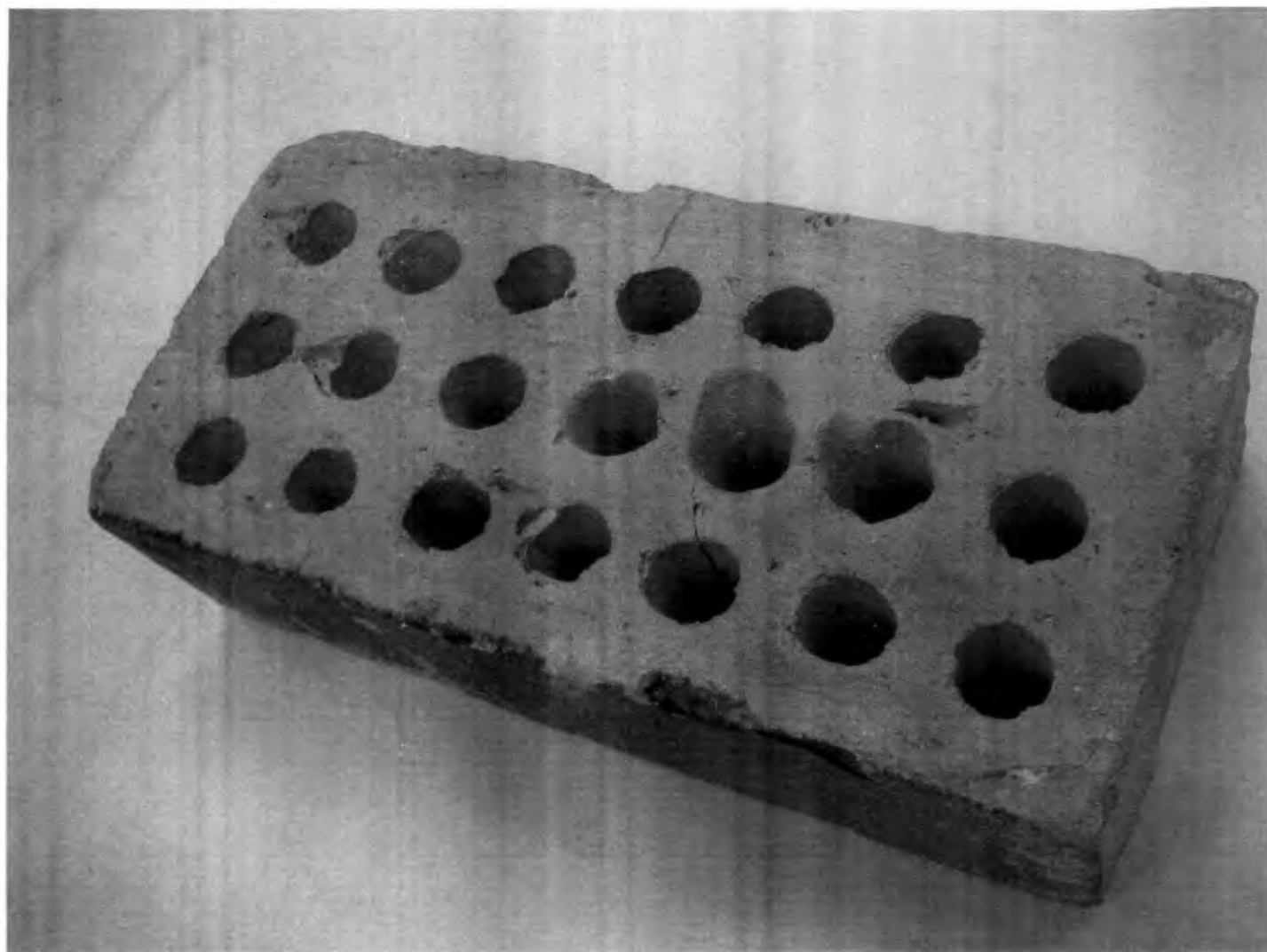


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BRITISH BRICK SOCIETY

# INFORMATION 115

FEBRUARY 2011



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\* The annual subscription to the British Brick Society is £10-00 per annum.  
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**British Brick Society web site:**

<http://www.britishbricksoc.free-online.co.uk/index.htm>

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### *Cover Illustration:*

**A perforated Beart brick made at Arlesey, Bedfordshire**

## Editorial:

### *British Brick Society Information* in 2011 and future years

To accommodate a much longer article than is customary as the principal contribution in this issue of *British Brick Society Information*, this Editorial has deliberately been kept brief and hence there is no essay on a brick topic preceding the portion devoted to the society's affairs. It also has the effect of allowing the editor to review the progress *British Brick Society Information* has made in the last decade: the most review of the society's activities was published in *BBS Information*, 100, May 2006. Equally, this brief editorial serves to provide some indication of the direction the society's publication is likely to take in the next twelve months.

The biggest change in the last five years has been to move to using a professional printer and the society's thanks are due to its Printing and Distribution officer, Chris Blanchett, for facilitating this.

What the editor has noticed is that more contributions have been forthcoming in recent years and from a much greater range of contributors: the issues where the author's names on the Contents page have been horribly familiar have decreased considerably and when this occurs, it is often due to the specific topic covered in that issue of *BBS Information*. Editorial experience over forty-plus years has taught him that all learned periodicals go through peaks and troughs of contributions. The society's editor was a mere sapling who had not completed a quarter century when he took on being editor of *Bedfordshire Archaeological Journal* in July 1969; now, as one who has recently retired, he might be described as a sturdy tree coming into its full maturity and not yet afflicted by Dutch elm disease.

The present issue of *British Brick Society Information* is largely composed of what became a rather lengthy answer to a query and has in part relied on the editor garnering information from several other members, for which many thanks. One item, omitted from the text of the article on 'The Building of the New War office, 1897-1906: the Connection with Brickmaking at Arlesey, Bedfordshire' is a photograph of the building known as the Admiralty Extension, the sole brick-faced principal government offices in Whitehall, City of Westminster (fig. 1). The complex story of the two-stage competition to design the Admiralty building, the various delays in construction, the need for the periodic re-drafting of the plans, partly due to changes in who the users would be, and its eventual but largely unfavourable critical reception would make a fascinating story and may be the subject of an article in a future issue of *British Brick Society Information*.

The eventual size of the article on 'The Building of the New War Office, 1897-1906: the Connection with Brickmaking at Arlesey, Bedfordshire' together with its many tables and illustrations has meant that the editor has accumulated a pleasant backlog, probably sufficient to fill four, if not five, issues of the society's journal. It is therefore pleasing to report that *BBS Information* is in good health. It is anticipated that four issues will appear in the course of 2011.

It is hoped that the next issue, *BBS Information*, 116, will appear in late April 2011; editorial work on it is largely complete. This will be an issue with a range of general contents including three items held over. For issues due to be published in 2011, the editor already has a choice of longer articles. Those not used in the present year can be expected will be included in the first or second issue to be published in 2012.

Editorial work for an issue of *BBS Information*, devoted to 'Brick in London' is planned for completion in early July 2011; much of the basic work for this issue is done. The issue has as its principal article 'The Building of the New 'Pastry' and its Brick Ovens at Carpenters' Hall, London, in 1584'. In the past twelve months, a number of interesting books relating to brick and



Fig. 1 The Admiralty Extension: Leeming & Leeming, 1884-1895 and 1900-1905. This is one of only two major government buildings in the Whitehall area where brick is the principal material for the outer walls. The other is New Scotland Yard for the Metropolitan Police: Richard Norman Shaw, 1888-90.

its uses in London have been published: review articles, reviews and notices of these will be included in *BBS Information*, 117, July 2011.

The idea has long been mooted of an issue of *British Brick Society Information* devoted to the use of brick in museum buildings, including what the Americans called art museums, art galleries to the British, but more often art museums to continental Europeans, for example, the French who have Musée de Louvre and the Musée d'Orsay in the former Gare d'Orsay. Projected items provisionally intended for publication in the future issue of *BBS Information* to be devoted to museum buildings are an account of the Dulwich Picture Gallery, a major brick building by the celebrated Sir John Soane, which celebrates its bicentenary in 2011, and a consideration of the two museum buildings designed by Charles Harrison Townsend: the Whitechapel Art Gallery and the Horniman Museum in south London. The former of these was included in the London Autumn Meeting in 2006 before the art gallery took over the former Passmore Edwards Library next door.

As members will be aware each of these buildings is in London. It would be valuable to have contributions examining brick-built museum buildings elsewhere in Britain, for an issue of *BBS Information* on the use of brick for museum buildings, either purpose-built or converted from some other use. The editor's address is on the inside cover of each issue of *BBS Information*. If members have possible contributions on museum brick, either a collection or a brick building used as a museum, they are invited to contact the editor, preferably on or before 18 June 2011, the day of the society's 2011 Annual General Meeting although for publication in late 2011 final texts would not be required until early August 2011. To a certain extent the issue on museums is reliant on the two projected articles being completed by August 2011.

There is flexibility in this, as the editor holds several articles, by authors other than himself, which would make a good issue with general contents. The editor anticipates being in the USA during the early part of May 2011 and again in late September and the first half of October, although the exact dates have yet to be finalised for the latter.

As long-standing members will be aware, production of *British Brick Society Information* was designed to be three issues each year but there have been occasions when four issues have been produced in a calendar year. Now that he has retired from teaching, but not from writing, it may be that the editor's energy will be sufficient to enable him to fairly consistently produce four issues in a year, given an adequate supply of articles.

One of ideas for an issue of *British Brick Society Information* in 2012 or early 2013 is to examine some of the brick buildings built for the fifteenth-century soldier, magnate and businessman Sir John Fastolf. Sir John is best known for commissioning the still surviving Caister Castle, but his other buildings are less well-known. Articles suggested for inclusion in this projected issue will consider the surviving Drayton Lodge, north-east of Norwich and the transport of bricks by cart to Caister Castle contrasting this with bricks being carried on barges to the earlier Cow Tower in Norwich partial building accounts for both buildings are in print.

In the years beyond 2011, various building types have been suggested as possible themes for specific issues of *British Brick Society Information*. One is brick and its uses in churches, a topic which has been featured before and on which the editor holds a number of contributions. On this other articles have been suggested. Other ideas mooted include synagogues and transport, either buildings and other structures for transport constructed of brick, such as the façade and side walls of London King's Cross, or the separate topic of the transport of bricks from manufacturing site to building site. There is a proposed paper for the former of these: respectively on the colour of the brick used in railway bridges and viaducts.

It is with considerable regret that the British Brick Society records the death of two long-standing and very active members: Rear-Admiral Tony Monk and Mrs Averil Harper-Smith. Appreciations of their contributions to the society and to the study of brick follow.

DAVID H. KENNETT

Editor, *British Brick Society Information*,

Shipston-on-Stour, Warwickshire

14 January 2011 and 25 February 2011

## Obituary:

Rear-Admiral Tony Monk, C.B., C.B.E., M.Sc., B.Sc.Eng., C.Eng.,  
F.I.Mar.E., F.R.Ae.S., F.I.Mech.E.

The British Brick Society received the sad news that on 5 July 2010, Tony Monk died peacefully at his home in Kingsdown, Kent, aged 86 years. Tony who had been a member of the British Brick Society for twenty-seven years will be well-known to many members as Tony and his wife, Elizabeth, were eager participants in the society's Spring and Autumn meetings in the 1990s and early years of this century.

Following a distinguished career in the Fleet Air Arm of the Royal Navy, in 1979 Tony was appointed Director General of the Brick Development Association, the trade association for brick manufacturers in the United Kingdom and Ireland.

After being Commanding Officer of the Royal Naval Dockyard at Rosyth, running the Brick Development Association and its three dozen staff must have seemed a bizarre contrast. As well as leading the BDA team, the Director General did require political skills of liaison and negotiation with directors of brick manufacturing firms, senior figures in construction firms, and associated government bodies.

I joined the technical staff of the BDA a few months after Tony's appointment and I well remember his warm welcome and his observation that we were two new boys working together. As a boss he readily showed appreciation of his staff and it was a pleasure to work under his leadership.

In the early 1980s, the British Brick Society was finding it difficult to establish stable support and founder member Geoffrey Hines approached Tony for help. I was asked if I would like to take an active interest and become the Honorary Secretary of the society, with the BDA providing practical help with typing and mailing which continued for several years.

Even after he left the Brick Development Association, Tony continued to maintain his members of the society and attended many of our Autumn and Spring Meetings.

I remember Tony as a very kind and generously spirited colleague and friend. He was a devoted family man and was sustained by Elizabeth and their sons and families.

MICHAEL HAMMETT

## Obituary:

Mrs Averil Harper-Smith

Mrs Harper-Smith, who died in Leicester General Hospital on 3 January 2011 after a short illness, was a long-standing member of the British Brick Society. She will be best known to most members of the British Brick Society for her 1991 publication, *The Brickfields of Acton*, jointly researched and written with her late husband, Thomas Harper-Smith. It is a model of its kind: detailed and with full references to the sources. In her latter years she had resided in Loughborough, Leicestershire, and I received several e-mails from her concerning brick and terracotta there and on the chimneys of the former London Brick Company brickworks visible from the train south of Bedford. Her last communication in October 2010 to me expressed her pleasure at being able to see the chimneys of Charnwood Brick from the window of her bedroom at the care home where she spent her final months.

