Shrops., who had experimented with cast iron. Unlike Strutt's mill at Belper, Ditherington Mill had both uprights and horizontal beams of iron with the iron cast by William Hazledine of Shrewsbury; the Belper mill had iron uprights but wooden beams. At Ditherington, the spaces between the beams were filled with brick arches. Bage used iron window frames and so eliminated any use of wood in the working area of the mill, so reducing fire risk. The outer brick walls were still load-bearing and provided stability to the iron frame. The stairs were housed separately and access from the working floors was through iron doors. The mill was 180 feet (55 metres) long and 36 feet (11 metres) wide. The external walls are of very large bricks.

There are other buildings connected with the making of flax. In 1801, a small warehouse for finished flax, a blacksmith's shop and a stable were built, all using the large bricks as employed at the mill. A formerly timber-framed wing of the mill, built in 1803, burned down eight years later and what may have been the heckling shed (used to separate long fibres from short) was rebuilt with iron beams and uprights in 1811. Six years earlier, in 1805, a four-storey warehouse had been built to house raw flax; like the wing to the mill, the warehouse was constructed using standard-sized bricks.

Part of the labour at Ditherington Mill was pauper apprentices, for whom two accommodation blocks were constructed, each divided into sections for boys and girls. The earlier of *circa* 1800 was built using large bricks; the later of 1812 was built of standard-sized bricks.

Ditherington Mill continued to produce flax for a century but was converted to a maltings in the late 1890s and with other buildings continued in this use until almost the end of the twentieth century.

An extended account of the buildings of Ditherington Mill is in J. Newman and N. Pevsner, *The Buildings of England: Shropshire*, New Haven and London: Yale University Press, 2006, pages 587-590, with drawing of the iron-framing and the external brick walls.

D.H. KENNETT

Bricks in the Wall at Settle, North Yorkshire: A Potential Source and its History

Derek Barker

In *British Brick Society Information,* **144,** January 2020, pages 53-54, the society's chairman, Mike Chapman, produced a query about the bricks with the brickmarks WW and WDB which are set on edge (fig.1) in a wall beside a car park at Settle, North Yorkshire (fig.2):

> 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.1 Bricks from the wall alongside the entrance road to the Greenfoot public car park, Settle, North Yorkshire, with the marks WW and WDB.
Photograph: Mike Chapman

Mike thought that it would be very interesting to be able to both identify the brick manufacturers and something of the history of the wall itself. Having seen the wall, it is possible both to suggest a potential manufacturer of the bricks and offer something of the history of the enterprise which produced them.

My understanding is that William Bracewell (1814-1885) was a Lancashire mill-owner, born in Barnoldswick or Earby. He bought Ingleton Colliery (Wilson Wood Colliery). I gather that he wished to supply coal for his mills at Barnoldswick, Yorks., and Colne, Lancs. He subsequently built a brickworks and made large quantities of bricks for his own use but the business collapsed on his death in 1885. William Bracewell was the first to make use of the railway which arrived in Ingleton in 1849. He had his own railway wagons on the main line.

James Barker (not a relative) took over the pits from the Bracewell executors who had built a tramway to the main line from the Ingleton Colliery and Brickworks. When James Barker took over the Ingleton Collieries, he took out small quantities of fireclay which made excellent bricks. They were originally made by hand but in 1896 the demand was so great that he installed modern machinery to extend his business. James Barker died in 1913; I assume that the Ingleton Brickworks closed at this time, although the colliery lingered on until the 1930s.

Several brickmarks are known which may have originated from this story:

- [BARKER], [INGLETON]
- [WDB], [WW] bricks. Could this be William Bracewell and Wilson Wood?

Fig.2 The brick wall at the entrance to the Greenfoot public car park in Settle, North Yorkshire. Photograph: Mike Chapman

ACKNOWLEDGEMENT

Thanks to Mike Chapman for allowing me to re-use his photographs of the bricks and the wall in Settle. The photographs are in colour in *BBS Information*, **144,** January 2020, pages 53-54.

BRICK IN THE NEWS: GLYNDEBOURNE, EAST SUSSEX

On a west Saturday afternoon in November 2000, a large party of the members of the British Brick Society visited the then relatively new Opera House at Glyndebourne, East Sussex (1991-93: Michael Hopkins & Partners). Due to lockdown in the light of the Coronavirus pandemic, performances in the house have not been possible in 2020. However, staging of performances outdoors was permitted in August. A stage was erected for the singers against the wall of the ancillary buildings of the 1933-34 and another stage put up for the orchestra at one side of the actors' domain.

The centre double-page photograph in *The Guardian*, Friday 14 August 2020, showed the brickwork of two buildings. The 1930s ancillary buildings are in a red brick laid in a version of Flemish Bond interspersed with irregularly-sized white stone blocks to form a rough chequer patter. The windows are mullioned and in one case transomed. The fenestration echoed that of the original early-seventeenth-century house which was given Georgian additions and then completely remodelled twice: in 1876 by the architect Ewan Christian and then between 1930 and 1934 for John Christie, the owner of Glynde House who conceived and brought to fruition the idea of an opera house, assisted by Edmund I. Warre, a friend from his schooldays at Eton. The second building in the photograph is the Rehearsal Stage, built in 1959 to the same materials and brick bond as the ancillary buildings but using a much darker red brick. This is much taller and is supported by wide pilasters using the same materials.

For a brief account of Glyndebourne see N. Antram and N. Pevsner, *The Buildings of England: Sussex: East with Brighton and Hove*, New Haven and London: Yale University Press, 2012, pages 405-407. The British Brick Society's visit to Glyndebourne in November 2000 is noted *BBS Information*, **83,** Feb 2001, pages 26-28.

D.H. KENNETT

Book Review:
Twentieth-Century Meeting Places for the Christian God

Susannah Charlton, Elain Harwood and Clare Price (editors), *100 Churches, 100 Years*,
London: Batsford for the Twentieth Century Society, 2019,
208 pages, numerous colour and monochrome photographs,
ISBN 978-1-84994-514-1, price £25-00 hardback.

To celebrate a century of its concerns, in 2014, the Twentieth Century Society issued *100 Buildings, 100 Years*, edited by Susannah Charlton with Elain Harwood.[1] It covered all building types with a single building for each year. But churches were relatively sparsely represented: nine only, of which five are given individual treatment in the present volume.[2] In the new book, one of the nine churches in the previous volume, Our Lady Help of Christians, Tile Cross, Birmingham, is noted under the practice then led by Richard Gilbert Scott (*d.*2007)[3] but not as an individual building: its companion, St Thomas More, Sheldon (page 117), was given individual treatment.

This new volume concentrates on specifically Christian religious buildings but also includes two crematoria,[4] five college chapels[5] and a Roman Catholic seminary[6] as well as three abbeys[7] and ninety churches: page 70 includes two buildings. The book has an introduction by Clare Price (pages 8-13) and a short essay by Elain Harwood on 'Church Building in Western Europe 1922-1975' (pages 14-17). Following the gazetteer are three essays: 'Places of Worship in a Changing Faith Landscape' by Kate Jordan on buildings for non-Christian faiths (pages 145-149); 'Stained Glass' by Jane Brocket (pages150-156); and 'Art and Artefacts' by Alan Powers (pages 157-161).

The idea behind the new volume is roughly the same as the earlier one, a gazetteer with each church presented under the year of its completion but not every year has a completed building and some years have two or more: 1958 has six entries. Eleven of the religious buildings in the book are from the seven counties of south-west England but none is from Cornwall or Wiltshire: buildings from the last-named county which could have been included have been noted later in this Book Review. There are nine churches from Cornwall built between 1914 and 2015, any one of which would qualify for inclusion: three Anglican, three Roman Catholic, two Methodist, and one United Reformed Church.[8]

In a book covering a century, surely, it should have been possible to have included at least one church from each of the pre-1974 forty-two English counties,[9] each of the six Welsh regions,[10] each of the six counties of Northern Ireland,[11] and each of the nine 1970s local government areas in Scotland, plus allowing for at least one church from both the country's two major cities.[12] Whilst such a proposal would have meant finding around sixty-five churches including ones from areas with which the Twentieth Century Society seems to be less familiar, it would have still allowed free choice of one third of the churches chosen. As crematoria necessarily must accommodate a variety of religious and secular philosophies in their design, their omission would not have detracted from the volume.

The gazetteer is divided into five sections. The decade and a half before the Great Crash elicits ten buildings constructed between 1914 and 1929 (pages 20-29). Of these five were for the Church of England and three for the Roman Catholic Church, including Our Lady and St Alphage at Bath (1927-29: Giles Gilbert Scott), an aisled, basilica constructed of Bath stone rubble.[13] The other buildings from the period were an Armenian Orthodox church (page 25) and a building for the Christian Science Church (page 27).

Twenty-four buildings represent the period 1930-1945 (pages 32-56); fifteen for the Anglicans, seven for the Roman Catholics including two in Scotland and one in Wales, and what we are told was Cachemaille-Day's only nonconformist chapel, a brick building in Sutton, Greater London (page 44). Three from south-west England for the Church of England are all very different. Dedicated to St Francis of Assisi, J. Harold Gibbons' church at Bournemouth of 1929-30, has a cemented exterior painted yellow (page 34) and an aisled nave and fairly long chancel, although the photograph shows the altar at the end of the nave.[14] Two other churches are in Hampshire: St Faith, Lee-on Solent (1933: Seely & Paget) has brick external walls but the interior has concrete arches cast in situ (page 40)[15] while St Philip in the Portsmouth suburb of Cosham, built

between 1935 and 1937 was Ninian Comper's last work, a brick exterior and a plain white interior (page 50).[16] The final building is Douai Abbey, Woolhampton, Berkshire (1928-33: J. Arnold Crush; 1992-93: Michael Blee), is a building of contrasting halves (page 42); brick was used in the later portion.[17] Among churches which might have been included is that dedicated to St John at West Bay, Dorset (1935-39: W.H. Randall Blacking) faced in white render and stone;[18] the architect had been a pupil and later an assistant of Ninian Comper and was the first partner of the Salisbury-based, church specialist Robert Potter.