DAVID H. KENNETT

# The Building of the New War Office, 1897-1906: the Connection with Brickmaking at Arlesey, Bedfordshire

Lawrance Hurst and David H. Kennett

with contributions from Steven Coleman, Alan Cox, Terence Paul Smith, Paul W. Sowan

## INTRODUCTION

In September 2010, Lawrance Hurst submitted a query about 'Arlesey common bricks' (printed below and fig. 1), which had been specified for use in the 'New War Office'. In the light of this, the circumstances of the design and construction of the New War Office at the northern end of the east side of Whitehall in the City of Westminster between 1897 and 1906 have been investigated, particularly in regard to a connection with brick production at the adjacent Bedfordshire villages of Arlesey and Langford between 1852 and 1932: bricks were produced at two works in the former village between these dates and at a works in Langford, the next parish, for a few years at the beginning of the twentieth century; two small nineteenth-century brickworks at Stotfold are also noted. In conclusion, suggestions are offered as to the suppliers of common bricks for the building of the New War Office, only one of whom is mentioned in one source in the contemporary literature.<sup>1</sup>

Contributions of the various writers are individually acknowledged; unattributed tables and other items are the work of the undersigned.

DHK

## ARLESEY COMMON BRICKS AT THE NEW WAR OFFICE

The Specification and Bill of Quantities for the 'New War Office'<sup>2</sup> — now known as the Old War Office<sup>3</sup> — is in a beautiful copperplate hand and is dated March 1901 (fig. 1). It includes the following paragraph:

The Bricks except where otherwise directed are to be Arlesey Fletton manufacture at the best option and to the approval of the Architect or other approved well burnt bricks of the best quality of their respective kinds free from breakage, cracks, soft or other inferior quality bricks,<sup>4</sup>

and in Addendum Bill No 3 this is corrected:

The bricks should be described as Arlesey or Fletton.<sup>5</sup>

The architect for this large building designed in 1898 was William Young (1843-1900), who was originally from Glasgow.<sup>6</sup> Foster and Dicksee of Rugby were the contractors for the superstructure, which was everything from the sub-basement upwards, and completed the building in 1906, the mass concrete retaining wall and the 6ft-thick mass concrete raft having previously been completed by John Mowlem, starting in 1899. The structure is of load-bearing brickwork carrying concrete floors with the elevations faced in Portland stone, except for the glazed brick in the light wells. All the other bricks in the thick load-bearing walls are Arleseys.



Estimate  
*For Works in the Execution of the  
Superstructure of the New War Office,  
Whitehall, for the Commissioners of  
His Majesty's Works & Public Buildings.*

*Wm Young Esq<sup>r</sup>  
Architect.*

*6, Lancaster Place.*

*Strand W.C.*

March 1901

*The Bricks except where other-  
wise directed are to be Arlesey  
Fletton manufacture at the  
option and to the approval of  
the Architect or other approved  
well burnt bricks of the best quality  
of their respective kinds free from  
breakage, cracks, soft or other  
inferior quality bricks.*

*2 The bricks should be described as "Arlesey or Fletton."*

Fig. 1 Memorandum from the office of William Young, architect, specifying Arlesey bricks for the New War Office.

The Bill of Quantities shows that Foster and Dicksee needed a large number of common bricks —over 20.7 million<sup>7</sup>— and it is interesting to note that they chose Arlesey bricks, not Flettons, perhaps because they cost less at that time.

The Arlesey bricks are of Gault clay and when broken can be seen to be very badly fissured, presumably because they were not allowed to dry for long enough before being fired. Most Gault bricks I have seen are perforated, as they were Beart's patent bricks (fig. 7), no doubt to allow them to dry properly. The picture of the core taken from one of the bricks shows typical fissures (fig. 6). As it is now twenty years since I worked on the building, I cannot remember if the bricks were extruded but I seem to recollect that they were pressed and had frogs.

I wonder if other members of the British Brick Society have come across Arlesey common bricks and if they really cost less than Flettons at the turn of the nineteenth century.<sup>8</sup>

LAWRANCE HURST

## THE CONTEXT OF THE BUILDING OF THE 'NEW WAR OFFICE'

### *The Building of Government Offices, 1884-1915*

Government had been a fairly modest affair in the 1850s (see Table 1); almost half a century later, on the eve of the South African War, government expenditure had increased by almost 50 per cent and directly-employed civil servants in all departments had risen by 135 per cent.

The expansion of space for the business of government spanned thirty years from when the first proposals for additional buildings had been made in 1883 to the competition in 1913 for what became the Ministry of Defence building in the 1950s. Between 1883 and 1915, new buildings were erected for the Admiralty (Leeming & Leeming; 1884-95 and extended 1900-05); for the Army (William Young completed by F. Clyde Young; 1899-1906; figs. 2-4); for various government departments in the New Government Buildings on Parliament Square, (J.M. Brydon, completed by Sir Henry Tanner; 1899-1902 and 1912-15); for the Office of Woods and Forests (J.W. Murray; 1906-09); and for the Board of Agriculture (H.N. Hawkes, completed by H.A. Collins; 1912-14).<sup>9</sup> This flurry of activity began almost a decade after the completion of George Gilbert Scott's massive set of offices on the opposite side of Downing Street to the official residences occupied by the First Lord of the Treasury and the Chancellor of the Exchequer. In 1883, the so-called 'Battle of the Styles' and the disputes between Scott and various prime ministers between 1858 and 1862 were a distant memory: Scott ultimately produced a perfectly competent, if not exactly inspiring, classical building, very much against his own preferences.<sup>10</sup> Scott had won the commission by having the right connections, even though his original designs had only been placed third in the 1858 competition.

At least, when the Yorkshire practice of Leeming & Leeming, based in Halifax,<sup>11</sup> won the competition for a new combined Admiralty Office and War Office in 1884, they were allowed to build a new building for the Admiralty, officially called the Admiralty Extension, but there were changes of plan — not least because the army decided it wanted its own offices: hence the New War Office. Changes in site size were imposed because of the belated retention of the existing eighteenth-century buildings on Whitehall used by the Admiralty. Even when the new scheme was agreed in 1887, there were construction delays and reductions in the budget.<sup>12</sup> A building which had been scheduled to take five years to build took almost decade and then, within six years, had itself to be extended: the Edwardian decade was characterised by noisy popular and much quieter but extremely insistent professional clamour for a vastly increased number of battleships, the Dreadnoughts, to counter the perceived threat of the increasing size of the German Navy. The extension to the Admiralty Extension, its seventeen-bay south wing, was designed and built between 1900 and 1905.

The critical reception given to the Admiralty Extension in architectural circles, both contemporary with the building and more recently, has never been high.<sup>13</sup> It was the only major central government building where brick is used as the principal external walling material;<sup>14</sup> in this case for the first and second floors above a rusticated stone base for the ground floor and semi-basement. The Navy preferred to spend its money on ships rather than expensive stone for the exterior of fancy offices.<sup>15</sup> In the light of subsequent government commissions and the fact that competitions were eschewed for major new buildings at the end of the 1890s,<sup>16</sup> it is clear that contemporaries, both architects and politicians, felt that the selection process regarding the architects of the Admiralty Extension had been unsatisfactory. Whatever the faults of the building, a suspicion can be voiced that the elite coterie of London architects had felt excluded by the choice of a northern practice for the Admiralty Extension, the first prestigious government building enterprise for two decades. One problem was that in 1884 Leeming & Leeming<sup>17</sup> had never built anything of the size of the Admiralty Extension and, consequently, various doubts

**TABLE 1**  
**GOVERNMENT EXPENDITURE AND EMPLOYEES, circa 1853, 1887 AND 1897**

	c. 1853	1887	1897	Notes
Total annual expenditure by central government	£55.2 million	£87.4 million	£118.3 million	
Royal Navy	£10 million	13.0 million	£22.4 million	
Army	£15.3 million	£17.7 million	£20.2 million	
Poor Relief, Education, Health, Public Works	£10 million	£30.7 million	£37.7 million	
Civil servants	64,000	--	150,000	directly employed by central government
War Office staff	--	958	1,140	
Income Tax rate	4d. in the £	7d. in the £	8d. in the £	

*Sources:* A. Service, *London 1900*, St Albans and London: Granada Publishing Limited, 1979, pp. 232, 233, and 235; A.L. Friedberg, *The Weary Titan Britain and the Experience of Relative Decline*, Princeton and Oxford: Princeton University Press, 1988, re-issued in pb.2010, tables 3.1 and 3.2 using B. Mallett, *British Budgets 1887-88 to 1912-13*, London: Macmillan, 1913, pp.476-7, 500-504, 484. M.H. Port, *Imperial London: Civil Government Building in London 1851-1915*, New Haven and London: Yale University Press, 1995, p.50 for War Office employees.

were expressed as to their ability to carry out such a large scheme. But there can be little doubt that this building lacks the substantive presence to reflect the power and global reach of the Navy for whose administration it was originally constructed.<sup>18</sup>

### *The War Office and its Function*

The War Office administered the army; even in the comparative peace of the final years of the nineteenth century, this numbered around 230,000 men, of whom about one-third were stationed in India. Just under half the battalions were in Britain and Ireland, and just over one-sixth of Britain's land forces were scattered in individual battalions across the British Empire.<sup>19</sup>

Spending on the army in the decade before the New War Office began to be built was never less than one-sixth of all government expenditure; and until fiscal year 1894-95, the cost of the army invariably exceeded that of the navy, (Table 2). Once full-scale war arrived — as it had done in the Crimea from 1854 to 1856 or would in South Africa between October 1899 and June 1902 — military expenditure took up more than half of all government spending, rising to almost two-thirds when the Boer War was at its most intensive (Table 2).<sup>20</sup>

However, essentially, the job of the War Office was to provide for keeping of the peace across a world where in 1897, 'at the end of a very long procession came an open carriage with [in it] a little old lady [Queen Victoria] to whom a quarter of the globe owed fealty',<sup>21</sup> but this also meant responsibility for fighting wars: real, as would happen in South Africa two years after building the New War Office was designed, or imaginary, as with the threat from Russia to India through Afghanistan.<sup>22</sup> As preliminary discussions concerning the provision of a new building for the War Office were beginning, there were conflicts in progress in Sudan and East Africa and

TABLE 2  
MILITARY AND NAVAL EXPENDITURE, 1853-1913

Financial Year	Government Expenditure			Military Expenditure as Percentage of Government Expenditure		
	Total	Army	Navy	Army	Navy	Total
	£ million	£ million	£ million	%	%	%
1853	55.2	15.3	£10	27.7	10.9	38.6
1856	93.0	46.7	£10	50.2	10.1	60.3
1887-88	87.4	17.7	13.0	20.2	14.9	35.1
1888-89	87.0	16.8	13.8	19.3	15.9	35.2
1889-90	91.2	17.6	15.6	19.3	17.9	36.4
1890-91	94.7	18.6	18.0	19.7	19.0	38.7
1891-92	97.5	18.3	18.1	18.8	18.6	37.4
1892-93	97.6	18.4	17.3	18.9	17.7	36.6
1893-94	98.4	18.7	16.2	19.0	16.5	35.5
1894-95	100.9	18.5	18.5	18.3	18.3	36.6
1895-96	105.1	19.0	21.2	18.1	20.2	38.3
1896-97	109.7	18.5	23.8	16.9	21.7	38.6
1897-98	112.3	20.2	22.4	18.0	19.9	37.9
1898-99	117.7	21.0	26.0	17.8	22.0	39.8
1899-1900	143.7	44.1	28.3	30.7	19.7	50.4
1900-01	193.3	92.4	33.2	47.8	17.2	65.0
1901-02	205.2	94.2	34.9	45.9	17.0	62.9
1902-03	194.2	70.2	35.2	36.2	18.1	54.3
1903-04	156.7	39.6	40.0	25.3	25.5	50.8
1904-05	151.7	31.6	41.0	20.8	27.0	47.8
1905-06	150.4	29.1	37.2	19.4	24.7	44.1
1906-07	149.6	28.3	34.6	18.9	23.1	42.0
1907-08	151.8	26.7	32.7	17.6	21.5	39.1

*Sources:* K.T. Hoppen, *The Mid-Victorian Generation 1846-1886*, Oxford: Oxford University Press, 1998, pp.179-180; A.L. Friedberg, *The Weary Titan Britain and the Experience of Relative Decline 1895-1905*, Table 3.1 using B. Mallett, *British Budgets 1887-88 to 1912-13*, London: Macmillan, 1913, pages 476-7; 500-04. Mallett, 1913, was not available to D.H. Kennett and hence the table could not be continued to 1912-13. Percentage calculations are by D.H. Kennett.

major conflict in South Africa had been narrowly averted following the Jameson Raid (1895). A decade earlier, in the mid-1880s, there were wars in both Sudan and Burma. Around 1880, deployments were made to Malta — to counter a joint Russian and French naval threat to trade routes in the Mediterranean — Afghanistan, Egypt, and South Africa.<sup>23</sup> In the thirty years following the charge of the Light Brigade, on 25 October 1854, Britain was *not* at war somewhere in the world in only six of them.<sup>24</sup> In contrast, the first decade of the period covered by Table 2 was relatively calm with peace-keeping rather than the active counterbalancing of aggression as the order of the day.

Even so, in an uneasy peace casualties were not inconsiderable and in conflict they were more. Many a “Drummer Hodge” and his companions took their “share both of blade and ball”; it was not only on the “broad Karoo” or in Kandahar and Kabul that “strange stars” and “foreign constellations” “uprose to nightly view” above the graves of British soldiers, both marked and,

the more often, unmarked.<sup>25</sup> Thomas Hardy captured the scenes at Southampton Docks when the troops embarked for the South African War in October 1899: in *The Colonel's Soliloquy*, an old man remembers and thinks of his wife, now a grandmother, and not of the fight to come: if "her man went underground", his would have been one of the many names that five years later were to be inscribed on the first wave of civic war memorials to be erected in towns in England.<sup>26</sup>

### *Building the New War Office, 1897-1906*

Of all government departments in the late nineteenth century, that relating to the administration of the army was one of the most scattered in London: 1,140 employees in 440 rooms scattered over seventeen offices, six of which comprised converted houses in Pall Mall; individual offices housed between two and 160 civil servants. Excepting offices in Kent's Horse Guards Building, these offices were in converted premises, not ones purpose-built for the administration of the army. Such dispersion of workers was clearly inefficient; the employees included no fewer than 198 messengers, mostly boys and young men hoping for a career in the lower ranks of the civil service; this was far more than would be needed if the War Office was housed in a single building. It was also a numerical increase from the 164 messengers amongst the 958 employees in fiscal year 1886-87 although there had been a very slight percentage decrease in the messengers employed.<sup>27</sup>

There was clearly a need for all the employees of the nation's largest consumer of taxation money to be efficiently housed within a single building. But disquiet remained on the part of government as to how to procure the new building: the open competition for the Admiralty was seen as unsatisfactory. Therefore, for both the New War Office and the contemporary New Government Offices on Parliament Square, a novel procedure was devised in 1897 whereby a sub-committee of the Royal Institute of British Architects, chaired by its then President, Professor George Aitchison RA,<sup>28</sup> working in conjunction with Sir John Taylor<sup>29</sup> of the Office of Works, would present a list of architects who had relevant experience and whose peers considered that they would be able to handle such an important commission.<sup>30</sup> In consultation with the various heads of the civil service departments who would use the buildings, draft plans for their layout had been drawn up under Sir John Taylor's supervision.<sup>31</sup> From the list of architects, a committee of the cabinet chaired by the First Commissioner of Works, Aertas Akers-Douglas,<sup>32</sup> would then make a choice of two architects to submit more detailed plans and elevations, one for the New War Office and the other for the New Government Offices on the east side of Parliament Street facing Parliament Square.<sup>33</sup> A preliminary list of twelve names was prepared, from which with two additions a ballot of the full Council of the Royal Institute of British Architects chose eight:<sup>34</sup> Charles Barry,<sup>35</sup> John Belcher,<sup>36</sup> John McKean Brydon,<sup>37</sup> John Burnet,<sup>38</sup> Sir Thomas Deane,<sup>39</sup> Thomas Drew,<sup>40</sup> W.H. Lynn,<sup>41</sup> and William Young.<sup>42</sup> Almost all had designed and successfully completed at least one major central or local government office.<sup>43</sup> Of these, Deane was probably the most experienced, having designed several government buildings in Dublin: but aged 69, he was the oldest. Both men selected by Akers-Douglas had completed municipal buildings for major local authorities. In 1882, Young had designed the acclaimed Glasgow City Chambers and was recognised as an accomplished planner and designer of country houses;<sup>44</sup> Brydon was the architect of the Chelsea Vestry Hall in 1885 and both the Bath Municipal Buildings and Chelsea Polytechnic in 1891.<sup>45</sup>

On the basis of their previous work, William Young and John McKean Brydon were invited to submit elevations and plans for the New War Office and the New Government Offices on Parliament Square respectively,<sup>46</sup> both buildings whose basic form had been planned by anonymous persons in the Office of Works.<sup>47</sup> Both men also had the advantage in 1898 that they

**TABLE 3**  
**THE NEW WAR OFFICE, DIMENSIONS OF THE BUILDING**

<i>Direction</i>	<i>Street</i>	<i>Length</i>	
<i>Façade faces</i>			
West	Whitehall	250 ft	82.0 metres
North-east	Whitehall Place	500 ft	163.8 metres
East	Whitehall Avenue	379 ft	121.3 metres
South	Horse Guards Avenue	320 ft	104.9 metres
<i>Location</i>		<i>Height</i>	
Above the pavement		80 ft	26.2 metres
Basement and sub-basement		30 ft	9.8 metres
Concrete foundations		6 ft	1.8 metres
Total below ground (including tank walls)		39 ft - 43 ft	11.9 metres - 13.1 metres

*Source:* C. Young, *Architectural Review*, 20, December 1906, p.302. gives dimensions and comments on the varying height of the subterranean overflow tank for surplus rainwater above the concrete raft.

were well-established in their profession but still comparatively young: William Young was 55 and his close friend, John McKean Brydon, three years older at 58. The government thus had the prospect that the architects appointed would be able to finish the work for which they had been chosen.

Brydon had a more or less rectangular site, facing south on Parliament Square with other frontages to Parliament Street, King Charles Street and Great George Street, for the New Government Buildings; officially these were at least in part for the Colonial Office although it never occupied any of the space therein, unlike the Board of Education, the Health Department, the Home Department (now the Home Office) and the Board of Local Government.<sup>48</sup>

In contrast, the New War Office was designed to occupy a large<sup>49</sup> but awkwardly-shaped quadrangular site, not quite a trapezium,<sup>50</sup> almost at the northern end of the east side of Whitehall. Just over two hundred years earlier this had been part of the vast Whitehall Palace, from 1529 to 1691, the official residence of the monarch.<sup>51</sup> Apart from Inigo Jones' Banqueting House, Whitehall Palace suffered serious fires on two successive days, 4 and 5 January 1691, and was demolished.<sup>52</sup> The site for the New War Office overlay the kitchen range with many lodgings to the west of the kitchen itself, a great court immediately to the north, and north of that the southern range of Little Scotland Yard, all part of the long-demolished palace.<sup>53</sup> The principal façade of the War Office (figs. 2-4), facing west on to Whitehall, was, and is, immediately to the north of Inigo Jones' Banqueting House.<sup>54</sup> This was the narrowest of its four frontages. Hardly less significant because actually longer frontages were a long façade to the narrow Whitehall Place to the north, a diagonal range to Whitehall Avenue to the south-east, and another range alongside Horse Guards Avenue to the south (dimensions in Table 3, above).<sup>55</sup> The last was and is also very visible in relation to the Banqueting House (fig. 4). The location of the New War Office provided problems for the architect. Firstly, he had to seek to harmonise the new building with its acclaimed neighbour;<sup>56</sup> secondly, even before the foundations had been laid, one powerful voice, the Earl of Wemyss, who had been William Young's first client and principal champion behind his appointment to design the New War Office, sought to impose a pet project based on the full plan made by Jones for a Whitehall Palace for Charles I. Following



Fig. 2 The War Office, 1898-1906: William Young, completed by F. Clyde Young with Sir Henry Taylor. The Portland Stone façade gives no hint of the use of 20.7 million bricks in the construction of the building. To the left is the Office of Woods and Forests, by J.W. Murray, 1906-09; to the right is the Banqueting House, Inigo Jones, 1619-22.

a House of Lords' motion signed by 76 worthy peers, this idea was fully debated in August 1898 but fell not least because of government parsimony but also due to impracticality: Wemyss' project gave only 17,000 sq ft of office space as against the 20,000 sq ft called for in the brief given to the architect and in the anonymous plan given to him.<sup>57</sup>

William Young's façades offered a mixture of banded rustication below Ionic columns for the second and third floors and a recessed fourth floor. To cope with the awkward angles, there are five-storey drums at the corners; each is topped by a square tower with a cupola. Given the sensitivity of the site, and especially the relationship to its southern neighbour, William Young was more than partly successful in providing an imposing building although, perhaps, the degree of harmonisation may have been less than ideal.<sup>58</sup> In 1906, when the building was completed, Clyde Young recalled his father's intentions:

My father's first thought on receiving the commission was, very naturally, of the style to be adopted for the new building: and the position of the site in proximity to numerous government offices, the Horse Guards and Inigo Jones' masterpiece, quickly he decided on a Classic treatment. The question whether that treatment should be free or orthodox was a problem more difficult to solve. The influence of the Banqueting House, was, however, too great to be resisted and he decided on a more difficult and dangerous course (and one likely to provoke criticism) of trying to produce a design which would harmonise with its beautiful neighbour and at the same time provide accommodation for the large staff. The dimensions of the order, the level of the cornice, and the height of the building were accordingly made to line with the Banqueting House as nearly as the internal arrangements would permit.<sup>59</sup>

Much of the problem arises from the layout of the chosen site: there is not a right-angle at any



Fig. 3 The New War Office, 1898-1906: from the north. Its frontage to Whitehall Place is prominent to the left of centre. The Office of Woods and Forests is on the extreme left.

of the corners: the drum towers are the means of masking this unavoidable fact and of moving the street, Whitehall, through an obtuse angle and allowing those walking up its east side to see Trafalgar Square.

Internally, the New War office has a large almost rectangular courtyard between the west wing and a cross wing and a smaller triangular courtyard east of the cross wing. Within the cross wing are light courts.<sup>60</sup> Construction began in 1898, with two years spent on the foundations of what was a large project costing well over a million pounds including the site.<sup>61</sup> Even in 1902, construction had not proceeded to the top of the ground floor, even though large cranes were in evidence.<sup>62</sup>

Government ministers and senior officials had expected William Young to live to complete the building: the New War Office could be seen as the crowning achievement of his career. Suddenly, when only the foundations of the structure had been laid, he died on 5 November 1900,<sup>63</sup> aged only 57. In the design work, William Young had been aided by his son and partner, Francis Clyde Young.<sup>64</sup> As the latter was entirely familiar with the thinking behind the design, the new president of the Royal Institute of British Architects, Sir William Emerson,<sup>65</sup> intervened with the government on his behalf. Clyde Young, an architect then in his late twenties and early thirties, completed his father's building with an agreed oversight being exercised by the recently retired Sir John Taylor,<sup>66</sup> who as chief architect to the Office of Works had been responsible for the supervision of drawing up the draft plan.

As a codicil to this complex tale, it should be recorded that John McKean Brydon also died<sup>67</sup> before his new building had proceeded very far but this site was taken over in 1901 by the Office of Works, with its new chief architect, Sir Henry Tanner,<sup>68</sup> in charge, much to the dismay of the architectural profession.<sup>69</sup> Brydon, who ran a comparatively small office, had neither a son nor a partner to continue his work. Tanner made some changes to the street façades of Brydon's scheme, but, even if less inspired than might have been the case, these were no more than those which might equally have been made by the original architect in the course of construction: Brydon's concept of a great circle for the central court of the building was retained as was his scheme for its finish. A more significant change was the provision of a curved façade to the western side, destroying the symmetry of the frontage to Parliament Square. Equally important was the introduction of a steel frame:<sup>70</sup> load-bearing internal walls of brick had been the original





Fig. 4 The New War office from the south, showing part of the frontage to Horse Guards Avenue (partly behind the tree) and the drum tower at the corner. Contemporaries criticised the use of Doric columns on the drum towers and cupolas above the Ionic columns of the main façades.

intention. Being a central government building, the New Government Offices were not subject to the building regulations of the London County Council.<sup>71</sup>

DAVID H. KENNETT

#### BRICKMAKING AT ARLESEY, BEDFORDSHIRE, 1852-1932

The choice of bricks from Arlesey as the common bricks in the construction of the New War Office between 1899 and 1906 should not come as a great surprise. The parish of Arlesey in the south-east corner of Bedfordshire was a major brickmaking centre throughout the second half of the nineteenth century (fig. 5). Buff/off-white Gault bricks were produced by various firms in Arlesey from 1852 until about 1932; drainage pipes were still being made there when long-standing BBS member Alan Cox compiled his *Survey of Bedfordshire Brickmaking A History and Gazetteer* in the late 1970s.<sup>72</sup> Manufacture continued until 1981.<sup>73</sup> And there was a brief attempt to resuscitate the making of Gault bricks at Arlesey between 1983 and the early 1990s.<sup>74</sup>

When, in the early years of the twentieth century, the account of Arlesey was being prepared for inclusion in the second volume of the *Victoria County History of Bedfordshire*, three brickworks were recorded as operational: the Arlesey Brick Company, the Arlesey Station Gault Brickworks and the London & Arlesey Brick Company.<sup>75</sup> However, only the first was still working when the volume was published in 1908 (see below and Tables 6 and 7).

The Arlesey Brick Company began in 1852, when Robert Beart (1801-1873)<sup>76</sup> moved his business interests some 20 miles south from his original base in Godmanchester, Hunts., a town

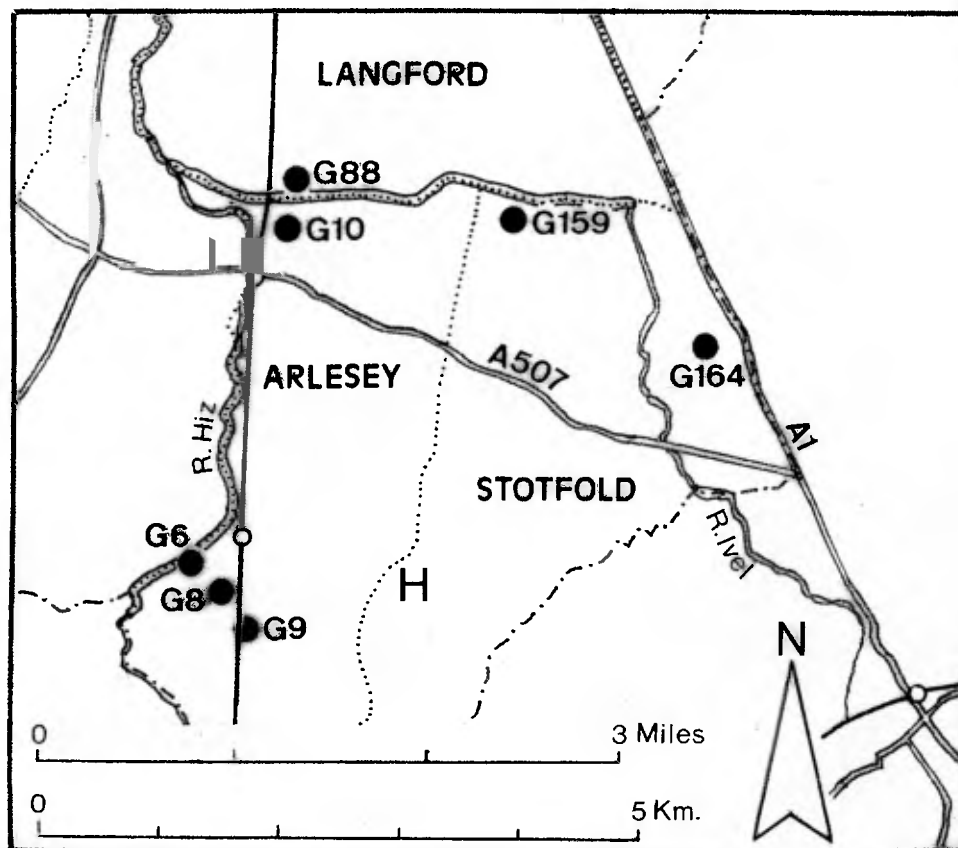


Fig. 5 Map of Arlesey, Langford and Stotfold, Bedfordshire, showing location of brickworks. All sites are in Arlesey unless otherwise stated.