One thinks of the nonconformist denominations as having Victorian churches but individual congregations renewed their building in the 1920s. One such was the Methodist congregation in Stourbridge, Worcestershire (now in the Metropolitan Borough of Dudley). Their original church (now flats) was erected in 1886; moving along the road, the congregation had a much larger church erected in 1927 to a design by the Birmingham architects Crouch, Butler & Savage. It was built for a much larger congregation than attend today; the western half of the building (fig.1) has become social space, capable of being used for an overflow congregation at weddings or Christmas.

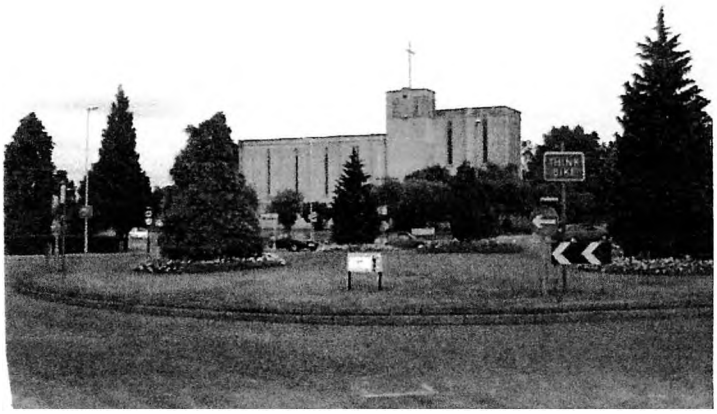
Fig.1 New Road Methodist Centre, Stourbridge, was designed by the Birmingham practice of Crouch, Butler & Savage. Building began in 1927 using a dull red brick laid in Flemish Bond. The church has a north-west tower, a nave with aisles, a chancel with a polygonal sanctuary, and a north chapel. The architects chose a Romanesque style and provided the tower with an elaborate sandstone, arched doorcase. The window surrounds use both white limestone and the local red sandstone.

The book has twenty-one buildings from the decade and a half after the Second World War, 1946-1959 (pages 58-77): eight Anglican, four Roman Catholic of which three are in Scotland, three for the Church of Scotland, and one each for the Baptist Church (page 70), the Congregational Church (page 60), the Dutch Protestants (page 63), the Finnish Lutherans (page 73), the Methodist Church (page 75), and the Unitarians (page 70). The big cities of Devon contribute four buildings. The Mary Harris Memorial Chapel at Exeter University (1958: E.V. Harris), a simple brick building with large, square, oriel windows (page 71).[19] The three Plymouth buildings are all replacements for bomb-damaged structures. The book makes much of the Baptist and Unitarian chapels (both 1958: Richard Fraser of Louis de Soissons Partnership)[20] being at right-angles to one another suggesting inspiration from 'the churches built by the descendants of the Pilgrim Fathers in New England' (page 70).[21] The materials are brick, with an interesting diamond diaper pattern on the building for the Baptists, and stone. Stone for the east and west ends but much render on the side walls, a pattern repeated on the porch-tower characterise the exterior of the Church of the Ascension (1956-58: Robert Potter of Potter & Hare).[22]

A brick church which looks interesting and a possible venue for a British Brick Society visit is the Anglican church dedicated to St John the Evangelist, Newbury, Berkshire (1955-57: Stephen Dykes-Bower) replacing a bombed Butterfield church of 1860, whose rectory still survives.[23] Red brick, both internally and externally but in subtle shades, it is a very tall church in a quasi-Romanesque style: stumpy double-lights for the middle tier, and tall, single lights for the clerestory, all fenestration in the nave being round arched.

The largest group of twentieth-century church buildings included are from the so-called "swinging sixties", twenty-seven buildings completed between 1960 and 1969 (pages 80-115) but none is from south-west England. Eleven, including the cathedrals at Coventry and Guildford, were completed for the Church of England and another eleven, including Liverpool Cathedral, for the Roman Catholic Church. Otherwise, there are two buildings for the Church of Scotland, a Swedish Lutheran centre, an inter-denominational chapel, and a crematorium.

Churches conceived after the Second World War tended to be more adventurous than those originating before the war: contrast the Anglican cathedrals at Guildford, originally designed by Edward Maufe in 1932 but not consecrated until 1966, with that at Coventry, a competition won by Basil Spence in 1951 where the building was finished in 1962. In Gloucester, the contrast can be seen in the fairly conventional ideas about liturgy behind St Barnabas, Tuffley, of 1938-40 by N.F. Cachemaille-Day (fig.2) and the more recent St Aldate, Finlay Road (fig.3), built between 1961 and 1964, designed by Robert Potter and Richard Hare.



Contrasts in Gloucester: before and after the Second World War

Fig.2 (left) St Barnabas, Tuffley, Gloucester (1938-40: N.F. Cachemaille-Day) in a cream-coloured brick, with a fairly conventional arrangement of nave and chancel. The outer walls are characterised by thin pilasters in the same brick and thin, slit-like windows.

Fig.3 (right) St Aldate, Gloucester (1959-64: R. Potter and R. Hare) where the concrete frame is clad in a light brown brick. The hyperbolic parabolid roof is clad in copper; the needle-like spire anchors the triangular, fan-shaped worship space, with the sanctuary in the curving (liturgical) east end. Due to falling numbers in the congregation, this church is now closed for worship.

Wiltshire, a largely rural county, has few twentieth-century churches. During the 1960s, three churches were built in Swindon. St Aldhelm is in the centre of the railway town (1967-68: Norman Davey) replacing the demolished St Paul (1881: Edmund Ferry). The Roman Catholic church dedicated to the Holy Rood was built before the Great War (1905: E. Doran Webb) but was largely demolished for a new nave on the site of but at right-angles to the old one (1967-69: Ivan Day & O'Brien) making the former chancel and transepts into side chapels. In an eastern suburb, Park North, the same architects did the Holy Family Church in red brick, adjacent to a convent and earlier primary schools (1961-64: J.F.G. Hastings).[24]

The final section, '1970 & After' (pages 118-144), has nineteen buildings:[25] five for the Church of England, including the cathedrals at Liverpool and Bury St Edmunds,[26] and ten, including the cathedrals at Brentwood, Essex, and in Clifton,[27] a Bristol suburb, erected for the Roman Catholic Church. Completed in 1971 is the brick-built Roman Catholic church dedicated to St Joseph the Worker at Wool, Dorset (1969-71:

Fig.4 St Francis of Assisi church, Kenilworth, Warwickshire (1992-93: Rathbone & Taylor), a relatively conventional cruciform design but with the south transept given an extension in the form of a quadrant of a circle to accommodate a raised baptistry, allowing the priest and the family to stand behind and to the side of the font in comfort and the congregation to be witness to the christening. The building is clad in red brick laid in a mixture of bonds, including Header Bond in the curved areas. The long narthex connects with the social spaces beyond.

Anthony Jaggard of John Stark & Partners), built of plum-coloured brick.[28] The church at Wool has an oval baptistry on one of the long sides as does the later, red brick, neo-Norman St Francis of Assisi in Kenilworth, Warwickshire, built 1992-93 to a design by Rathbone & Taylor (fig.4),[29] but there is a contrast the interior of the walls at Wool are left as simple brick, those at Kenilworth have been given plaster and whitewash.

The United Reformed Church in King's Cross, London (page 142) is the sole Nonconformist church in this section. There are also two inter-denominational Cambridge college chapels and a second crematorium.

At the head of each entry in the gazetteer, the dedication of the church is the title followed by the architect, the location by place but not by postal address, the year completed, the denomination, and the listing status. The format is a text of 150 to 170 words with one or two photographs: churches with a single photograph split more or less evenly between interior and exterior shots: 30 of exteriors, 29 of interiors. Six cathedrals receive four-page entries with around 500 words of text and three or four photographs; but the double-column for the text is accompanied by an unnecessarily wide spacing between each line.

As far as the split between the denominations is concerned the volume has forty-four buildings for the Anglican Church and thirty-five for the Roman Catholic Church.[30] The breakdown by time of completion, given in several previous paragraphs, is probably a reasonably accurate reflection of church construction by each denomination at different periods in the twentieth century. There are significant omissions in the choice of churches. Amongst buildings for the Roman Catholic Church, that dedicated to the Sacred Heart and St Catherine at Droitwich, Worcs. (1919-21: F. Barry Peacock of Peacock & Bewlay)[31] deserved inclusion, not just for its plan and external brick walls but even more for its almost complete overall decoration in mosaics, designed by Gabriel Joseph Pipper of Solihull and executed by Maurice Josey over ten years between 1922 and 1932.

On the whole the churches of the Roman Catholic Church were more adventurous than those of the Church of England. Of the churches unknown to the writer, Marychurch, Hatfield, Hertfordshire (1971: Mather

& Nutter), a great brick and concrete drum with the slot windows of stained glass by Dom Charles Norris of Buckfast Abbey reminds him of the same denomination's church dedicated to Our Lady and the English Martyrs on Highbridge Road, Burnham-on-Sea, Somerset (1966-67: Peter Ware).[32] And, Our Lady Star of the Sea and St Winefride, Amlwch, Ynys Môn (Anglesey) of 1937 by the engineer Guiseppi Rinvolucri[33] in parabolic segments of concrete, three of which have inserts of blue and white glass, all above a masonry base containing a meeting room light by porthole windows, is simplicity itself, a reinterpretation of the brick, basilican churches of the architect's native Piedmont.