Key: *Brickyards working in 1900*

G6 Beart's Patent Brickworks

G10 Arlesey Station Gault Brickworks

G88 London & Arlesey Brick Company, Langford

G160 Brick and tile works south of Caldecote Road, Stotfold.

*Brickyards closed before 1900*

G8 Great Northern Brick Co. (incorporating G7 William Dennis' Brickworks)

G9 Arlesey Brick and Lime Co. Ltd.

G159 Kiln at Astwick Road, Stotfold

*Other*

H Three Counties Hospital

Note: Numbers follow the gazetteer of A. Cox, *Survey of Bedfordshire Brickmaking A History and Gazetteer*, Bedford: Bedfordshire County Council in association with London: Royal Commission on Historical Monuments England, 1979, pages 65-105; see pp.70-71 for details of Arlesey brickworks; p. 85 for the brickworks in Langford; and p. 101 for Stotfold.

Drawn by T.P. SMITH

on the south side of the river Great Ouse from Huntingdon. Beart is sometimes described as 'of Huntingdon' as he continued to live in Godmanchester, being its mayor six times.<sup>77</sup> In Godmanchester in the 1830s, he had established a business making bricks and, initially of much greater significance, brickmaking machinery.<sup>78</sup> A Beart machine was viewed by those members who visited Marks Tey brickworks in July 2010.<sup>79</sup> Beart's patent still applied in 1865 when Humphrey Chamberlain of Kempsey, Worcs., who had a patent for a new brickmaking machine, stated that anyone who made perforated bricks with his machine was liable to pay a patent royalty to Robert Beart.<sup>80</sup>

The abundant Gault clay at Arlesey gave Robert Beart the opportunity to expand and to build 'an immense works' beside the newly-opened Great Northern Railway line at Arlesey: the railway from Leeds to London King's Cross had opened two years earlier in 1850. A single paragraph in the issue of *The Builder* for 18 December 1852 notes

Companies have been formed in the most eligible localities for the purpose of manufacturing bricks in steam factories by a new patent process. One of these establishments has for more than twelve months been in operation on a small scale at Huntingdon where 6 men and 4 boys are making 60,000 bricks a week, no alterations of weather in the slightest degree interfering with their operations. Under the same patent and on an improved scale, immense works are just being put down at Arlesey, also on the Great Northern line and a little more than 20 miles south [in the direction] of the metropolis where about a million and a quarter [bricks] will be made for the London market.<sup>81</sup>

The next paragraph of this short notice gives some statistics for weekly production at other brickworks using a steam engine and the patent process: Table 4 has been compiled from this. It is not clear what time-frame is implied by the optimistic "about a million and a quarter [bricks] for the London market". Annual production of eight million bricks in 1858 would imply a weekly production rate in the order of 160,000 bricks,<sup>82</sup> which would be one of the highest amongst firms then operating in England; but if the time frame for the expectation of a million and a quarter bricks is monthly, production each week would be in the order of 320,000 bricks (see Table 4).

Beart's firm went through several changes of name.<sup>83</sup> By 1877, the firm had become a private company, Beart's Patent Brick Co., and its clay pit had reached a depth of between 50 and 60 feet (between 15.25 and 18.3 metres). *Kelly's Directory of Bedfordshire* in its 1885 issue records that Beart's Patent Brick Co. was in association with the Arlesey Brick Co.<sup>84</sup> The Arlesey Brick, Lime and Cement Company had been producing off-white bricks from the Gault clay and drainage pipes since October 1880 but as a brickmaker, the firm was short-lived, being taken over by Beart's in 1883; however, it continued as manufacturer of lime and cement.<sup>85</sup> The clay pit is shown as active on the Ordnance Survey map surveyed in 1880-81.<sup>86</sup>

By the time the New War Office was being built, the firm had become a private limited company, The Arlesey Brick Company (Beart's) Limited; the name is first noted when the firm was reorganised in 1898 and was the one it retained until the firm was taken over by the London Brick Company in 1928. As previously noted, the first phase of brickmaking at Arlesey ceased in about 1932. The Arlesey Brick Company (Beart's) Ltd., is noted as a major brick producer in the Quarry Act Returns from 1895 to 1937. These give statistics of the number of employees at each works where the clay pit had a depth of more than 20 feet (6.1 metres)<sup>87</sup> and from which Tables 6 and 7 are drawn. In 1895, Beart's employed more men than any other brickmaking firm in Bedfordshire: a total of 154 workers.<sup>88</sup> However, from 1900, the number of employees drops considerably (Table 6).

**TABLE 4**  
**WEEKLY BRICKMAKING CAPACITY OF SELECTED BRICKWORKS**  
**IN 1852**

Beart works, Godmanchester	60,000 bricks	
Beart works, Arlesey (projected)	1,250,000 bricks	Time-frame uncertain
Beart works, Arlesey (possible)	320,000 bricks	If projected production is per month
Beart works, Arlesey (actual in 1858)	160,000 bricks	From return in Hunt, 1860
Cambridge	120,000 bricks	
Rugby	120,000 bricks	
Leicester	60,000 bricks	
Liverpool	500,000 bricks	
Manchester	600,000 bricks	
Birmingham	600,000 bricks	
Derby	120,000 bricks	
Edward Gripper works, Mapperley (near Nottingham)	360,000 bricks	
Doncaster for Yorkshire towns	800,000 bricks	

*Source: The Builder, 10, 18 December 1852, page 800.*

In 1852, Beart's bricks at Godmanchester were perforated with twenty-four holes, in three rows of eight,<sup>89</sup> those produced at Arlesey in the 1870s had only twenty-one holes, arranged in three rows of seven (fig. 7).<sup>90</sup> The reason for the holes has been disputed. Modern wire-cut bricks often have three large holes rather than a frog. These allow the fingers of the bricklayer to hold the brick when setting it in mortar though that is not its primary purpose; and certainly it cannot explain the much greater number of holes in a Beart's patent brick. One explanation given for the nineteenth-century practice is that the holes made the brick lighter and thus provided an alternative to the frog. *The Builder* in June 1852 suggested that the holes allowed the bricks to burn more thoroughly. Because of this, moisture could escape more easily and without creating fissures.<sup>91</sup> The brick produced with many small holes was supposedly very hard and very strong, ideal, in fact, for load-bearing walls as in the New War Office which had to take the weight of floors made of concrete slabs.<sup>92</sup> As an advertisement (fig. 8) shows Beart's also made solid bricks.

The two other firms operating at the very beginning of the twentieth century were both completely separate from Beart's. The Arlesey Station Gault Brickworks was opened in October 1882 by James McCullum Craig on land formerly part of Hermitage Farm, Arlesey; it was taken over by a much larger firm, Eastwood & Co., in or before 1890. This brickworks was noted in the Quarry Act Returns until 1910 but apparently had ceased operating by 1907, whereas in 1895 it had employed 96 workers (Table 7).<sup>93</sup>

Just over the Cat Ditch, the parish boundary with Langford, was the works of the London & Arlesey Brick Company. A brickworks was opened near Langfordhill Farm, adjacent to the main Great Northern Railway line, in about 1900 but apparently had ceased working by 1906: no return was submitted as required by the Quarry Act in that year or any other up to 1910, when the record ceases (Table 7).<sup>94</sup> Basically, production was uneconomic: the owners were unable to produce bricks for less than their selling price.<sup>95</sup>

Both the London & Arlesey Brick Company in Langford and the Arlesey Station Gault Brickworks in Arlesey itself had railway sidings giving direct access to the main line of the Great

**TABLE 5**  
**BRICKMAKING AT ARLESEY IN 1858**

<b>Name of Brickfield or kiln</b>	<b>Description of clay or brick earth</b>	<b>Nearest town</b>	<b>Name of freeholder Name of manufacturer</b>	<b>Kind of manufactures. Estimated annual make and general remarks</b>
Arlesey Brickworks	Gault	Baldock	Robert Beart Esq Robert Beart & Co.	Bricks of various shapes to suit architect's designs: 8,000,000 bricks Agricultural drain pipes: 1,500,000
Arlesey Brickworks	Gault	Hitchin	no freeholder. Arlesey Brick Co. [so spelled]	[included in the above]
Arlesey Brickworks	Gault	Hitchin	W.Dennis William Dennis	Bricks and drain tiles [no production figure given]

*Source:* Robert Hunt, *Mining Records Mineral Statistics of the United Kingdom of Great Britain and Ireland. Being Part II for 1858*, London: Longman, Green, Longman and Roberts/ Memoir of the Geological Survey of Great Britain and of the Museum of Practical Geology, 1860, page 62.

Data supplied by PAUL W. SOWAN.

Northern Railway. The London & Arlesey Brick Company's siding was 16 chains (322 m) north of Arlesey level crossing; that of the Arlesey Station Gault Brickworks was 9¾ chains (196 m) north of Arlesey level crossing.<sup>96</sup> Beart's Patent Brickworks had access to the main railway line but also railways of various gauges on its site: 2 foot (0.6 m), 3 foot (0.9 m), and standard gauge (4 ft 8½ in = 1.435 m) systems have been noted on various maps and after the Great War this profusion is noted in the Quarry Act returns in the 1920s and 1930s (Table 6).<sup>97</sup>

Apart from Beart's, two other brickmaking firms were operating in Arlesey in 1858, when the Geological Survey of Great Britain notes brick production in its *Mining Records Mineral Statistics of the United Kingdom of Great Britain and Ireland*.<sup>98</sup> As with Beart's later competitors, mentioned above, each produced a buff/off-white Gault brick. One firm operating in the 1860s had stopped production by the time surveying was undertaken for an Ordnance Survey in 1880-81, where 'old brickworks' designate the site of the works of the Great Northern Brick Company,<sup>99</sup> the successor in business to William Dennis' brickworks noted in 1858.<sup>100</sup>

Concerning the Arlesey Brick Company noted by Robert Hunt in 1858, it is not possible to add to the basic information given in Table 5; as the Arlesey Brick and Lime Company it may be a predecessor of the Arlesey Brick, Lime and Cement Company mentioned above.<sup>101</sup>

Also in south-east corner of Bedfordshire is the parish of Stotfold, where two small-scale brickworks were worked at different dates in the nineteenth century. The more northerly of the two was active in the 1840s when Bryan Gibbins claimed ownership. The second, on the road to Caldecote, was possibly a larger concern and was in operation from at least 1877 until 1914 but had ceased production by 1925. Two brickmakers are known: Alfred Lambert between 1877 and 1898 and then after a gap of a few years, from 1903 to the Great War, a small-scale building concern, Redhouse & Co., made bricks there. In the 1970s, a kiln survived.<sup>102</sup>

DAVID H. KENNETT

TABLE 6

**PERSONS EMPLOYED AT BEART'S PATENT BRICKWORKS, ARLESEY, BEDFORDSHIRE, 1895-1914**

Year	Railway Sidings	Total Number of Workers	Inside Workers	Outside Workers
1895	2	154	no data	no data
1896	1	152	114	38
1897	1	161	120	41
1898	1	161	120	41
1899	1	114	114	-
1900	2	28	28	-
1901	2	26	26	-
1902	2	24	24	-
1903	2	21	21	-
1904	2	12	12	-
1905	2	24	24	-
1906	2	13	13	-
1907	2	13	13	-
1908	2	10	10	-
1909	2	10	10	-
1910	1	12	12	-
1911	1	12	12	-
1912	1	12	12	-
1913	1	12	12	-
1914	1	12	12	-
1916	1	4	4	-
1918	1	5	5	-
1920	1	no data		
1922	no return			
1925	2	25	22	3
1928	36	35	23	12
1931	33	5	5	-
1934	43	12	12	-
1937	44	43	21	22

*Note:* The Quarry Act returns are intermittent for the period 1916 to 1937; even years for 1916 to 1922 and then for 1925, 1928, 1931, 1934, and 1937.

Data made available by ALAN COX through the good offices of STEVEN COLEMAN of Central Bedfordshire Council from the notes made by the late G.N. Webb from the Quarry Act Returns in the State Paper Room of the British Library.

**WHO SUPPLIED THE BRICKS FOR THE NEW WAR OFFICE?**

As noted in the introduction, suppliers of common bricks to the New War Office are recorded in only one of the various published accounts consulted; that in the December 1906 issue of the *Architectural Review*<sup>103</sup> where 'A List of Sub-Contractors' records J.C. Edwards of Ruabon, Flintshire, and Beart and Sons as suppliers of common bricks. An early twentieth-century advertisement (fig. 8) provides confirmation of Beart's involvement: it lists the New War Office

TABLE 7  
**PERSONS EMPLOYED AT BRICKMAKING FIRMS  
 IN ARLESEY AND LANGFORD, BEDFORDSHIRE, 1895-1910**

Firm	<i>Eastwood &amp; Co. at Arlesey Station Brickworks</i>			
Year	Railway Sidings	Total Number of Workers	Inside Workers	Outside Workers
1895	1	69		
1896	2	87	18	69
1897	2	90	16	74
1898	2	96	15	81
1899	2	17	17	-
1900	3	11	11	-
1901	3	18	12	6
1902	3	18	12	6
1903	no return			
1904	3	12	12	-
1905	3	9	9	-
1906	3	8	8	-
1907-1910	shown as not worked			

Firm	<i>London &amp; Arlesey Brick Company, Arlesey near Hitchin, at Langford Gault Brickworks, opened 1900</i>			
Year	Railway Sidings	Total Number of Workers	Inside Workers	Outside Workers
1900	1	7	5	2
1901	1	5	5	-
1902	1	9	5	4
1903	1	12	6	6
1904	1	12	6	6
1905	1	12	6	6
1906	1	not worked		
1907-1909	shown as not worked			

Data made available by ALAN COX through the good offices of STEVEN COLEMAN of Central Bedfordshire Council from the notes made by the late G.N. Webb from the Quarry Act Returns in the State Paper Room of the British Library.

in fourth place on a list of public buildings using Beart's Gault Bricks, after the Record Office, Chancery Lane; the Bankruptcy Office, Carey Street; and the Admiralty. Also listed are the Chelsea Barracks and the Queen Victoria Memorial.

'A List of Sub-Contractors' may imply that minor suppliers have been excluded. Suppliers of other building materials and internal fittings are also noted in the accounts given in mid-November 1906 in *British Architect*, *The Builder*, and *Building News* as well as that in the December 1906 issue of the *Architectural Review*. The white glazed bricks, for instance, were supplied by Brookes and Sons of Halifax, Yorkshire. Bath Stone Firms Ltd, one of several

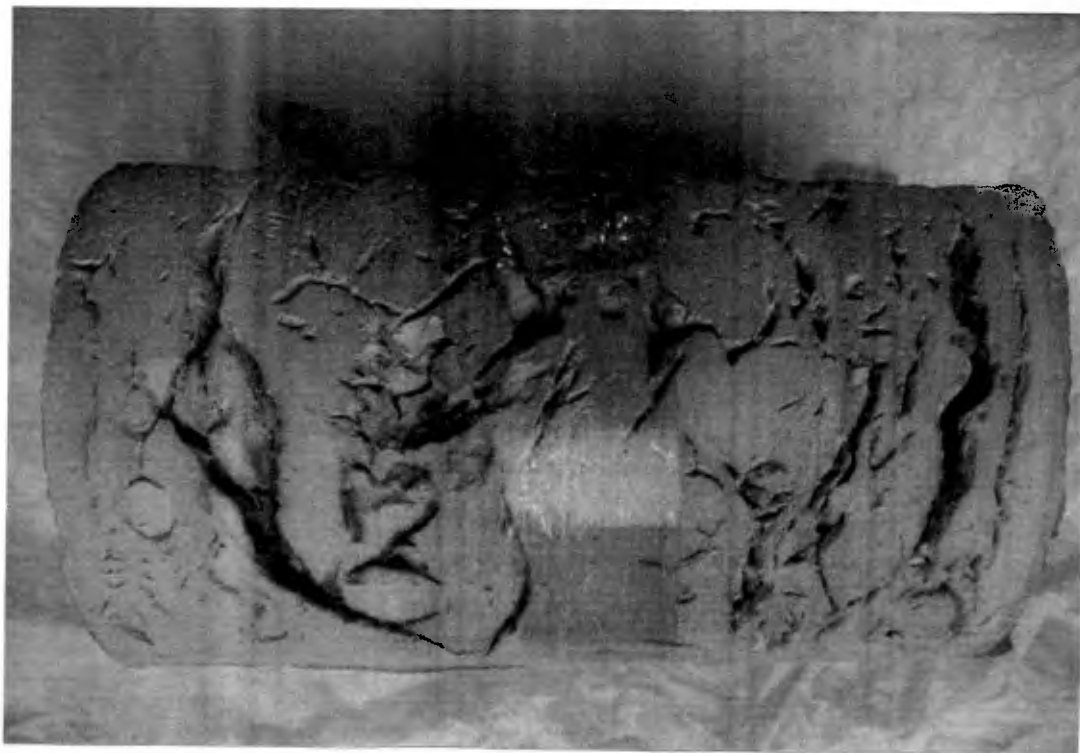


Fig. 6 The core of an Arlesey common brick showing heavy fissures.

firms working the quarries at Portland, Dorset, provided the specially chosen Portland stone; the stone was worked at the contractor's own yard in Chelsea.<sup>104</sup>

In the absence of any detailed examination of the building accounts, we are therefore left, a century later, to speculate as to whether Beart's was the only supplier from Arlesey of the 20.7 or 25 million "ordinary bricks",<sup>105</sup> as contemporaries termed them.

Whilst Lawrence Hurst's (uncertain) recollection of a frog might argue against the bricks he saw being Beart's; it is clear from the advertisement (fig. 8) that both solid and perforated bricks, not just extruded and perforated bricks, were produced by Beart's in the final quarter of the nineteenth century, the period immediately before the New War Office was built.

The two other brickmaking firms then working in Arlesey might equally be seen as possible suppliers to the New War Office, but direct evidence is not as yet forthcoming. In 1898, the Arlesey Station Gault Brickworks, since about 1890 under the control of Eastwoods, a firm originating in Kent, had been in operation for almost two decades. The second largest brickmaking firm in Bedfordshire in 1895 in terms of employees, it had a railway siding off the Great Northern line but had ceased operation by 1907. The brickworks in Langford, called the London & Arlesey Brick Company, opened in 1900 but ceased working in 1904, its period of operation almost coinciding with the *exact* period when the New War Office was being built and certainly with the period when bricks would be required. It may be that the brickyard and the associated clay pit was opened specifically to provide bricks for the New War Office, but as yet this is not proven. This firm was never economically successful.

This speculation does not preclude the idea that all three concerns each supplied bricks for the New War Office. Multiple suppliers would be in accordance with the policy stated by the government in April or May 1906 when asked about furniture for the New War Office.<sup>106</sup> The response was that "the government was *not* in the habit of using only one or two firms"; although the reply was made by a Liberal minister, it would equally have applied for a Conservative one



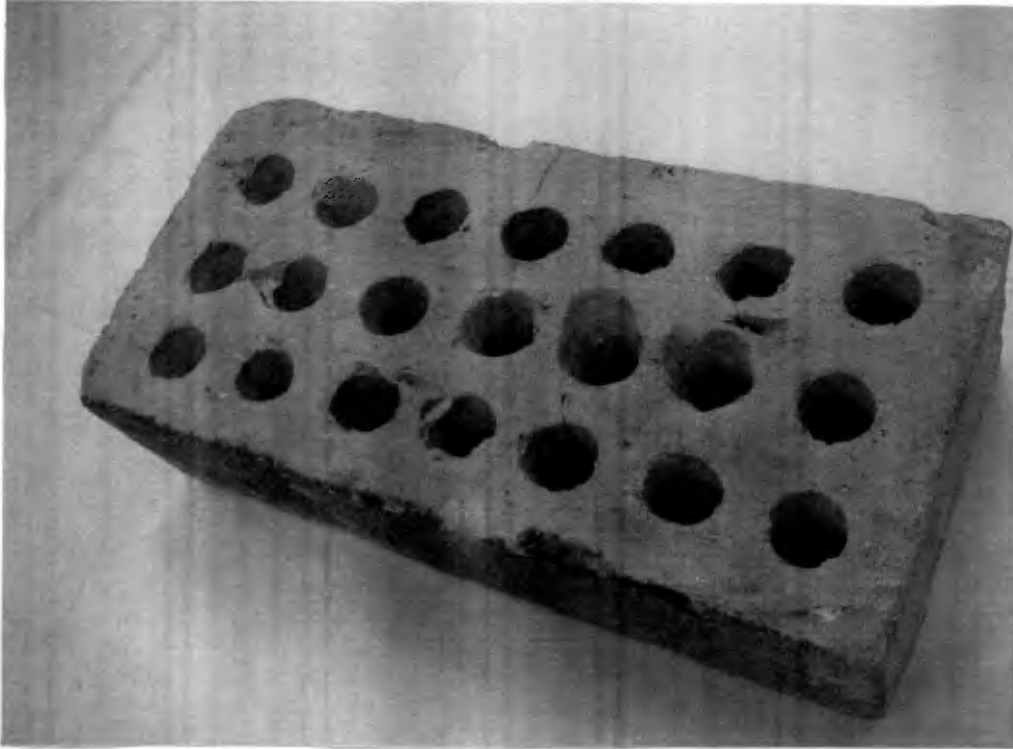


Fig. 7 An Beart's brick made at Arlesey showing finger holes arranged in three rows of seven.

from the government which commissioned the New War Office. Something else is instructive in the government's attitude: it invited tenders from firms "where inspection of work in progress [was] possible" and there was a "guarantee of government rules as to rates of wages".

DAVID H. KENNETT

## ARLESEY BRICKS IN OTHER BUILDINGS

The account in *The Builder* on 18 December 1852 notes that brick production at Arlesey was aimed at "the London market" and just over a century later, Michael Robbins remarked of Middlesex that

From 1850 onwards every kind of material was poured on to the unprotesting soil: harsh red bricks, sometimes glazed; in the north, yellow-green brick from Three Counties, near Hitchin; slates, pantiles, green tiles; stucco, artificial stone, and concrete.<sup>107</sup>

It is probable that Gault bricks, particularly those of Beart's patent, replaced London stocks for the front walls of some speculative housing developments constructed for members of the emerging middle class in London from the 1850s onwards.

A good example of this is at Chalcots, the Eton College Estate between Swiss Cottage and Primrose Hill. It can be seen in the large semi-detached houses on King Henrys Road, either side of the junction with Lower Merton Rise. The street frontages were built with Beart's Gault bricks but the side and rear walls were constructed of London stocks. There is block bonding between the Gaults and the stocks at the front end of the side walls of these villas.<sup>108</sup>

**THESE BRICKS WERE USED IN THE UNDERMENTIONED  
PUBLIC BUILDINGS.**

<p>RECORD OFFICE, CHANCERY LANE. BANKRUPTCY OFFICE, CAREY ST. ADMIRALTY. NEW WAR OFFICE. CHELSEA BARRACKS. QUEEN VICTORIA MEMORIAL (BUCKINGHAM PALACE).</p>	<p>ST. THOMAS'S HOSPITAL. UNIVERSITY COLLEGE HOSPITAL. BETHLEHEM HOSPITAL. GUY'S MEDICAL SCHOOL. ORTHOPEDIC HOSPITAL. CHILDREN'S HOSPITAL, 61, ORMOND ST. WOMEN'S HOSPITAL, EUSTON ROAD. HOMŒOPATHIC HOSPITAL. LONG GROVE ASYLUM, EPSOM. MIDDLESEX HOSPITAL.</p>	<p>JUNIOR CONSTITUTIONAL CLUB. PRUDENTIAL INSURANCE, HOLBORN. NORTHERN ASSURANCE, MOORGATE STREET. ELECTRIC LIGHT STATION, SOHO UNION BANK, SLOANE STREET. UNION BANK OF SCOTLAND. STOCK EXCHANGE.</p>
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<p>ALEXANDRA PALACE. NATIONAL PORTRAIT GALLERY. TATE PORTRAIT GALLERY. GRAFTON GALLERY.</p>	<p><small>Phone North 2100.</small></p> <p><small>Telegrams: "Bearts, London."</small></p> <p><b>BEART'S</b> <small>STRENGTH.</small> <b>BEART'S</b> <small>DURABILITY.</small></p> <h1 style="margin: 0;">GAULT BRICKS</h1> <p style="margin: 0;"><b>STAND THE TEST OF TIME.</b></p> <p style="margin: 0;"><b>SOLID.</b></p> <p style="margin: 0;">WHITE AND YELLOW GAULT FACINGS. RADIATED, for Culvert and Sewer work. MINGLED WIRE CUTS, for Ordinary Purposes <small>(As used by Government Contractors, and Builders generally.)</small></p> <p style="margin: 0;"><b>ALSO PERFORATED.</b></p> <p style="margin: 0;"><small>A very large variety of Fancy and Moulded White Bricks to select from. N.B. All Bricks made by this firm are thoroughly burnt and guaranteed to stand any weather, frost, or changes of temperature. STOCK ALWAYS ON HAND AT KING'S CROSS DEPOT, G.N.R.</small></p> <p style="margin: 0;"><small>Prices on application to</small> <b>The Arlesley Brick Co. (Bearts) Ltd.</b> <small>No. 1 Wharf, Goods Yard, King's Cross, G.N.R.</small></p>	<p>SELFIDGE'S. MAPLE'S, GAMAGE'S. SHOOLBRED'S. HARROD'S. CROSSE &amp; BLACKWELL'S. DEBENHAM'S. M. B. FOSTER &amp; SONS'. WATERLOW'S. BRIXTON MOTOR GARAGE.</p>
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<p>MANSIONS, &amp;c. GROSVENOR SQUARE. GREEN STREET. DOWN STREET. JAMES STREET. ST. MARY'S TERRACE. BEDFORD SQUARE. PONT STREET. HANS PLACE. CLARENCE GATE, &amp;c.</p>	<p>HOTELS: BERKELEY HOTEL. GWALIA, Upper Woburn Place. WAVERLEY, Southampton Row. COSMO, Ditto.</p>	<p>CITY CORPORATION. LONDON COUNTY COUNCIL. HORNSEY DISTRICT COUNCIL. TWICKENHAM COUNCIL. BECKENHAM COUNCIL.</p>
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<p>D'OYLE CARTE'S THEATRE (Shaftesbury Avenue). QUEEN'S HALL. LONDON MUSIC HALL. CROWN THEATRE. SCALA THEATRE.</p>	<p>WAREHOUSES: All Parts of London.</p>	<p>MEYROPOLITAN STATIONS. G.N.R. STATIONS. N.L.R. (MAIDEN LANE STATION). L. C. &amp; D. STATIONS. S. E. R.</p>
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<p>CANNON BREWERY, LONDON. SWAN BREWERY, LONDON. BLACK EAGLE BREWERY, LONDON. BENSKIN'S BREWERY, WATFORD. NEW LONDON BREWERY.</p>	<p>ALBERT HALL ESTATE, KENSINGTON. BEECH HILL PARK ESTATE, BARNEY. BYCULLAH PARK ESTATE, ENFIELD. BELSIZE PARK ESTATE. EARL'S COURT.</p>	<p>SCHOOL BOARD OFFICES. OWEN'S SCHOOL. BOARD SCHOOLS (Several). ST. PAUL'S SCHOOL, HAMMERSMITH. CRIPPLEGATE INSTITUTE. LEVISHAM MISSION.</p>
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Fig. 8 Advertisement for Beart's Bricks showing lists of buildings where they had been used, including the 'New War Office'.