Building materials are not always given in the comments and the internal photographs often fail to demonstrate the external walling. As far as can be judged, fifty-two of the buildings were constructed of brick, and some of these covered in cement and/or stucco may also have brick walls. For church work, some architects favoured brick in the twentieth century: N.F. Cachemaille-Day (1896-1976), Gillespie, Kidd & Coia in Scotland, Harry Goodhart-Rendel (1887-1959), the three members of the Scott family, and F.X. Velarde, to name five of the featured practices. Brick was favoured by others, particularly those working for the Roman Catholic Church: Edward Bower Norris and being one and his former associate F.M. Reynolds another.[34]

The Norris firm was essentially Midlands-based while Reynolds practised in Manchester. Even though for England, the book examines 56 churches outside of London, no fewer than seven of these are from the four counties immediately adjacent to Greater London: Essex, Hertfordshire, Kent, and Surrey. Equally, of the 56 non-London churches only twenty-two are definitely by practices based outside of London. Or put another way, more than half the churches in the book — at least 55 of the 100 — were designed in London offices.[35]

To emphasise this point, of the eleven religious buildings in south-west England, no fewer than seven were designed in London offices. E. Vincent Harris may have been a Devon man, but his extensive practice was London-based.[36] Actually resident in the region were Robert Potter in Salisbury, who specialised in church work;[37] Richard Fraser in Plymouth; and Robert Weekes in the Bristol office of the Cardiff-based Sir Percy Thomas Partnership. Weekes was the lead architect for Clifton Cathedral for the Roman Catholic Church.

The Twentieth Century Society should get out of London more often. And it should not merely concentrate on the big cities. Coventry Cathedral (pages 89-92) and one other church from that city (page 69) and two from Birmingham (pages 97 and 117) supposedly represent Warwickshire in its historic form. In south Warwickshire towns, the Roman Catholic Church in particular has been extremely active, since 1968 building new churches in Kenilworth (fig.4), Kineton, and Leamington Spa, with a total refurbishment and subsequent extension of the former workhouse chapel in Shipston-on-Stour as well as a refurbishment of the historic chapel in Brailes, a substantial village, and an extension to the church in Warwick. These six projects have been followed by an extension to the church in Southam. Other denominations while building fewer individual structures have refurbished or extended buildings and erected at least one new worship centre.[38] From the same two district council areas,[39] a potential candidate for inclusion in the section on 1914-1929 would have been the Carey Memorial Methodist church and hall at Wellesbourne (1915: F.W.B. Yorke), a brick church in the Arts and Crafts idiom (fig.5).[40]

Equally, it would be a good idea if the Twentieth Century Society were to somewhat desist from its fixation with specific architectural practices, a fault encouraged in this book by the nine 'Practice Profiles' which complete the body of the work. The format here is two double-page spreads beginning with an initial full-page photograph, then 500 words of text, followed by a double-page spread with four or more photographs, mixing churches already instanced with other work. The 'Practice Profiles' cover six based in London. They are N.F. Cachemaille-Day[41] (pages 174-178); Harry Stuart Goodhart-Rendel[42] (pages 166-169); Maguire & Murray[43] (pages 194-197); Edward Maufe[44] (pp.170-173); Giles, Adrian & Richard Gilbert Scott[45] (pp.162-165); and Sir Basil Spence[46] (pages182-185). Spence had offices in both London and Edinburgh, under three different practice names. Also in Scotland was the Glasgow practice, Gillespie, Kidd & Coia[47] (pages 190-193); while George Pace[48] (pages 186-189) practiced in York, and F.X. Velarde (pages 178-181) was based in Liverpool and taught in the Department of Architecture at Liverpool University.[49]

These 'Practice Profiles' vary in their coverage of each firm's buildings. That for Gillespie, Kidd & Coia illustrates the same five churches that occur in the main body of the text, although Robert Proctor manages to mention twenty-one of the firm's forty church buildings executed between 1936 and 1980. Gerald Adler on Maguire & Murray is more typical, having two out of four buildings illustrated occurring in both the gazetteer

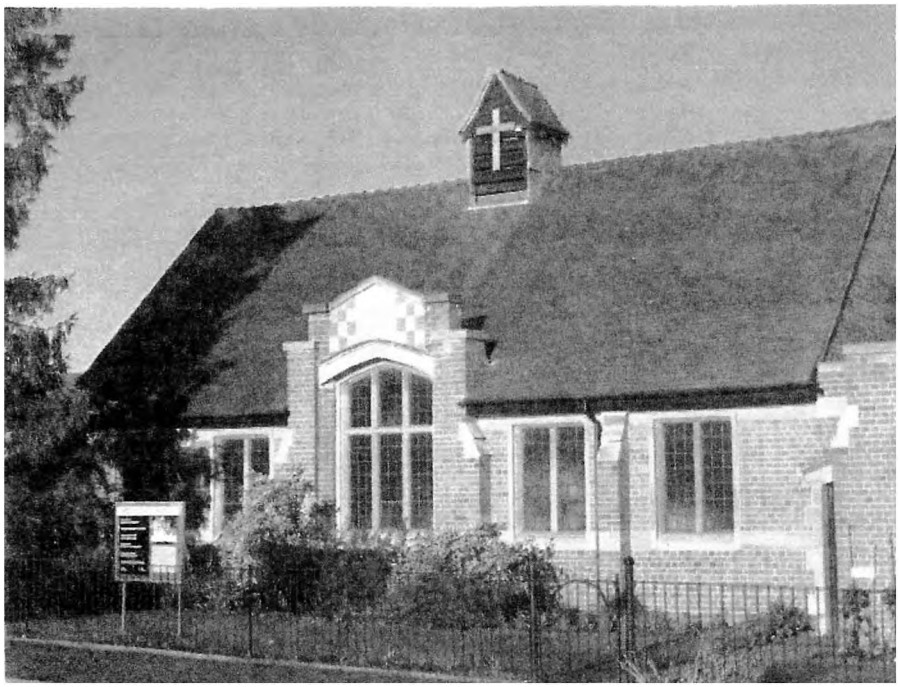


Fig.5 The exterior of the hall of Carey Memorial Methodist Church, Wellesbourne, Warwickshire (1915: F.W.B. Yorke), a church built in the Arts and Crafts. Very simple exterior with mullioned windows, the larger central one with a single transom. The architect, who practiced in Stratford-upon-Avon, was the father of the better-know F.R.S. Yorke.

and the 'Practice Profile'; Dr Adler wrote the descriptions of both St Paul, Bow Common, London (page 85), and St Matthew, Perry Beeches, Birmingham (page 97), providing pictures of their interiors for the individual entries but of the exterior for the 'Practice Profile'. However, with the 'Practice Profiles' of George Pace and F.X. Velarde, by Judi Loach and Andrew Crompton respectively, buildings considered in the gazetteer are not those illustrated in the 'Practice Profile', despite Ms Loach having written the entries on the chapel at St Michael's College, Llandaff, Cardiff (page 76), and the William Temple Memorial church, Wythenshawe, Manchester (page 100). The profile of F.X. Velarde is Andrew Crompton's sole contribution to the volume.

One may grouse that the entry on N.F. Cachemaille-Day has a serious omission. Louise Campbell (page 69) rightly draws attention to the three Anglican churches in 1950s Coventry designed by Basil Spence, but Clare Price fails to mention the two late 1950s churches in the city by Cachemaille-Day and his three churches and a church hall of the late 1930s also in Coventry.[50] Indeed, Spence and Cachemaille-Day were just two of eight architects who designed twelve Anglican churches in Coventry between 1950 and 1968.[51] Unlike Spence or the other six practices, Cachemaille-Day was the only one to design churches in Coventry both before and after the Second World War. In total, Cachemaille-Day designed no fewer than 61 churches, including the dramatically-sited St Barnabas in the Gloucester suburb of Tuffley constructed between 1938 and 1940 (fig.3), for which Claire Price provides an internal photograph (page 177).

Of the nine featured practices, Gillespie, Kidd & Coia and Velarde worked primarily for the Roman Catholic Church. Through the change in faith in 1880 of the younger George Gilbert Scott, Giles' and Adrian's father, succeeding generations of the Scotts have also been of that denomination as was Goodhart-Rendel after his conversion in 1936. Both the Scotts and Goodhart-Rendel did work for both the Anglican Church and the Roman Catholic Church. On the other hand, Cachemaille-Day, Maguire & Murray, Maufe, Pace, and Spence all worked primarily for the Church of England and in Pace's case also for the Church in Wales. Pace was responsible for the reconstruction of Llandaff Cathedral after bomb damage.

Bomb damage sustained during the Second World War was responsible for ten of the churches discussed which were completed between 1952 and 1962, culminating in Coventry Cathedral. Brick churches

include two by Harry Goodhart-Rendel: St John the Evangelist of 1952 at St Leonards-on-Sea, Sussex, for the Church of England (page 61) and completed in 1960, the Most Holy Trinity, Docklands, London (page 82) for the Roman Catholic Church. Members of the British Brick Society saw the last-named on the coach tour of Docklands following the society's Annual General Meeting in 1991.[52]

One disadvantage of the approach followed in the book is to concentrate the gazetteer on the nine practices, leaving other firms, possibly no less significant but perhaps less prolific in their contribution to church building, with a single entry. For example, Francis Xavier Velarde (1897-1960) is described as 'a protégé of Professor Charles Reilly at the Liverpool School of Architecture', but the equally talented Bernard A. Miller with the same background is reduced to a single early work: St Christopher, Norris Green, Liverpool, of 1932 (page 38). His reconstruction of the nave of St Michael's church, Tettenhall, Wolverhampton, following a fire in 1950 surely deserved to be in the volume;[53] one inspiration for the cross-gabled windows may be the east wall of Holy Trinity church, Barsham, Suffolk, a wall incorporating an east window completed covered with diagonal lozenges which occur also in the stonework.[54] Another influence thereupon could have been the west window of the church dedicated to St Edward the Confessor, at Kempley, Glos., (1902-03: A. Randall Wells).[55] Like both the earlier churches, St Michael, Tettenhall, was built of stone.