Beart's bricks were used for housing developments elsewhere in London. The undated advertisement, utilised as figure 8, notes their use in Barnet at the Beech Hill Estate; in Enfield at the Bycullah Farm Estate, begun in 1879; in Hampstead in the Belsize Park Estate, developed by William Willets from 1868 onwards.<sup>109</sup> In more central parts of London, they were used at the Albert Hall Estate in Kensington and Earl's Court. Mansion flats occupy a central place on the left-hand side of the advertisement (fig. 8).

Lower down the social scale, Beart's bricks were used in the later nineteenth century, almost contemporaneous with the New War Office, in the Peabody Estate, Farringdon Lane,

EC1, where these machine-made extruded bricks are bonded with hand-moulded dun-coloured London stocks.<sup>110</sup>

Other than housing developments, Beart's advertisement (fig. 8) lists various public buildings in London wherein the firm's bricks were used: government offices, as noted above, hospitals, and art galleries, together with insurance offices, the new department stores, hotels, and places of entertainment. Also noted are the buildings of several railway companies. These include stations built by the Metropolitan Railway in the 1860s, such as what are now Barbican, Farringdon and Moorgate.<sup>111</sup> At Farringdon, for example, Beart's not only supplied standard bricks but also the specials used: voussoirs for arches, and key-stones for single cants, bricks with sunk quarter-round on one angle, plinth bricks, and plinth external returns (though internal returns are created by cutting mitres on plinth bricks).<sup>112</sup>

For much of the late nineteenth and the early twentieth centuries, as the advertisement in figure 8 shows, Beart's maintained an office and depot at King's Cross to aid (and promote) the use of their materials in the metropolis.<sup>113</sup>

The correlation by Michael Robbins of Arlesey bricks with Three Counties, noted above, is illustrative of the fame of one local building largely constructed of Beart's bricks: Three Counties Hospital (now Fairfield Hall); the hospital gained its name because it provided for the mentally ill of three rural but not especially populous, counties: Bedfordshire, Hertfordshire and Huntingdonshire.<sup>114</sup> A site on Arlesey was chosen as being rural but with good transport links. It was adjacent to the county boundary of Bedfordshire and Hertfordshire and on a main railway line from Huntingdon and the other small towns of Huntingdonshire. The asylum had its own railway station, Three Counties, towards the southern end of Arlesey parish, whereas Arlesey Station was at the northern end, near the inhabited village centre.

Three Counties Hospital was a county lunatic asylum erected under three separate but linked parliamentary provisions — the Lunatic Asylums Act of 1842, the Lunatic Act of 1844 and the Lunatic Asylums and Pauper Lunatics Act of 1845 — which established that every county was *required* to build a county lunatic asylum, separate from any other provision for those whom the state needed to support.<sup>115</sup> Prior to this, provision for those suffering from any form of mental illness had been a voluntary obligation on the county justices who provided such local administration as existed. In fact, Bedfordshire and Bedford together had established an asylum in St Mary's parish in Bedford, to which Hertfordshire and Huntingdonshire sent inmates from 1837 and 1847 respectively.<sup>116</sup>

The Arlesey site was chosen in 1857. In addition to being a rural parish on the county boundary, Arlesey was also relatively distant but comparatively accessible from the major Bedfordshire towns of Ampthill, Bedford, Biggleswade, Dunstable, and Luton,<sup>117</sup> and similarly it was reasonably easy to reach from towns in east Hertfordshire such as Baldock, Hertford, and Hitchin. Only from St Albans and Watford in Hertfordshire and Leighton Buzzard in Bedfordshire was Arlesey not within a day's return journey by horse-and-cart.

Also in Bedfordshire, Beart's bricks were the principal material of the Primitive Methodist Chapel (now church hall), High Town, Luton, considered in a previous contribution to the journal.<sup>118</sup> It was designed by a local architect, Henry Holyoak, and was built in 1852, although its frontage was later altered. The Beart's bricks, which were used together with local red bricks and Luton Greys, are notable for the wrinkled fabric impressions and the (?children's) finger-marks which they show.

LAWRANCE HURST, DAVID KENNETT, TERENCE PAUL SMITH

## ACKNOWLEDGEMENTS

Lawrance Hurst wishes to express his thanks to all who have supplied an answer to his query. David Kennett thanks Steven Coleman, Alan Cox, Terence Smith, and Paul Sowen for their contributions and especially Alan Cox for allowing David Kennett to quote from his unpublished paper on 'Brickmaking in the Arlesey Area of Bedfordshire' and for providing a copy of the advertisement used in figure 9. Terence Smith kindly provided much back-up proof reading for which David Kennett is most grateful.

## NOTES AND REFERENCES

### ABBREVIATIONS

**DBA** A. Brooks, A. Felstead, J. Franklin, L. Pinfield, and J. Oldfield, *Royal Institute of British Architects Directory of British Architects 1834-1914*, London and New York: Continuum, 2001, 2 vols: A-K, L-Z, separately paginated.

**ODNB** H.G. Mathew and B. Harrison (eds.), *Oxford Dictionary of National Biography*, Oxford: Clarendon Press, 2004, 44 vols.

1. For sources of materials and contractors for the New War Office, the list given on p.308 in Clyde Young, 'The New War Office', *Architectural Review*, 20, December 1906, pp.301-316, is the most comprehensive. This article contains many high-quality photographs of the building when completed but before it was occupied; see also the unillustrated accounts in *British Architect*, 66, 23 November 1906, p.361; *The Builder*, 91, 17 November 1906, pp.563-4; and *Building News*, 91, 16 November 1906, pp.675-6, but although much information about suppliers is given in these three accounts, none mention the firms who supplied the common bricks.

2. The Bill of Quantities is the memorandum reproduced as figure 1, copy in possession of Lawrance Hurst.

3. The modern Ministry of Defence (E. Vincent Harris, 1951, designed 1913) is now seen as the present 'New War Office'. The brief description of the building under discussion, now the Old War Office, in S. Bradley and N. Pevsner, *The Buildings of England: London 6: Westminster*, New Haven CT and London: Yale University Press, 2003, p.238, concentrates on the external appearance on Whitehall. The plan of Whitehall, *ibid.*, p.107, with key on p.106, shows the block plan of the building. For a contemporary account when first completed but not fitted out see *The Builder*, 90, 6 January 1906, p.1. The most recent and fullest account of the building is in M.H. Port, *Imperial London: Civil Government Building in London 1851-1915*, New Haven CT and London: Yale University Press, 1995, pp.50, and 243-7, with figs.58, 61-3, 256-260. The building is extremely prominent

on the upper right in views of Whitehall shown on television at the annual Service of Remembrance on the Sunday nearest 11 November.

4 See note 2.

5. The amendment to the Bill of Quantities is from an unrecorded source but is added to the version reproduced as fig. 1.

6. A brief account of William Young's career is given in A. Stuart Gray, *Edwardian Architecture A Biographical Dictionary*, London: Duckworth, 1985, p.394-5, with references to obituaries in *Architectural Review*, 8, 1900, pp.234-5; *British Architect*, 54, 9 November 1900, pp. 324-5; *Journal of the Royal Institute of British Architects*, 8, 1900-1, pp.44-7 (by J.M. Brydon) with list of works; *The Times*, 6 November 1900, p.6. See also R. Dixon and S. Muthesius, *Victorian Architecture*, London: Thames and Hudson, 1978, p.270; A. Service, *Edwardian Architecture*, London: Thames and Hudson, 1977, p.213; Port, 1995, p.280; and *DBA*, II, p.1093. William Young does not appear in either *ODNB* or *Who Was Who 1897-1915*.

7. *British Architect*, 66, 23 November 1906, gives a figure of 25 million common bricks; and notes also 1.5 million glazed bricks supplied by Brookes and Son of Halifax..

8. Lawrance Hurst can be contacted at 2 Richfield Road, Bushey Heath, Herts., WD23 4LQ or by e-mail at [lhurst@hurstpm.co.uk](mailto:lhurst@hurstpm.co.uk) Questions of comparative costs are not considered in this paper.

9. Bradley and Pevsner, 2003, pp.232-271, gives a general account of each of these buildings; for locations see the site map, *ibid.*, p.107. References to the Admiralty Extension and the New Government Offices are given below, nn.12 and 35; for the New War Office see n.3 above. Descriptions of Office of Woods and Forests, now the Department of the Environment, Food and Rural Affairs and the Board of Agriculture, also used by DEFRA, are *ibid.*, p. 238. For all of these buildings see M.H. Port, 1995, *passim*.

10. Bradley and Pevsner, 2003, pp.265-270, with plan at p.268. The recent exhibition 'Masterworks: Architecture at the Royal Academy of Arts' featured Sir George Gilbert Scott's Diploma Work, 'Government Offices, Whitehall, London, from St James's Park as in the style desired by the architect', reproduced N. Bingham, *Masterworks: Architecture at the Royal Academy of Arts*, London: Royal Academy of Arts, 2011, pp.72-73, with detail on p.71 and text p.70.
11. The brothers John Leeming (c.1849-1931) and Joseph Leeming (1849-1929) formed their partnership in 1872; John, the elder, signed articles with C.F.L. Horsfall in 1865, a year earlier than his brother. Brief details of their careers, without a list of buildings, are given in *DBA*, II, p.33. There is a brief note in Dixon and Muthesius, 1978, p.261. They are omitted from 'Appendix 4 The Leading Characters', Port, 1995, pp.278-280.
12. Bradley and Pevsner, 2003, p.253, gives the bare details. This building and the sorry tale of its various pre-construction revisions would repay further study. For a preliminary study in the general context of government building see Port, 1995, pp.130-2, 181-5, 232-7, 269-271, with accompanying illustrations of various schemes and plans.
13. A. Service, *London 1900*, St Albans and London: Granada Publishing Limited, 1979, pp.232-3 with fig.210 sums up the general attitude to the building. Bradley and Pevsner, 2003, p.253 concurs but blame the "tameness" of the building on the various delays in its completion. see also Port, 1995, pp.237 for a discussion of its contemporary reception.
14. The use of brick drew unfavourable comment at the time of its completion; see *British Architect*, 49, 8 April 1898, pp.233-4, for the reaction of one architectural periodical. New Scotland Yard, also largely of brick, was built for the Metropolitan Police.
15. In 2011, the building is occupied by Foreign and Commonwealth Office staff in far less opulent surroundings than Scott's building. The FCO also occupies Scott's building.
16. And in the 1900s for the two buildings conceived in Edward VII's reign; there was a competition in 1913-14 for what became the Ministry of Defence Building, but was originally a building for the Board of Trade, won by a young E. Vincent Harris (1879-1971); see the brief notice in Grey, 1985, p.207. The final building is considered Bradley and Pevsner, 2003, pp.242-4.
17. Major buildings by Leeming & Leeming in their native Yorkshire include the Borough Market, Halifax (1895), Leeds City Markets (1903): Dixon and Muthesius, 1978, p.261. These are the only buildings by the firm in N. Pevsner, *The Buildings of England: Yorkshire, The West Riding*, Harmondsworth: Penguin Books, 1967, pp.231 and 317 respectively.
18. A.L. Friedberg, *The Weary Titan, Britain and the Experience of Relative Decline 1895-1905*, Princeton and Oxford: Princeton University Press, 1989 re-issued pbk., 2010, pp.135-208, describes the threats to the global reach of the Royal Navy c.1900 whilst also pointing out that total supremacy was no longer possible. *Ibid.*, Table 3.1 (on p.153) shows how the Royal Navy basically maintained the "two navy standard" that the Navy should exceed the combined strength of the next two largest fleets.
19. Friedberg, 1989/2010, Table 5.1 (on p.277) gives a breakdown of the deployment of British land forces in the early twentieth century. Friedberg's source is J.K. Dunlop, *The Development of the British Army 1899-1914*, London: Methuen, 1938.
20. K.T. Hoppen, *The Mid-Victorian Generation 1846-1886*, Oxford: Oxford University Press, 1998, pp.179-180, for expenditure in 1853 and 1856, but seems to confuse spending on the army with total military expenditure; in Table 2, I have followed Service, 1979, pp.232, 233, and 235 as to spending on the army and the navy in the 1850s. Figures for the 1897-88 to 1907-08 are taken from Friedberg, 1989/2010, Table 3.1.
21. Harold Macmillan (1893-1986), gave a talk 'Recollections of Queen Victoria's reign' on BBC Radio 4, date not recalled; Macmillan as a young boy of four watched the whole of the procession from a vantage point above Fleet Street.
22. Friedberg, 1989/2010, pp.209-278 with references there given.
23. K. Robbins, *The Eclipse of a Great Power Modern Britain 1870-1975*, Harlow, Longman, 1983, pp.3-6, 'Framework of Events [1870-1901]' gives a useful summary of when wars were fought.
24. Hoppen, 1998, pp.703-715, 'Chronology', records military engagements between 1846 and 1886.
25. T. Hardy, ed. D. Wright, *Selected Poems*, London: Penguin Books, 1978; the first quotation in double quotation marks is from *The Colonel's Soliloquy*, *ibid.*, pp.254-5; the following four are from *Drummer Hodge*, *ibid.*, p.257. The former is one of those composed at Southampton Docks in October 1899; *Drummer Hodge* is not precisely dated but was composed between October and December 1899.
26. The quotation is from *The Colonel's Soliloquy*, see n.25. DHK has not researched War

Memorials to the South African War in all of the towns from which soldiers were recruited, but he knows of two: on the Embankment at Bedford, at the north end of Bedford Bridge; and in Salford to the Lancashire Fusiliers where Chapel Street becomes The Crescent, at the junction with Oldfield Road and opposite the former Salford Royal Hospital. Both personal observation can be cited; for the latter, C. Hartwell, M. Hyde and N. Pevsner, *The Buildings of England: Lancashire: Manchester and the South-East*, New Haven CT and London: Yale University Press, 2004, pp.628-9. Both of these are in separate locations to memorials those who died in the Great War.