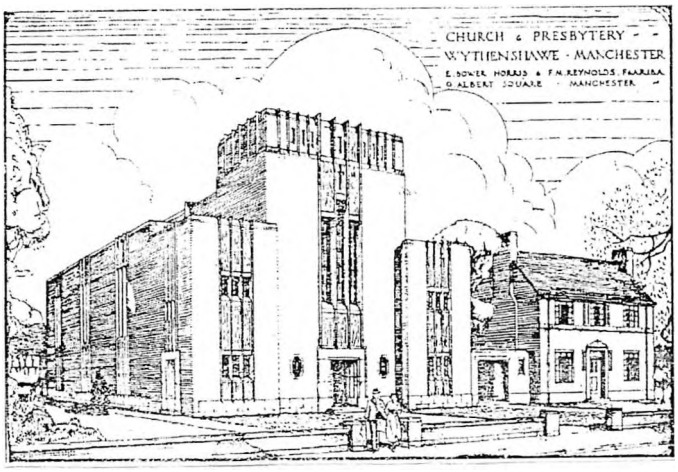
Among the Roman Catholic practices, the Stafford practice which went under various partners' names — in 1929, it was Hill, Sandy & Norris, responsible for the design of St John the Baptist church, Rochdale (page 29) — but after 1922 led by Edward Bower Norris (*d.*1969), the practice deserved better than this single entry. Their buildings may lack a certain external sparkle: Our Lady and St Wulstan, Southam, Warwickshire, of 1925 has an extremely plain frontage in brick but internally it echoes the needs of the denomination it serves.[56] This practice, based in Stafford and Manchester, built much both in the Midlands and in Lancashire; in its various guises, it would have been a good candidate for a 'Practice Profile'.

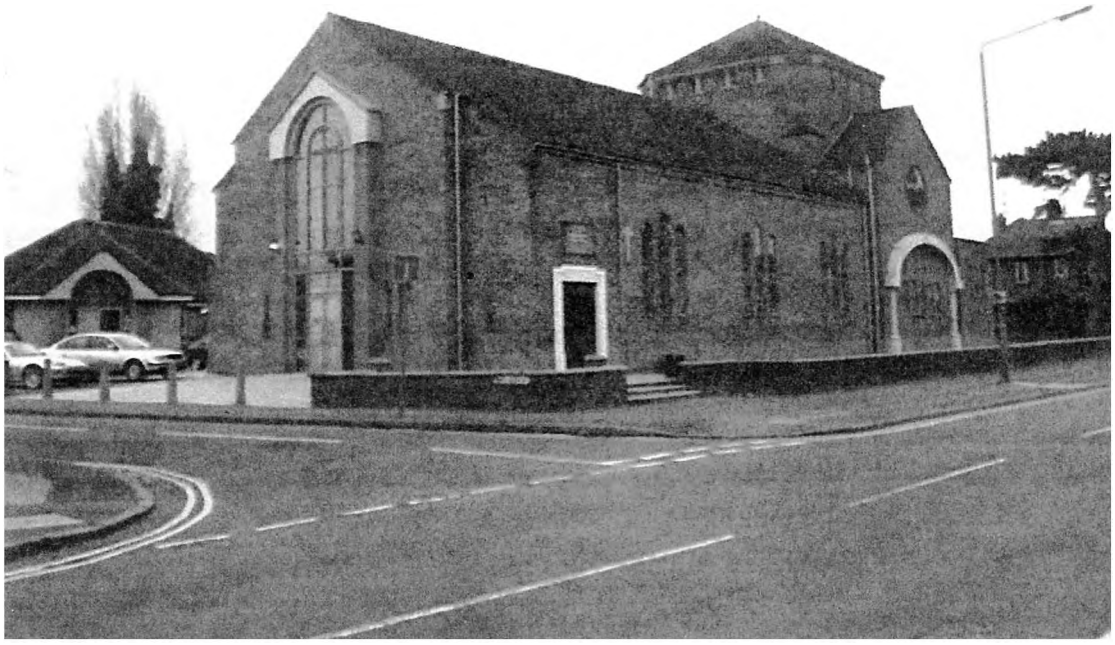
The practice divided into two practices after the Second World War: Sandy & Norris in Stafford and F.M. Reynolds, later Reynolds & Scott in Manchester. In 1935, the first Roman Catholic church in the new suburb of Wythenshawe, was dedicated to St John Fisher and St Thomas More:[57] the two celebrated English martyrs were canonised that year and this was the first church in England dedicated to them. Designed by F.M. Reynolds, it is a powerful brick building in the Art Deco style, a rarity in church buildings, with prominent fins connecting the recessed fenestration (fig.6). After 1945, the Manchester practice spread its wings into Derbyshire (fig.7), Leicestershire, and Nottinghamshire. Here, the innovation was less, partly, one suspects because the finance available was less.

The Glasgow-based Scottish practice, Gillespie, Kidd & Coia, post-1945 presents an interesting case of a design takeover by its unnamed partners, Isi Metzstein[58] and Andy MacMillan,[59] respectively a non-practising Jewish refugee from Berlin and a lapsed Scots Presbyterian, who both nevertheless understood the liturgical requirements of the Roman Catholic Church and designed forty places of worship, mostly in brick, and the ill-fated St Peter's Seminary, Cardross, in the Dunbartonshire countryside, in concrete. Jack Coia, the surviving partner from before the Second World War and a practising Roman Catholic, was content to wine

Fig.5 (top) St John Fisher and St Thomas More, Benchill, Wythenshawe, Manchester (1935: F.M. Reynolds). A strong design, influenced by the Art Deco movement as interpreted by German church architects; the strong vertical lines to the fenestration continue on all four sides of the exterior. Built in a pinkish-red brick mainly laid in Stretcher Bond, the vertical fins of the fenestration were recessed above and below the windows of the west wall. Due to the cost of repairs to a leaking roof, the first Roman Catholic church in Wythenshawe was forced to close in September 2010.

Fig.6 (below) English Martyrs, London Road, Alvaston, Derby (1951-52: Reynolds & Scott of Manchester). A more conventional design for the exterior using brown brick but note the use of a pyramid roof at the crossing and vestigial Romanesque arches at the entry points.





and dine the Roman Catholic hierarchy of Scotland. The two designers produced several of the most innovative responses to the opening up of the liturgy following Vatican II. The two architects were also responsible for the inter-denominational chapel at Robinson College, Cambridge (page 134).

After the Practice Profiles, *100 Churches, 100 Years* concludes with an uneven Glossary of somewhat limited coverage (pages 198-199); some notes on 'Further Reading'[60] (page 200); 'Acknowledgements' (page 201) which turns out to be notes on forty-two of the contributors — Giles Velarde (*b.*1935), an exhibitions designer, writes about two of his father's buildings but does not appear among these 'Acknowledgements'.[61] One difference between the present work and the earlier volume is that with two exceptions, both descendants of architects,[62] the contributors to *100 Churches, 100 Years* have some form of professional affiliation with

building history. In contrast, of the 75 contributors to *100 Buildings, 100 Years* at least twelve[63] were not professionally employed in the field of building history.

There is a note on 'Picture Credits' (page 202), and an average 'Index' (pages 203-207). For an inexplicable reason, the 'Further Reading' is printed in relatively large type in contrast to the smaller but quite adequate type size for the other final items. As one would expect, the 'Further Reading' is strongly architectural with several biographies or studies of architects specialising in church work cited but it also includes a single work on the importance of liturgy: Peter Hammond's *Liturgy and Architecture*,[64] the basis of the work of Robert Maguire and Keith Murray and their imitators. But any short bibliography which strays into the influence of the liturgical should include reference to the work of the late Professor Nigel Yates, not least his final book, *Liturgy and Space: Christian Worship and Church Buildings in Western Europe 1500-2000*.[65] Helpfully, Prof. Yates tabulates the differences in both Anglican and Roman Catholic liturgies which have followed mid-twentieth-century changes.

Faith and liturgy, its expression in words and music, are very personal things. Perhaps, the writer has been fortunate in the last forty years to worship in non-spectacular buildings, not least a routine mid-Victorian structure for the last two decades.[66] One may wonder how distracting it would be to worship in an architectural gem: diocesan services in Coventry Cathedral sometimes leave me gawping at the building rather than concentrating on worship and I suspect that is true for many, particularly those like myself whose attendance for most of the last forty years has mainly been at services from *The Book of Common Prayer*, in the simple, familiar language unchanged since 1662, rather than more modern liturgies favoured by many of the clergy.

The personal will affect how one views *100 Churches, 100 Years*. Like other books of this type, it has been written to a carefully controlled formula,[67] as outlined above in the description of entries in the gazetteer and the section giving a 'Practice Profile' of nine practices. As remarked earlier in this Book Review, what is disturbing is the selection of examples from specific practices: far greater editorial control should have been exercised regarding the relationship between examples illustrated under a 'Practice Profile' and those in the gazetteer: Robert Proctor on Gillespie, Kidd & Coia is particularly guilty in duplicating all five of featured churches in the illustrations to 'Practice Profile' and using photographs adding no further information for two of them: St Peter-in-Chain, Ardrossan (pages 52 and 190) and St Bride, East Kilbride, Lanarkshire (pages 93 and 193). The editors would have done well to have followed the practice of Gerald Adler, noted earlier.

Some architects specialised in the design of churches: most of those covered as a 'Practice Profile' being prime examples. The significant exception would be two of the three twentieth-century members of the Scott dynasty. Whilst Adrian Gilbert Scott concentrated his practice on church work, mainly for the Roman Catholic Church, both his brother and nephew, Sir Giles and Richard Gilbert Scott, respectively, did much secular work: power stations, telephone boxes, and London Bridge are among the better-known works of the father; the complex restoration of London Guildhall is the chief *œuvre* of the son.

But there were and are other practices concentrating on church work. Much of the work of Sir Ninian Comper,[68] like the liturgical practice of the Anglo-Catholic wing of the Church of England, may not be to my personal taste but as an early-twentieth-century church architect he is as important as several of the practices given extended treatment.

Most Christians worship in relatively mundane buildings. As Terence Paul Smith showed in his examination of brick buildings in 1930s Luton[69] many churches were designed by almost unknown architects. Franklin & Briars in Luton worked mainly in the town as did Peter Dunham. It would have been beneficial to have seen a much higher proportion of work by the less celebrated practices, far less concentration in the gazetteer of those practices given a 'Practice Profile', and certainly a much less-London-centric volume.[70]

The historian, Christopher Hill (1912-2003) once published an essay entitled 'The Dark Corners of the Land',[71] referring to religious practice in the central decades of the seventeenth century in those parts of England and Wales remote from London and Oxford who continued to follow more ancient rituals and retain particular now discredited internal features, such as a rood screen,[72] for example.

If the historic county of Westmorland can boast six post-1914 churches, one may ask, of what is the Twentieth Century Society afraid? In the church buildings beyond the golden triangle,[73] there are many riches still to be explored.[74]

DAVID H. KENNETT

NOTE ON THE CHURCHES CHOSEN FOR THE ILLUSTRATIONS IN THIS REVIEW ARTICLE

Originally, this paper was to have been illustrated with photographs of churches cited in the gazetteer of *100 Churches, 100 Years*. However, on further reflection, it was considered more appropriate to find illustrations of brick-built churches which *could* have been included in the volume under discussion. In so doing, certain principles have been applied. The churches have walls of brick, obviously, even if the brick is a facing to a concrete frame. There would be at least one church from each of the five periods around which *100 Churches, 100 Years* is organised. The churches illustrated shall, as far as possible, be from the counties cited in note 9, *infra*, from which there is no representative in *100 Churches, 100 Years*. Not more than two illustrations of churches have been chosen from any one traditional English county. Ideally, the churches chosen for illustration will have been designed by architects not included in the nine 'Practice Profiles' and as far as possible by architects whose work is at most represented by a single church in *100 Churches, 100 Years*. No more than two churches would be chosen from the work of any one architect or practice and if this is the case would come from different periods of his/her practice.

NOTES AND REFERENCES

1. S. Charlton with E. Harwood, *100 Buildings, 100 Years*, London: Batsford for the Twentieth Century Society, 2014, reviewed D.H. Kennett, 'Book Review: Brick from the Great War to the Great Recession', *BBS Information*, **129**, February 2015, pp.33-36. The Twentieth Century Society, successor to The Thirties Society, concerns itself with buildings erected from 1914 onwards; buildings of the first decade and a half of the twentieth century are the concern of the Victorian Society. This demarcation removed the possibility of considering the Anglican St Michael's church, Newquay, Cornwall (1909-11: J.N. Comper; 1961: Sebastian Comper) for which see P. Beacham and N. Pevsner, *The Buildings of England: Cornwall*, New Haven and London: Yale University Press, 2014, pp.378-379.
2. Charlton with Harwood, eds. 2014, p.26: St Andrew, Gretna, Dumfries and Galloway, by Alan Hamilton; p.71: St Peter, Grange Park, London, by Cela Selley; p.74: Italian Chapel, Orkney, by Aidan Turner-Bishop; p.93: English Martyrs, Wallasey, by Father Peter Newby; pp.108-109: Guildford Cathedral, by Robert Drake; pp.110-111: St Thomas More, Tile Cross, Birmingham, by Gavin Stamp; p.122: Clifton Cathedral, Bristol, by Bob Hardcastle; pp.132-133: Liverpool Anglican Cathedral, by Aidan Turner-Bishop; pp.198-199: Cuddesdon Chapel, by Flora Samuel. Those given individual treatment in Charlton, Harwood, and Price, eds, 2019 are: p.62: English Martyrs, Wallasey, by Giles Velarde; p.102-105: Guildford Cathedral, by Juliet Dunmur; pp.124-127: Clifton Cathedral, by Grace Etherington; pp.129-132: Liverpool Cathedral (C of E), by David Frazer Lewis; and p.143: Cuddesdon Chapel, by Catherine Croft. It is instructive to compare the two accounts but one cannot help wondering why the duplication.
3. G. Stamp, 'Obituary: Richard Gilbert Scott', *The Guardian*, 15 July 2007 with large photograph of Our Lady Help of Christians, Tile Cross. The present writer is hoping to visit Richard Gilbert Scott's two churches in Birmingham with the idea of considering them further in an article in a future *BBS Information*. Unfortunately, the writer's back problems in 2019 and lockdown conditions for much of 2020 have made this difficult, as many bus services were withdrawn in 2020; the journey is bus, two trains, then another bus, usually a return journey undertaken with equanimity.
4. The crematoria are Mortonhall, Edinburgh (1967: Sir Basil Spence, Glover & Ferguson) p.113 and the Mid-Glamorgan Crematorium at Coychurch, Bridgend (1970: Maxwell Fry of Fry, Drew, Knight, Creamer), p.121. [Page references to Charlton, Harwood, and Price, eds, 2019]. One may question whether crematoria, which have to cater for all forms of philosophical and religious beliefs, really belong in a book about *churches*. Equally, one may ask if the Bridgend one was chosen so as to include a building by Maxwell Fry, and is the Edinburgh one an example of practice fascination?
5. The college chapels are the Mary Harris Memorial Chapel, University of Exeter (1943-58: E. Vincent Harris), p.71; St Michael's College, Llandaff, Cardiff (1959: G.G.Pace), p.76; Robinson College, Cambridge (1981: Gillespie, Kidd & Coia), p.134; Fitzwilliam College, Cambridge (1991: MacCormac, Jamieson, Pritchard), p.137; and Bishop Edward King Chapel, Ripon College, Cuddesdon, Oxfordshire (2013: Niall McLaughlin), p.143. The first two and the last of these are Anglican: the first and last for the Church of England, the second for the Church in Wales, with the second and fifth being at theological colleges; the third and fourth are inter-denominational. [Page references to Charlton, Harwood, and Price, eds, 2019]. In one sense, these are 'religious buildings' rather than 'churches' despite both categories referring to places of Christian worship.
6. The ill-fated St Peter's Seminary, Cardross, Argyll, Scotland (1966: Gillespie, Kidd & Coia) for the Roman Catholic Church; considered, Charlton, Harwood, and Price, eds, 2019, p.108.
7. The three abbeys are Douai, Woolhampton, Berkshire (1928-33: J. Arnold Crush; 1992-93: Michael Blee) for the English Benedictines, on p.42; Abbey Church of Our Lady Help of Christians, Worth, Sussex (1961-89: Francis

Pollen) for the Dominicans on p.140; and Stanbrook Abbey, Wass, North Yorkshire (2015: Feilden, Clegg, Bradley), a nunnery, on p.144. [Page references to Charlton, Harwood, and Price, eds. 2019].

8. P. Beacham and N. Pevsner, 2014, pp.111, 142, 144, 188, 236, 379, 610, 654, 669, for St Mary and St Petroc, Bodmin (RC); St Thomas of Canterbury, Camelford (CofE); St Anta and All Saints, Carbis Bay (CofE); Methodist church, Falmouth; Methodist church, Hayle; URC, Newquay; Our Lady and All Angels, Saltash (RC); St Saviour, Trevone (CofE); and Our Lady of the Portal and St Piran (RC), respectively. This is without invoking Edwardian churches in Newquay or the original suggestion of the Roman Catholic church dedicated to St Cuthbert Mayne, Launceston (1910-11: Arthur Langdon, completed by Railing & Tonor, Exeter), for which see Architectural History Practice [Andrew Derrick], *NHPP 4DI: Twentieth-Century Roman Catholic Church Architecture in England — A Characterisation Study*, London: Architectural History Practice, July 2014, p.40 and fig.23; and Beacham and Pevsner, 2014, p.293. AHP, 2014, is a far better piece of work than the book under review and is available online at *www.architecturalhistory.co.uk*.

9. Apart from Cornwall and Wiltshire, sixteen English counties are without an entry in the gazetteer. Of these, Bedfordshire has at least 28 churches built between 1914 and 2015; eight of these are in Bedford and sixteen in Luton. The latter figure includes the Roman Catholic church on Ashcroft Road, Stopsley; Beech Hill Methodist church on Dunstable Road; and Blenheim Crescent Baptist church; while the last-named is a relatively small, plain brick box, the first two, also built of brick, ably proclaim their religious function. These three are omitted from C. Pickford and N. Pevsner, *The Buildings of England: Bedfordshire ...*, New Haven and London: Yale University Press, 2015. Similarly, historic Warwickshire south and east of the M42 and excluding Coventry has 41 churches built between 1914 and 2015, including no fewer than seventeen completed after 1970: see C. Pickford and N. Pevsner, *The Buildings of England: Warwickshire*, New Haven and London: Yale University Press, 2016, *passim*. For twentieth-century churches in Coventry see text p.45, and nn.50 and 51 *infra*. Derbyshire records 36 churches constructed in the twentieth century, including ten brick-built churches in Derby itself and another three elsewhere in the county. See C. Hartwell, N. Pevsner, E. Williamson, *The Buildings of England: Derbyshire*, New Haven and London: Yale University Press, 2016. Also without a church in the gazetteer are Buckinghamshire (24), Cumberland (17), County Durham (22), Gloucestershire (54), Herefordshire (8), Huntingdonshire (3), Isle of Wight (3), Leicestershire (18), Rutland (1), Shropshire (9), Staffordshire (14 including three each in Stoke, Walsall, and Wolverhampton), Westmorland (6), Worcestershire (20, all of which are in towns), and Yorkshire East Riding (40) including 30 in Hull. The figure in brackets is the total of the churches in the date range covered by *100 Churches, 100 Years* which are noted in the most recent edition of *The Buildings of England* volume for the county. Given that the Staffordshire volume was published in 1974, one suspects that the true number of twentieth-century churches in the county is rather more than fourteen. Of the 42 traditional English counties, none seems to be without a single church of any denomination built between 1914 and 2015.

10. Only buildings from Glamorgan and Ynys Môn were included in Charlton, Harwood, and Price, eds, 2019. The two in Glamorgan are a college chapel and a crematorium, both of which have dubious claim to be a 'church'. The volume omits buildings from Clwyd (16), Dyfed (14), Gwent (18), Powys (12), or mainland Gwynedd (17). Church buildings erected in Wales between 1914 and 2010 total 117: Breconshire (4); Caernarvonshire (11) including 2 in Bangor; Carmarthenshire (5); Ceredigion (6); Denbighshire (12); Flintshire (4); Glamorgan (35) including 15 in Cardiff and 5 in Abertawe (Swansea); Gwent (18) including 7 in Newport; Merionethshire (6); Montgomeryshire (5); Pembrokeshire (3); Radnorshire (3); Ynys Môn (5). Figures from the appropriate volumes of the *Buildings of Wales* series.