27. Accommodation for the Old War Office is noted Port, 1995, pp.27-8 and 34; *ibid.*, figs. 33-4 illustrates the offices on Pall Mall: buildings now demolished for the Royal Automobile Club, with the exception of Schomberg House. Figures for the total employees in the War Office are given by Port, 1995, p.50; it was expected that the numbers to be fed on a daily basis in the fourth-floor restaurant would be in the order of 1,000, *Architectural Review*, 20, 1906, p.306; *British Architect*, 66, 1906, p.361; but *Builder*, 91, 1906, p.564 claims that the restaurant seats 600 but would be expected to serve between 1,000 and 1,700 lunches on a daily basis. For the kitchens, see Port, 1995, fig.61; working conditions the new offices are illustrated *ibid.*, figs.58,62, and 63.

28. George Aitchison (1825-1910) was Professor of Architecture at the Royal Academy Schools from 1887-1905; he refused a knighthood: see Dixon and Muthesius, 1978, p.252 and *DBA*, I, p.17; see also J.M. Crook, in *ODNB*, I, pp.529-530.

29. Sir John Taylor (1833-1912), see *DBA*, II, pp.770-1, and H. Tanner, rev. M.H. Port, in *ODNB*, 53, pp.950-1; also Port, 1995, p.280. Taylor does not appear in either Dixon and Muthesius, 1978, or Gray, 1985.

30. *Journal of the Royal Institute of British Architects*, 5, pp.446-7 record the initial committee of the RIBA as consisting of Aitchison, James Brooks, Campbell Douglas, W.M. Fawcett and Aston Webb. Twenty-two architects were initially considered; this list was whittled down by these five men to twelve, to which the full council of the RIBA added two more; by ballot the council then chose the eight names to be submitted to the government.

31. The prior preparation of the plan for the New War Office is recorded in *British Architect*, 49, 15 April 1898, p.251. Final plans are given *Architectural Review*, 20, 1906, p.303 for ground floor and second (or principal) floor.

32. J. Ridley, 'Douglas, Aretas Akers-, Viscount

Chilston (1851-1926)', *ODNB*, 34, pp.629-631. He appears in *Who Was Who 1916-1928*, 1930, p.195 under Chilston. Port, 1995, pp.132-4 with fig.87 for an account of Akers-Douglas as First Commissioner of Works. *Ibid.*, p.278 for a brief account of his career.

33. The accounts in the building press, notably *Journal RIBA*, 5, 1897-98, p.446-7, and *Building News*, 74, 13 May 1898, p.692, do not state who comprised the government's committee nor how the two jobs were to be allocated. Port, 1995, p.189 prints a Memorandum that makes it clear that two architects would be chosen, one for the Government Buildings and one for the War Office. Port, 1995, p.190 gives the cabinet committee as Akers-Douglas, A.J. Balfour, and Lords Lansdowne and Wemyss.

34. The list of names is given in *Building News*, 74, 13 May 1898, p.692, where the comment is made that only Belcher and Barry are English, whereas three architects practising in Ireland were chosen -- Deane, Drew and Lynn - and three were Scotsmen -- Brydon, Burnet and Young -- but each of the Scots practised in London. Interestingly, only Belcher, Brydon, Burnet, and Young appear in the list of prominent architects and their principal buildings in Service, 1977, pp.197-213.

35. It is unclear whether this refers to Charles Barry the younger (1823-1900) or his son, Charles Edward Barry (1855-1937). For both men see *DBA*, I, pp.125-6. For Charles Barry the younger see Dixon and Muthesius, 1978, pp.252-3; and Port, 1995, p.278.

36. John Belcher (1841-1913), architect of the Institute of Chartered Accountants of England and Wales in 1890 and of Colchester Town Hall in 1898: see A. Service, *Edwardian Architecture and its Origins*, London: the Architectural Press, 1975, pp.310-27; and A.B. Pite rev. I. Dingwall, in *ODNB*, 4, pp.878-9. Shorter accounts are Dixon and Muthesius, 1978, p.253; Gray, 1985, pp.103-6; Service, 1977, p.198; and *DBA*, I, pp.153-4.

37. John McKean Brydon (1840-1901); see the obituary in *Journal of the RIBA*, 8, 1900-01, pp.400-3 (by J.S. Gibson); other obituaries are cited in n.43. Other principal civic buildings are noted in this text with n.32. For general accounts of his career see Gray, 1985, pp.126-7; Service, 1977, p.200; *DBA*, I, p.287; Port, 1995, p.278; and P. Waterhouse, rev. I. Dingwall, in *ODNB*, 8, pp.424-5.

38. John James Burnet (1857-1938; kt 1914), architect at 21 of the Institute of Fine Arts in Glasgow (1878); see D. Walker, 'Sir John James Burnet', in Service, 1975, pp.192-215; a summary of his career is given Dixon and Muthesius, 1978, pp.254-5; Gray, 1985, pp.128-132; Service, 1977, p.200; and *DBA*, I, p.304. After his Glasgow phase, as the partner of his

father, also called John Burnet (1814-1901), Burnet went on to design notable buildings in London, not least Kodak House (1911) and the King Edward VII Galleries at the British Museum (1905-14).

39. Sir Thomas Newenham Deane (1828-1899) of Dublin was the son of Sir Thomas Deane (1792-1871), the architect with Benjamin Woodward of the Oxford Museum. With his son, Thomas Manley Deane (1851-1933), T.N. Deane was responsible for the National Library and Museum of Ireland, Kildare Street, Dublin (1885-90) for which see C. Casey, *Buildings of Ireland: Dublin*, New Haven CT and London: Yale University Press, 2005, pp.479-81, with pl.83 and plan on p.480. In the index, Casey, 2005, p.725, has numerous references to the work of the three generations of the Deane family. For their careers and buildings see Dixon and Muthesius, 1978, p.257 and *DBA*, I, pp.522-3.

40. Thomas Drew of Dublin (1838-1910; kt 1900), see Dixon and Muthesius, 1978, p.257; *DBA*, I, pp.560-1; and [Anon.] rev. P. Larmour, in *ODNB*, 16, pp.914-16. From the lists of works in Dixon and Muthesius and the *ODNB* entry, Drew seems to have been primarily a church architect with only limited experience of designing major public buildings in a Classical style.

41. William Henry Lynn of Belfast (1829-1915), architect of Chester Town Hall (1864) and Barrow-on-Furness Town Hall (1878-87); for his career see Dixon and Muthesius, 1978, p.262 and *DBA*, II, p.89; also P. Larmour, in *ODNB*, 34, p.904.

42. For William Young (1843-1900) see note 6.

43. See notes 6, 35-41, 44 and 45 for details of some of the earlier buildings of the eight chosen.

44. E. Williamson, A. Riches, M. Higgs, *The Buildings of Scotland: Glasgow*, London: Penguin Books, 1990, pp.159-63 with pls. 60-2, including plans of the ground and second floors, respectively pp.160 and 161 of Glasgow City Chambers; also Port, 1995, fig.196, for the principal façade.

45. For Brydon's work in Chelsea see B. Cherry, *The Buildings of England: London 4: North West*, London: Penguin Books, 1991, pp.566 (town hall) and 568 (public library); and Service, 1979, pp.222-3, with fig. 194 (town hall). Brydon's work in Bath is best approached through M. Forsyth, *Pevsner Architectural Guides Bath*, New Haven and London: Yale University Press, 2003, pp.38, 69-79, and 198-201, and Service, 1977, pp.62-67 with illustrations.

46. *British Architect*, 50, 22 July 1898, p.55. See also Port, 1995, p.190,

47. *British Architect*, 49, 15 April 1898, p.251.

48. Initial publication is Anon., 'New Public Offices, Westminster, Designed by the late John Brydon FRIBA Completed by Sir Henry Tanner ISO FRIBA', *Architectural Review*, 24, 1908, pp.69-83. See also Bradley and Pevsner, 2003, pp. 270-1; the building is now occupied by the Treasury. Only two-thirds of the building had been completed and occupied in 1908; the west side and north-west quadrant were finished later. The building is studied, Port, 1995, p.51 with fig.65; pp.19 and 192 with figs 198-9; and pp.247-9 with figs 261-7 and 291.

49. Port, 1995, 140 and fig.140. The size of the site can be judged from a newspaper photograph of the coronation procession of Edward VII (1902), reproduced, S. Thurley, *Whitehall Palace The Official Illustrated History*, London and New York: Merrell, 2008, fig.131.

50. *Builder*, 76, 25 March 1899, p.290, comments on the awkwardness of the New War Office site. The final plan appears *Architectural Review*, 20, 1906, p.313. The maps cited in the next note show the irregular shape to its fullest disadvantage.

51. S. Thurley, *Whitehall Palace An Architectural History of the Royal Apartments 1240-1690*, New Haven CT and London: Yale University Press in association with Historic Royal Palaces, 1999, fig.1, and Thurley, 2008, fig.3, give a block plan of Whitehall Palace superimposed on a modern street plan of Whitehall and Parliament Street. The pre-fire Whitehall Palace is examined Thurley, 1999, and Thurley, 2008, but the annotated plans of 1670, with later copies, are published S. Thurley, *The Whitehall Palace Plan of 1670*, being *London Topog. Soc. Publ.*, 153, 1998. The buildings demolished for the New War office are considered G.H. Carter and W.H. Godfrey, eds, *Survey of London Volume XVI Charing Cross (Parish of St Martin in the Fields Part I)*, London: Country Life for the London County Council, 1935, pp.165-192 'Scotland Yard South of Whitehall Place', with pl. 82, a drawing of the site prior to the demolition of Carrington House in 1886; Port, 1995, fig.40, is a map of Whitehall in 1855. *Ibid.*, fig.1 is a detailed plan of Whitehall, c.1860.

52. For the fires in January 1698, see Thurley, 2008, pp.104-5.

53. Identification of area covered by the New War office from Thurley, 1999, with reference to the block plan of Whitehall in Thurley, 2008, fig.1. In the last decade of the nineteenth century, no archaeological investigation was undertaken in contrast to the late 1930s on the site to be occupied by Vincent Harris' building. Excavations 1934 to 1967 covered only Horse Guards Avenue and the area south

of Horse Guards Avenue. See Thurley, 1999.

54. Bradley and Pevsner, 2003, pp. 239-242, with pls 26 and 27; Thurley, 1999, pp.82-90; Thurley, 2008, pp.50-3.

55. C. Young in *Architectural Review*, 20, December 1906, p.302

56. The degree of harmonisation was one of the criticisms of the finished building offered in *Building News*, 91, 16 November 1906, pp. 675-6.

57. For accounts of the motion and the debate see *British Architect*, 51, 28 July 1899; *Builder*, 77, 29 July 1899, pp.97-8 (leading article); and *Building News*, 77, 11 August 1899. See also Port, 1995, p.243-5. John Webb's plan and façade of Inigo Jones' 1637 scheme for the palace are reproduced Port, 1995, fig.41. For the various plans of the Inigo Jones palace, as drawn by Webb, see Thurley, 2008, fig.58 (the plan of 1637-39) and fig.62 (the plan of the 1647 scheme). The façade, *ibid.*, fig.60, received considerable publicity in the eighteenth century; see the William Kent interpretation of 1727, *ibid.*, fig.61. The latter influenced J.M. Brydon and was accepted by Henry Tanner in the towers of the New Government Buildings of 1898-1915.

58. 'Editorial: the New War Office', *Building News*, 91, 16 November 1906, p.675, devotes 1¼ of its 3 columns to comments such as "it seems to lack just that delicate sense of proportion which is necessary for a great work", the writers were gracious enough to admit that they are judging the building by the very "highest standards" and to regret the early death of William Young.

59. Clyde Young in *Architectural Review*, 20, 1906, p.301, cited with elisions, Service, 1977, p.148, hence J. Bold and T. Hinchcliffe, *Discovering London Buildings with Twelve Walks*, London: Frances Lincoln, 2009, p.120.

60. For the initial plan see *Architectural Review*, 8, 1900, p.234, and *Builder*, 76, 25 March 1899, p.300 which also has an impression of the elevation to Whitehall. Illustrations of the plan and prospective elevations also appear in *Building News*, 76, in the issues of 31 March, 7 April, 14, April, and 21 April 1899. The contract plan of 1898 is reproduced Port, 1995, fig.257.

61. Port, 1995, p.140 gives £432,000 for the site and an estimate of £475,000 as the building costs; *ibid.*, p.276, in Appendix 3a, gives £672,000 as the final building costs. *Architectural Review*, 20, December 1906, appears to be the only contemporary source which gives even an approximate cost.

62. Thurley, 2008, fig.131.

63. Obituary, *The Times*, 6 November 1900, p.6.

64. Francis Clyde Young (1871-1948), see Gray, 1985, p.392; and *DBA*, II, p.1088.

65. William Emerson (1843-1926; kt 1902), see Gray, 1985, pp.172-3; with brief note Dixon and Muthesius, 1978, p.258; *DBA*, I, p. 612.

66. Sir James Taylor (1833-1912), see note 17.

67. 'The late Mr J.M. Brydon', *British Architect*, 55, pp.377-9 with many illustrations of his works; also *Builder*, 80, 1 June 1901, pp. 540-1; full obituary (by J.S. Gibson), is given in *Journal RIBA*, 8, 1901, pp. 400-3. See also items cited nn. 24 and 32.