11. The sole building included is from the City of Derry. There is nothing from County Derry, Antrim, Armagh, Down, Fermanagh, Tyrone, nor from the city of Belfast.

12. 1970s regions without an entry in the gazetteer are Borders, Central, Dumfries and Galloway, Grampian, Highlands, Northern Isles, Tayside, Western Isles, and, surprisingly, Glasgow itself. The churches chosen for inclusion in *100 Churches, 100 Years* do not have a representative of the Episcopal Church of Scotland, the Anglicans. Churches from the Western Isles and Dumfries and Galloway were included in *100 Buildings, 100 Years*, details in note 2 *supra*.

13. A. Foyle and N. Pevsner, *The Buildings of England: Somerset: North and Bristol*, London and New Haven: Yale University Press, 2011, pp.205-6. In Charlton, Hayward and Price, eds, 2019, the same photograph of the interior is used on pages 8 and 31. No photograph of the exterior is provided.

14. C. O'Brien, B. Bailey, and N. Pevsner, and D.W. Lloyd, *The Buildings of England: Hampshire: South*, London and New Haven: Yale University Press, 2018, pp.163-164.

15. O'Brien *et al.*, 2018, pp.361.

16. O'Brien *et al.*, 2018, pp.540-541, with pl.111.

17. G. Tyack, S. Bradley, and N. Pevsner, *The Buildings of England: Berkshire*, New Haven and London: Yale University Press, 2010, pp.732-734 with pl.112.

18. M. Hill, J. Newman, and N. Pevsner, *The Buildings of England: Dorset*, New Haven and London: Yale University Press, 2018, p.633.

19. B.K. Cherry and N. Pevsner, *The Buildings of England: Devon*, London: Penguin Books, 1989, p.404, a brief mention only.

20. Cherry and Pevsner, 1989, p.647, attributed to Louis de Soissons, rather than to the locally-based job architect.

21. One comparison would appear to be Holton Chapel, off Harvard Yard, Cambridge MA, built in 1742, see S. and M. Southworth, *AIA Guide to Boston*, Guilford CT: The Globe Press, 2nd edn, 1992, p.398 with illustration of front. A subsequent building on Harvard Yard is the Memorial Chapel (1931: Coolidge, Shepley, Bullfinch and Abbott) with tall thin spire. It was built to commemorate Harvard graduates who died in the Great War: Southworth, 1992, p.399 with photograph. See also R.B. Rettig, *Guide to Cambridge Architecture: Ten Walking Tours*, Cambridge MA: MIT Press, 1969, buildings A7 and A66, respectively. A possible inspiration for the latter may be Christ Church (the Old North Church) in Boston: Southworth, 1992, p.53. This reviewer's book collection is not strong on the buildings of New England, and he has not travelled there. Pertinent to church buildings in Dorset, England, are those of the Tidewater in the Commonwealth of Virginia, on which see D. Upton, *Holy Things and Profane: Anglican Parish Churches in Colonial Virginia*, New Haven and London: Yale University Press, pbk 1997 [first published Cambridge MA: MIT Press, 1986].

22. Cherry and Pevsner, 1989, p.640.

23. G. Tyack, S. Bradley, and N. Pevsner, *The Buildings of England: Berkshire*, New Haven and London: Yale University Press, 2010, p.394 with pl.116.

24. N. Pevsner, rev. B.K. Cherry, *The Buildings of England: Wiltshire*, Harmondsworth: Penguin Books, 1975, p.508 (St Aldhelm and Holy Rood), p.515 (Holy Family).

25. Foyle and Pevsner, 2011, pp.317-319 with plan and pl.116.

26. The breakdown of the 19 buildings is 1970-79, eight; 1981-89, three; 1991-98, four; 2005-15, four.

27. Alterations to the Anglican 'parish church' cathedrals of the 1930s — Blackburn, Chelmsford, Derby, Leicester, Portsmouth, Sheffield — are not considered in the volume nor is the complex history of Roman Catholic Cathedral at Northampton.

28. Hill *et al.*, 2018, p.704 with pl.123.

29. C. Pickford and N. Pevsner, *The Buildings of England: Warwickshire*, New Haven and London: Yale University Press, 2016, p.377, a rather dismissive account.

30. Dorset has 10 buildings for the Church of England, eight for the Roman Catholic Church, two for the Methodist Church, and one each for the Salvation Army and the United Reformed Church. For comparison, Shropshire has four buildings for the Church of England, three or the Roman Catholic Church, one for the Baptist Church, and one Ecumenical.

31. A. Brooks and N. Pevsner, *The Buildings of England: Worcestershire*, New Haven and London: Yale University Press, 2007, pp.264-265, with pl.125.

32. J. Orbach and Nikolaus Pevsner, *The Buildings of England: Somerset: South and West*, New Haven and London: Yale University Press, 2014, p.168.

33. As well as churches in Wales, Guiseppi Rinvolucri (1894-1963) also designed two Roman Catholic churches in England: St Peter, Ludlow, Shropshire, in 1935-36, and St Theresa and the Child Jesus, Princes Risborough, Buckinghamshire, in 1937-38.

34. E. Bower Norris (*d.*1969) of Stafford was the successor in practice in that town to T.H. Sandy (1868-1922), under the name Sandy & Norris. In 1918, Mr Sandy had acquired the Manchester practice and its Albert Square office of H.O. Hill (*kia.*1917) thereafter trading in that city as Hill, Sandy & Norris. By about 1935, F.M. Reynolds (*d.*1967) was a partner and from then until 1946, the Manchester firm was known as Norris & Reynolds. After the Second World War, the partnership split, Norris continuing to work from Stafford and Reynolds from Manchester, the latter later in partnership with William Scott, trading as Reynolds & Scott.

35. The location of the practices deigning eight of the churches is unknown to this writer.

36. For the long career of E. Vincent Harris see A.S. Gray, *Edwardian Architecture: A Biographical Dictionary*, London: Duckworth, 1985, pp.206-207, with references to the obituaries.

37. One of Mr Potter's churches is St George, Oakdale, Poole, built 1959-60: see Hill *et al.*, 2018, p.480. From limited consultation with the most recent appropriate county volumes in *The Buildings of England* series, Robert Potter looks to be a good candidate to have been given a 'Practice Profile'.

38. Details from Pickford and Pevsner, 2016, *passim*. Review of the *Taking Stock* programme for the Roman Catholic Church in the Diocese of Birmingham was not complete when AHP, 2014, was compiled, although the Gazetteer at p.111 lists nine works by Brian Rush and Remo Granellli, including those at Whitnash and Kineton but not that at Shipston-on-Stour. Rathbone & Taylor do not appear in the Gazetteer of AHP, 2014.

39. Stratford-on-Avon District Council and Warwick [and Leamington] District Council.

40. Pickford and Pevsner, 2016, p.699.

41. The writer is unaware of any full-length study of the work of Nugent Francis Cachemaille-Day. But see two postgraduate theses: M. Bullen, 'Cachemaille-Day in Manchester', University of Manchester, MA, 1991, and M. Gilman, 'A Study of Churches built for the Church of England between 1945 and 1970 and their Effectiveness in Serving the Needs of their Congregations Today', Department of Architecture, University of Sheffield, 1999. Dr Gilman's work is available online; Mr Bullen's was published as 'Cachemaille-Day's Manchester Churches', *Trans. Lancashire and Cheshire Antiquarian Society*, **92-93**, 1996-97. See also M. Bullen 'Cachemaille-Day, Nugent-Francis (1897-1976) in *ODNB*. Forthcoming in a future issue of *BBS Information* is T.P. Smith, 'Practice Profile: Nugent Francis Cachemaille-Day, FRIBA (1896-1976): A Response to Clare Price'.

42. A. Powers, ed., *H.S. Goodhart-Rendel 1887-1959*, London: Architectural Association, 1987.

43. G. Adler, *Robert Maguire and Keith Murray*, London: RIBA Enterprises, 2012. See also E. Harwood, 'Obituary: Robert Maguire', *The Guardian*, 8 April 2019.

44. J. Dunmur, *Edward Maufe: Architect and Cathedral Builder*, London and Dublin: Moyhill Publishing, 2019.

45. Giles Gilbert Scott (1880-1960) has an entry in Gray, 1985, pp.318-321, which includes reference to his brother, Adrian Gilbert Scott (1883-1963). The brothers had separate practices, both of which were inherited by Richard Gilbert Scott, whose obituary is cited in note 3, *supra*. The two churches in Birmingham's eastern suburbs were inherited from Adrian Gilbert Scott's practice by his nephew.

46. L. Campbell, M. Glendenning and J. Thomas, eds, *Basil Spence, Buildings and Projects*, London: RIBA, 2007; L. Campbell, *Coventry Cathedral: Art and Architecture in Post-War Britain*, Oxford: The Clarendon Press, 1996.

47. Mac Journal One. *Gillespie, Kidd & Coia*, Glasgow: Mackintosh School of Architecture, 1994; J. Rodger, *Gillespie, Kidd & Coia: Architecture 1956-1987*, Edinburgh: RIAS, 2007; R. Proctor, *Building the Modern Church: Roman Catholic Church Architecture in Britain, 1955-1975*, Farnham: Ashgate, 2014.

48. P. Pace, *The Architecture of George Pace*, London: Batsford, 1990.

49. A biographical study of the architecture of F.X. Velarde is unknown to this writer. Studies of the work of N.F. Cachemaille-Day cited in note 41 *supra* cover works only in two cities and only some of those in Coventry, for which see references in note 50. No biography of either man is in the 'Further Reading' of Charlton, Harwood, and Price, eds, 2019.

50. Coventry churches by N.F. Cachemaille-Day are St George, Barker's Butts Lane, Coundon, of 1938-39; St Luke, Rotherham Road, Holbrooks, of 1938-39; Holy Cross, St Austell Road, Caludon, of 1939; and the church hall for St James, Stivichall, of 1939 from before World War II; with St Francis of Assisi, Links Road, North Radford, of 1957-59; and St Christopher, Allesley Park (the Bishop Gorton church), of 1959-60, from the 1950s. Brief descriptions: C. Pickford and N. Pevsner, *The Buildings of England: Warwickshire*, New Haven and London: Yale University Press, 2016, pp.286, 292, 283, 297, 295, and 281, respectively.

51. Other than by Spence or Cachemaille-Day, the 1950s churches in Coventry are St James, Abbey Road, Whitley, of 1950, by C.F. Redgrave & Partners; St Paul, Foleshill Road, Foleshill, of 1951-53, by Nicholson & Rushton; St Nicholas, Engleton Road, Radford, of 1953-55, by Lavender, Twentyman & Percy; Christ Church, Frankpledge Road, Cheylesmore, of 1954-57 by A.H. Gardner & Partners; St Philip the Martyr, Chester Avenue, Canley, of 1954, also by A.H. Gardner & Partners; St James, Leamington Road, Stivichall, 1955-65, by W.H. Saunders & Son; and St Philip Deacon, Ringwood Highway, Potter's Green, of 1963-64, also by W.H. Saunders & Son. The churches are instanced under the 'area' name in Pickford and Pevsner, 2016, pp.277-308.

52. See *BBS Information*, **52**, July 1991, p.2 for a brief synopsis of the visit arranged by Michael Hammett.

53. N. Pevsner, *The Buildings of England: Staffordshire*, Harmondsworth: Penguin Books, 1974, p.325 with pl.102.

54. J. Bettley and N. Pevsner, *The Buildings of England: Suffolk: East*, New Haven and London: Yale University Press, 2015, pp.97-97 with early-nineteenth-century lithograph on p.97; N. Pevsner, rev. E. Radcliffe, *The Buildings of England: Suffolk*, Harmondsworth: Penguin Books, 2nd edn, 1975, pp.87-88 with pl.8a, a 1950s photograph; H.M. Cautley, *Suffolk Churches*, Woodbridge: The Boydell Press, 5th edn, 1982, p.221; D.P. Mortlock, *The Guide to Suffolk Churches*, Cambridge: Lutterworth Press, 2009, pp.41-42.

55. D. Verey and A. Brooks, *The Buildings of England: Gloucestershire 2: The Vale and the Forest of Dean*, London and New Haven: Yale University Press, 2002, p.551-552 with pl.117.

56. Personal observation; see Pickford and Pevsner, 2016, p.572, for a brief description.

57. C. Hartwell, M. Hyde, and N. Pevsner, *The Buildings of England: Manchester and the South-East*, New Haven and London: Yale University Press, 2004, pp.496-497.

58. Anon., 'Obituary: Isi Metzstein', *The Times*, 18 January 2002; unfortunately, the author has mislaid his copy of the obituary which appeared in *The Guardian*. See also the works cited in n.47 *supra*.

59. See n.47 *supra* for the work of Andy MacMillan.

60. Gerald Adler, Louise Campbell, and Alan Powers are all listed in the 'Further Reading' as the writers of studies about architects for whom they provide the 'Practice Profile': Maguire & Murray, Basil Spence, and H.S. Goodhart-Rendel, respectively. Robert Proctor is the author of *Building the Modern Church: Roman Catholic Church Architecture*

in Britain 1955-1975. Farnham and Burlington VT: Ashgate, which deals with Gillespie, Kidd & Coia for whom he provides the 'Practice Profile' and the gazetteer entries.

61. In contrast, Pamela Buxton appears in the 'Acknowledgements' but not in the index and appears not to have contributed to the volume.

62. Juliet Dunmur, granddaughter of Edward Maufe, and Giles Velarde, son of F.X. Velarde.

63. They included a solicitor, two now former MPs, a freelance photographer, a Roman Catholic parish priest, and various building owners/trustees. See Charlton and Harwood, 2014, p.208.

64. P. Hammond, *Liturgy and Architecture*, London: Barrie and Rockliff, 1960.

65. N. Yates, *Liturgical Space: Christian Worship and Church Buildings in Western Europe 1500-2000*, Aldershot and Burlington VT: Ashgate, 2008.

66. Since 1997, at St Edmund's Shipston-on-Stour by George Street (1855, retaining a fifteenth-century tower of ironstone). See Pickford and Pevsner, 2016, p.562, for an adequate account. This is in contrast to fifteen years (1965-1980) when he worshiped at St Mary's, Luton, Bedfordshire, a multi-period building where the centre tower was weakened by the rains of the early fourteenth century and crashed down in 1336; the south arcade was hastily rebuilt with shaped stone appearing in the rubble walling. That building remains of considerable interest to a building historian.

67. As one of at least four members of BBS who contributed to the Grove *Dictionary of Art*, London and New York, 2003, I can testify to the tyranny of a strictly-applied word limit; revising two of my own contributions for a now online only edition, more latitude was permitted with regard to the number of words used in the text: the bibliography was excluded from the word limit. The other known members of BBS who were contributors were the late Martin Hammond, the late Richard K. Morriss, and Terence Paul Smith.

68. A. Symondson and S. Bucknall, *Sir Ninian Comper*, Reading: Spire Books, 2006.

69. T.P. Smith, 'The 1930s in One Town: Brickwork in Luton', *BBS Information*, **81**, October 2000, pp.3-19, esp. pp.3-7. A forthcoming paper in preparation for a future *BBS Information*, 'At Leisure and at Play: New Brick Buildings in Oxford, 1919-1941: Part One: Passive Interaction' will include consideration of new church provision in another car-making town, albeit one where there were already eleven functioning churches of the Church of England and at least six buildings for other denominations. The paper will also consider theatres, cinemas, and commercial venues for organised games, those team sports beloved of PE teachers. It would be interesting to compare the much larger Coventry (population in 1939 approximately 250,000) with Oxford and Luton, which both had populations of around 100,000 in 1939.

70. T.P. Smith submitted an extensive survey of Charlton, Harwood, and Price, eds, 2019, under the title, '*100 Churches, 100 Years*: A Further Assessment', which it has been agreed with be split into T.P. Smith, 'Practice Profile: Nugent Francis Cachemaille-Day, FRIBA (1896-1976): A Response to Clare Price' which is scheduled to appear in *BBS Information*, **147**, February 2021; T.P. Smith, 'London Churches in *100 Churches, 100 Years*: A Further Assessment' for the forthcoming 'Brick in London' issue of *British Brick Society Information* scheduled for October 2021; and T.P. Smith 'Misplaced Arches, St Peter the Apostle, Gorleston-on-Sea, Norfolk', forthcoming in a projected 'Brick in Churches issue' of *BBS Information*.

71. I regret that I have been unable to find the exact reference to Dr Hill's paper; the idea of using the title occurred to me on the same day as it was decided to cease making adjustments to this review article.

72. Norfolk has 655 medieval churches of which I have visited over 400; at a rough guess, at least 200 retain a rood screen. Rood screens have an even greater level of survival in Wales.

73. The golden triangle is the area between Oxford, London, and Cambridge, within which much of the scientific research effort of Britain is concentrated.

74. [Much revision of this paper took place while *BBS Information*, **145**, May 2020, was in progress, which accounts for a certain preponderance of examples from the counties of south-west England. One reason it has been included in this issue of *British Brick Society Information* is to stop the author fiddling with it and making even more minor adjustments; that way mistakes creep in. (Ed.)]

STOP PRESS

As this issue of *British Brick Society Information* was put to bed, the Editor received his copy of Clare Hartwell, Nicholas Pevsner, and Elizabeth Williamson, *The Buildings of England: Nottinghamshire*, New Haven and London: Yale University Press, 2020. Plate 101 is a colour photograph of the office of the architect Watson Fothergill on George Street, Nottingham, the subject of Jeffrey Sheard's article, 'A Nightmare on George Street: Watson Fothergill's Office, Nottingham', in *BBS Information*, **140**, November 2018.

Book Notice:
Going, Going, and almost Gone!

Travis Elborough, *Atlas of Vanishing Places, The Lost Worlds as They Were and as They Are Today*.
Maps by Martin Brown,
London: White Lion Publishing, 2019,
208 pages, numerous illustrations, 45 maps and plans,
ISBN 978-1-78131-895-9: price, hardback £22-00.

From the initial site, Mohenjo-Dara in Pakistan (pp.12-15), to the penultimate one, the Great Wall of China (pp.192-195), brick is at the heart of several of the vanishing places. Vanishing places may be man-made, in stone — Timgad (pp.60-63), Leptis Magna (pp.20-23), and Alexandria (pp.64-69) are examples of the latter — or in brick of which examples have been noted, or natural phenomena. Of the latter, the Dead Sea (pp.130-135) and the Everglades in Florida (pp.144-149) are considered as 'Shrinking Places' (pp.123-149), whilst Glacier National Park in Montana (pp.152-157) and the nation of Tuvalu in the South Pacific Ocean (pp.196-199) feature in 'Threatened Worlds' (pp.151-199). In the week of the book's publication (17-24 August 2019), Iceland recorded its first death of a glacier, Okjokull, which surely will not be the last as the continuing increase in the severity and complexity of the present and on-going climate emergency. Political circumstance and military conflict presumably prevented the book's author from visiting Palmyra, Syria, both a 'Threatened World' and among the world's 'Ancient Cities'. Earlier sections of the book examine 'Ancient Cities' (pp.11-69) and 'Forgotten Lands' (pp.71-121), both with places built of brick. Henceforth, this book notice will concentrate on those places built of brick.

The book features two sites at almost opposite ends of the Islamic world. Previously unknown to this reviewer is the Mosque City of Bagerhat, Bangladesh (pp.82-85). Khan Jahan Ali was dispatched in about 1398 to the marshlands at the mouths of the Ganges and the Brahmaputra rivers to establish an Islamic colony. The Sixty Dome Mosque was one of at least fifty mosques in a city. The city failed after the fifteenth century. Excessive vegetation has been removed from it to reveal stone columns supporting the domes within a brick-built exterior of five simple arches either side of a taller, central arch. Each corner has a turret-like minaret. This building makes one wish to know more about Bagerhat and its mosques, for which the 'Selected Bibliography' (pp.200-203) gives two books.

The comments on Timbuktu, Mali (pp.162-165), attracted purchase of the book. With the possible exception of the Djingareyber Mosque, the mud brick structures of the fabled city at the end of the Sahara crossing is in danger of succumbing to the twin effects of wind and sand as the desert continues its relentless advance south, as the comments and footage in a recent BBC4 television programme made clear.

Port Royal, Jamaica (pp.98-103), was destroyed by an earthquake and subsequent tsunami on 7 June 1692. Within thirty years, there were further disasters: a fire in January 1703, hurricane damage on 28 August 1712 and a dreadful storm on 28 August 1722. The end of the long spit of land protecting Kingston harbour was much reduced in size: the outline of the post-1692 coastline on the pre-1692 plan (p.101) and the plan of the present town (p.102) shows the extent of the destruction north of the town and the reclaimed land to the east, south, and west. A telling photograph of the aftermath of the 1907 Kingston earthquake (p.103) demonstrates the power of the planet. It has brick walls apparently free-standing but actually from roofless buildings and many piles of brick rubble in the semi-cleared street.

Also, in the Americas are the mud brick remains of the great city of the Chimú empire, Chan Chan, Peru (pp.72-75). The city was built *circa* 850 but was abandoned after conquest by the Inca in about 1470. More than half a century later, Francisco Pizarro arrived to loot but left the walls standing. In a dry climate, these walls were constructed of interlocking hexagonal blocks, twice as long as they are wide, placed on top of one another. These interlocking blocks have rhomboidal hollow centres, presumably to reduce the weight. From the photograph on page 75, the blocks seem to been laid without mortar. The whole site is at the mercy of the increased rains induced by the more frequent El Nino events of the last fifty years. From the plan (p.73), there were four royal compounds in the initial phase: Chayhuac, Uhle, Tello, and Labertino. The secondary

phase had a single royal compound, Gran Chimú in the north-east of the city, much larger than any of the earlier or later ones. Five royal compounds have been detected in the final phase: Suler, Velarde, Gran Bandeller, Tschudi, and Rivero. Of these, all except Labertino, Squler, and Tello have burial platforms.

The advance of the desert and the jungle like an earthquake and an El Nino are natural events. While initially a natural event, the flooding of Venice (pp.176-181) has become largely man-made and to a great extent exacerbated by human folly — or ought that to be greed. Giant monsters of the sea, in tonnage much greater than the largest mid-twentieth-century trans-Atlantic liners, regularly obliterate views of the canal-side buildings of La Serenissima, damage walls, and contribute to increased flooding. The culprits, multi-storey hotels mounted on a ship's hull, cruise liners taller than the spire of Santa Maria della Salute, have no place in the Venice Lagoon, let alone approaching the Grand Canal. A telling map (pp.178-179) shows the buildings damaged by the waves and the areas of flooding, not once but ten to fifty times a year! As 2019 ended, great floods engulfed the city: English newspapers carried multiple photographs of the floods in *La Serenissima*, the highest since 1966. As the local population departs for jobs and modern housing in Mestre, Venice is heading for the fate of its Roman predecessor, Aquileia, further to the east at the north end of the Adriatic.

Britain is represented by the hidden River Fleet in London (pp.86-89) and by the vanishing east Yorkshire coastline (pp.140-141). For the latter, Eccles and Happisburgh, Norfolk, or Dunwich, Suffolk, could equally have sufficed. Coastal erosion can be dramatic. The writer recalls a July afternoon in the 1980s as one of several teaching staff taking year 8 out along the pier at Gorleston-on-Sea to explain the process of coastal erosion when a slice of Corton cliff fell into the North Sea. Elsewhere in Norfolk, the remains of the tower of the church at Eccles, recognisable seventy years ago, by 1979 had become a lump of congealed stone and were merely a few stones increasingly buried in the sand a little over five years after that. Roads end with a jagged edge leading nowhere at Happisburgh, where the lighthouse is in danger of being toppled by coastal erosion. Martin Brown's map of Skipsea, East Yorkshire (p.141) shows a similar retreat, marking the coastline in 1750, in 1880, and the present day; a successor would necessarily record further erosion. Continuing erosion at Skipsea has attracted further attention with articles in *The Guardian*, 18 and 21 January 2020.

The map of the River Fleet (p.87) shows the multiple streams originating in springs of Hampstead Heath feeding into the river which provided water for early-nineteenth-century brickworks in the King's Cross. Henry VIII's Bridewell Palace, built and used between 1515 and 1530, stood on the west bank of the outflow of the Fleet into the River Thames. However, an illustration (p.88) seems to imply it was built of stone when in fact it was a brick building.

This is one of a number of instances where tighter editing and better proof-reading would have eliminated infuriating defects. Commenting (p.40) on the geology underlying the temples at Mahabalipuram, south of Chennai (formerly Madras), India, the text has 'peers', meaning titled people, for 'piers', a man-made structure either the support for a building or one built out into the sea! The contrasting fates of the stone temples at Mahabalipuram may be compared to the Colosseum in Rome where the majority was built on bedrock but a portion took advantage of an old course of the River Tiber. The Rome earthquake of 1362 destroyed the outer walls part built on the sand of river infill, but the majority constructed on rock survived largely intact.

Similarly, Susan Raven is quoted as 'the historian of Roman Africa' (p.60) in connection with the account of Timgad, Algeria, but there is no entry of this author's work in the 'Selected Bibliography' (pp.200-203). While Timgad appears on the world map of the sites covered (pp.4-5), neither the ultimate inspiration for the grid across Buckinghamshire's green fields at Milton Keynes nor Petra, 'the rose red city half as old as time' (see pp.52-59), appear on the map of 'Major Mediterranean settlements of the Greco-Roman world' (p.23). An unrepaired portion of the Great Wall of China from between Jinshsangling and Simatai is illustrated on page 193 but neither place is shown on the useful map (pp.194-195) of the various incarnations of the defensive systems protecting rich agricultural lands and sophisticated cities from mounted, marauding hordes of desert nomads resident in the lands to the north.

Nevertheless as an introduction to some of the world's threatened brick structures and to the wider ecological destruction the human race has wrought in maltreating the beautiful blue and green planet it shares with millions of other species, *Atlas of Vanishing Places* is valuable. It would make a fine Christmas present, particularly for an adolescent child or grandchild with interests in the ancient world, archaeology, or ecology.

D.H. KENNETT

Future Issues of *British Brick Society Information* with a Regional Focus

In view of the impending Annual General Meeting in Lincoln on a Saturday in June 2022, the Editor of *British Brick Society Information* would like to include in one or both of the first two issues of *BBS Information* in 2022 articles about brick in Lincolnshire and possibly the adjacent midland counties, without at the moment being specific as to which of the two issues to use for this purpose. The adjacent midland counties are those which formed the territory of the Five Boroughs — Derby, Leicester, Lincoln, Nottingham, and Stamford. It is probable that a completed article on 'Castle, Court and Prison: Brick Buildings at Lincoln Castle' will be included in one of these two issues: the brick buildings at Lincoln Castle formed the *raison d'etre* for suggesting that the British Brick Society hold an Annual General Meeting in the city. Also in preparation, but not scheduled for immediate publication, is 'Thirteen to One: Prisons in Nineteenth-Century Lincolnshire' surveying the wider context of the county gaol, the city gaol and house of correction in Lincoln, the five houses of correction in smaller, often rural places, and the five other borough gaols; in 1837, there were twelve prisons in the county. The new county gaol, built on the then outskirts of Lincoln in 1869-72, makes thirteen in about 1870; in 1884 the latter became the only prison in the county.

Following on from a paper entitled 'How Many Bricks are there at Tattershall Castle?' due to appear in the next issue of *British Brick Society Information*, a study is in progress: 'The Brick Solar Tower: A Building Type in Fifteenth-Century Lincolnshire and Beyond'.

Contributions on Lincoln, Lincolnshire and the adjacent counties are invited. If a member has even the shortest of pieces relating to brick or a brick building in Lincoln, Lincolnshire, and the adjacent counties, the Editor of *British Brick Society Information* would welcome notice of the contribution and indication of its length and number of illustrations by Saturday 25 December 2021 and the text with the illustrations by Friday 15 April 2021 or earlier, if at all possible.

The Editor of *British Brick Society Information* as holds a substantial paper based on buildings in London and New York, 'From Manhattan to Great Marlborough Street: Two Buildings in Black by Raymond Hood', and has in progress a somewhat shorter paper, 'From Palace to Prison: The London Bridewell'. It is proposed that either of these two items could form the basis of using *BBS Information*, **149,** September/October 2021, as a 'Brick in London' issue, if sufficient contributions from other authors on brick in Greater London are available. He also has a contribution, 'London Churches in *100 Churches, 100 Years*: A Further Assessment' written by one member of the society. In connection with the idea, the editor has held over two items for 'Brick in Print' and has retained various book reviews on brick buildings in London.

Further contributions are invited. If a member has even the shortest of pieces relating to brick or a brick building in the Greater London area, defined as within the London Orbital Motorway (the M25), the Editor of *British Brick Society Information* would welcome notice of the contribution and indication of its length and number of illustrations at or before the society's AGM in Bridport, Dorset, in June 2021 and the text with the illustrations by Monday 16 August 2021.

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BRITISH BRICK SOCIETY
MEETINGS in 2021

A Saturday in June 2021
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*
This is the meeting postponed from Saturday 16 May 2020.

Planning for possible visits in 2021 is in progress and dates will be announced in the next mailing: it is hoped to arrange a visit to at least one and possibly two of Alcester, Banbury, and the industrial area of Worcester, and to include a visit to a brickworks in the 2021 programme. Visits to Tewkesbury and Cardiff Bay are being planned for future years when the Covid-19 situation has been resolved.

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. The Covid-19 virus regulations has meant postponement of this to a Saturday in June 2022.

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.