68. Sir Henry Tanner (1849-1935; kt. 1904): see Gray, 1985, p.344, also *DBA*, II, p.754 and Port, 1995, p.280. Tanner is not in Dixon and Muthesius, 1978 but see now M.H. Port in *ODNB*, 53, pp.770-1. Tanner was a notable proponent of reinforced concrete, see n.71 below for its use in conjunction with post office buildings.

69. The story can be followed in *British Architect*, 56, 16 August 1901, p.108; 6 September 1901, pp.165-6; 20 September 1901, pp.197-8. The last notes that Brydon's head draughtsman had been recruited by the Office of Works at a weekly wage to work on the drawings. Port, 1995, p.192, states the wage was £4. Port, *loc.cit.* gives further details from the government side. John Brydon ran a small office and worked on the majority of drawings himself. For his initial work on the Parliament Square government offices between 1898 and 1901 he was paid £10,000 out of an agreed fee for all the work of £26,000.

70. *Architectural Review*, 24, 1908, pp.69-83., and 28, 1910, p.155. See Port, 1995, pp.76-7 for Tanner's engagement with new technology, reinforced concrete and steel.

71. R. Fellows, *Edwardian Architecture Style and Technology*, London: Lund Hemphries, 1995, p.59 notes that Crown buildings were exempt from L.C.C. Building Regulations. Fellows is commenting on Tanner's use of reinforced concrete as the framing for large post office buildings: see Port, 1995, p.280; also H. Tanner, 'The New GPO London', *Journal RIBA*, 18, 1910-11, pp.149-177.

72. A. Cox, *Survey of Bedfordshire Brickmaking A History and Gazetteer*, Bedford: Bedfordshire County Council, and London: the Royal Commission on Historical Monuments, 1979.

73. A. Cox, 'Brickmaking in the Arlesey Area of



Bedfordshire', unpublished paper, draft of November 2010.

74. Cox, unpublished paper cited note 73.

75. A.V. Rickards. 'Arlesey', in W. Page (ed.), *Victoria County History of Bedfordshire II*, London: Constable, 1908, p.261.

76. Robert Beart (1830-73 see) P. Hounsell, in *ODNB*, 4, pp.546-7.

77. Hounsell, in *ODNB*, notes the first mayoralty in 1846 and a sixth and last in 1870-71.

78. Cox, 1979, pp.37-38 with illustration on p.38.

79. M. Chapman, 'Brick for a Day: W.H. Collier's works at Marks Tey, Essex', *BBS Information*, 114, October 2010, pp.21-24, fig.3 illustrates a Beart's machine.

80. Cox, 1979, p.45 with n.117. Chamberlain, it may be noted, was a vigorous advocate of machine-made bricks.

81. *The Builder*, 10, 18 December 1852, p.800.

82. R. Hunt, *Mining Records. Mineral Statistics of the United Kingdom of Great Britain and Ireland, Being Part II for 1858*, London: Longman, Green, Longman and Roberts, [being Memoir of the Geological Survey of Great Britain], 1860, cited Cox, 1979, p. 44 with note 113.

83. Cox, 1979, pp.44 and 70, site G6.

84. *Kelly's Directory of Bedfordshire*, 1885, cited Cox, 1969, pp.70.

85. Cox, unpublished paper cited note 73.

86. This is a 6 inches to the mile map published in 1887, sheet NW XXVII.

87. British Library, State Paper Room; notes made by the late Geoffrey N. Webb, kindly made available through the good offices of Alan Cox and Steve Coleman.

88. Quoted, Cox, 1979, p.49.

89. Cox, 1979, pp.44-5; 'Editorial', *The Builder*, 10, 15 June 1852, p.385.

90. Cox, 1979, p.45 with fig.29.

91. 'Editorial', *Builder*, 10, 18 June 1852, p.385.

92. 'New War Office', *Builder*, 91, 17 November 1906, pp.563-4 with illustrations; similarly *Building News*, 91, 16 November 1906, pp.675-6 with illustrations. The most complete account is C. Young, 'The New War Office', *Architectural Review*, 20, 1906, pp.301-316

93. Cox, 1979, p.45 with nn.119 and 120; p. 71, site G10.

94. Cox, 1979, pp. 45 and 85, site G88.

95. Information from Alan Cox, unpublished paper, cited note 73.

96. Information on the location of the brickworks' sidings is from the notes made by the late Geoffrey N. Webb at the British Library: State Paper Room, concerning the location of the sidings, kindly made available through the good offices of Steven Coleman and Alan Cox.

97. Cox, 1979, gazetteer under 'Further Information' on Beart's (site G7), Arlesey Station Gault Brickworks (site G10) and London & Arlesey Brick Company at Langford (site G88), respectively Cox, 1979, pp. 70, 71, 85.

98. Hunt, 1860.

99. This is a 6 inches to the mile map published in 1887, sheet NW XXVII. See note 86 above.

100. Cox, 1979, pp. 45 and 70 (site G8: Great Northern Brick Company); brief comment also in D.H. Kennett, *Portrait of Bedfordshire*, London: Robert Hale, 1978, p.116. Both authors were mistaken in their belief that this firm was a subsidiary of the Great Northern Railway; it was an independent company formed by persons in Leeds to take over William Dennis' brickworks (site G7). Details in Alan Cox's unpublished paper, cited note 73.

101. Cox, 1969, p.71, site G9 where Hunt, 1860, is noted as a possible reference to this works. See also Alan Cox's unpublished paper, cited note 73. The firm is noted as 'Arley Brick Company' by Hunt, 1860, see Table 4; Arley is a recognised spelling of the parish name in the eighteenth and nineteenth centuries.

102. Cox, 1979, p.101, sites G159 and G160. As Cox, 1979, Map 3 at p.69 makes clear, the other adjacent Bedfordshire parishes of Henlow, Astwick and Edworth do not have known brick kilns.

103. *Architectural Review*, 20, 1906, pp.301-316 gives 'A List of Sub-Contractors' at p.308. Other accounts are *British Architect*, 66, 23 November 1906; *The Builder*, 91, 17 November 1906; and *Building News*, 91, 16 November 1906; unfortunately the set of

*Builders' and Architects' Journal* [the predecessor of *Architects Journal*] in Birmingham Central Library does not include any issues published before 1918. No attempt was made in the time available to compile these notes to search for the building accounts for the New War Office which may be assumed to exist in the National Archives at Kew. Work on the buildings designed by Louis Sullivan in St Louis, specifically the Wainwright Building, has equally drawn a blank on the suppliers of pressed brick, although the account of the opening, *St Louis Post-Dispatch*, 16 January 1893 mentions suppliers of stone, marble and terracotta as well as the carpentry contractors.

104. Suppliers for these are noted in the references given in n.103.

105. See above, with note 7 for the discrepancy in numbers of common bricks utilised.

106. *Building News*, 90, 4 May 1906, p.655. Much of the furniture in the New War Office was, in fact, transferred from the twenty offices mainly in Pall Mall previously occupied by the War Department. The quotations are taken from this source. Various fireplaces and wooden panelling for rooms were also removed from the previous offices to be re-fitted in the New War Office, see *Architectural Review*, 20, December 1906. Further details in Port, 1995.

107. M. Robbins, *Middlesex*, London: Collins, 1953, p.165.

108. B. Cherry and N. Pevsner, *The Buildings of England: London 4: North*, London: Penguin Books, 1998, p.241. See also the Google Earth street scene for the block bond between Gaults and London Stocks.

109. Cherry and Pevsner, 1998, pp.447 (Bycullah Farm) and pp.239-40 (Belsize Park); these authors do not specifically mention the Beech Hill Estate at Barnet.

110. A. Cox, 'Bricks to Build a Capital', in H. Hobhouse and A. Saunders, eds., *Good and Proper Materials: the Fabric of London since the Great Fire*, London: RCHM (England), in association with the London Topographical Soc., Publication 140, 1989, p.15; Cherry and Pevsner, 1998, p.625 date the estate to 1883 but provides no description; Hounsell in *ODNB*, 4, p.127 mentions this estate and notes "specification by architects for fashionable parts of South Kensington". Alan Cox's unpublished paper, cited note 73, also mentions a number of houses and other buildings in London which are known to have been built of Arlesey bricks.

111. Colour photograph of Farringdon bricks in

Cox, 1989, p.8, pl.IId. The three stations referred to were originally named Aldersgate Street, Farringdon Street, and Moorgate Street respectively: L. Menear, *London's Underground Stations: a Social and Architectural Study*, Tunbridge Wells: Midas Books, 1983, pp.185, 187, 139; T. Dewick, *Complete Atlas of Railway Station Names*, Hersham, Surrey: Ian Allen Publishing, 2002, key to map 40 (no pagination).

112. Details and references in this paragraph are by T.P. Smith, who is currently preparing a more detailed contribution on the Farringdon Station bricks.

113. Cox, 1979, p.44; Cox, 1989, p.13.

114. N. Pevsner, *The Buildings of England: Bedfordshire and the County of Huntingdon and Peterborough*, Harmondsworth: Penguin Books, 1968, p.42. Construction of Three Counties Hospital is noted as "in progress", *Builder*, 16, 4 September 1858, pp.597-9. The estimated cost of the initial phase was put at £95,009 but the actual cost was £114,831 according to Pevsner, 1968. J. Godber, *History of Bedfordshire, 1066-1888*, Bedford: Bedfordshire County Council, 1969, pp.540-1.

115. T.A. Markus, *Buildings & Power Freedom and Control in the Origin of Modern Building Types*, London and New York: Routledge, 1993, pp. 130-141, provides a useful introduction to the subject. See also J. Taylor, *Hospital and Asylum Architecture in England 1840-1914: Building for Health Care*, London, 1991, cited Fellows, 1995, p.158.

116. Godber, 1969, p.541.

117. An indication of the comparative accessibility of the site was that on Wednesday afternoons, which was visiting time, bus routes from several places were diverted to terminate at Three Counties. DHK distinctly recalls that on Wednesday afternoons in the 1950s and 1960s, the 13.15 Luton to Stotfold bus on service 52B was diverted to terminate at Three Counties Hospital. Then alternating with service 52 to Baldock, the bus route also served the eastern outskirts of Luton, where DHK lived with his parents, as well as Hitchin and the twentieth-century garden city of Letchworth.

118. T.P. Smith, 'Fabric-Marks, Finger-Prints, and other Features: Bricks in High Town Methodist Chapel, Luton', *BBS Information*, 77, June 1999, pp.12-16; since this contribution, the building has been seriously damaged in an arson attack, but has been repaired. Alan Cox, in his unpublished paper, cited note 73 above, suggests that the bricks for the chapel *may* have been purchased at the Huntingdon or Godmanchester works rather than from Arlesey.

## BRICK IN PRINT

Between April and November 2010, the Editor of the British Brick Society received notice of a number of publications of interest to members of the society. This is a now regular feature of *BBS Information*, with surveys usually two or three times a year. This listing includes two items held over from *BBS Information*, 113, July 2010, due to considerations of space. Members who are involved in publication and members who come across books and articles of interest are invited to submit notice of them to the editor of *BBS Information*. Web sites are also included. Unsigned contributions in this section are by the editor.

DAVID H. KENNETT

1. John Bonehill and Stephen Daniels (editors), *Paul Sandby Picturing Britain*, London: Royal Academy of Arts, 2009, 248 pages, numerous illustrations, ISBN 978-1-905711-49-9 (paperback), price £20-00.

After the show, the catalogue remains. Paul Sandby (1731-1809) was given a bicentenary exhibition in the Nottingham Castle Museum and Art Gallery — Nottingham was the birthplace of Paul Sandby and his elder brother Thomas, also an artist but also an architect — in Summer 2009, which transferred first to the National Gallery of Scotland, Edinburgh, and then to the Royal Academy of Arts, London, of which both brothers were inaugural Royal Academicians and Thomas the academy's first Professor of Architecture. From the late eighteenth to the early twentieth century the Royal Academy Schools provided high quality professional training for aspirant artists: painters, sculptors, printmakers and architects.

After six brief introductory essays, the catalogue is divided into four sections. The first, 'Picture Making', concentrates on Sandby's work in Scotland and his satires on Hogarth and Bute. The former includes work by Thomas Sandby for the Military Survey of the North of Scotland. The second part, 'Roads and Street Life', has few depictions of buildings. The third section, 'Antiquities', includes eight views of different aspects of Windsor Castle (cat. nos. 55-62): Thomas Sandby was the Deputy Ranger of Windsor Great Park from 1765 to his death in 1798. Windsor Great Park is also prominent in the catalogue's fourth section, 'Estates'. Of greater interest to members of the British Brick Society regarding 'Antiquities' are two drawings in pen and ink and watercolour: of 'Whitehall with the Holbein Gate', the work of both Sandby brothers, and one of the same gate by Thomas Sandby (figs. 40 and 41). One of Thomas Sandby's greatest achievements, literally, for it is 1220 mm (48 inches) wide, is 'Nottingham Market Square from the East' (cat. no. 63) which shows many houses with brick on the second, third and fourth floors above arcades. These houses and inns were all once timber-framed, as two on the right remain. Some of the new, raised fronts, like the two premises on the extreme left and the sixth and eighth buildings from the right are of brick, but other buildings may have been faced in mathematical tiles. Thomas Sandby also did a companion piece, 'Nottingham Market Square from the West' (reproduced as fig. 44), although this is less wide. An engraving by Isaac Basire, published on 1 May 1741, reproduced Thomas Sandby's 'The South Prospect of .... Nottingham' (fig. 45).

Paul Sandby first came to the acquaintance of both the present writer and the society's chairman through his watercolour of the fifteenth-century brick house, Someries Castle, of *circa* 1765 [Birmingham: Barber Institute]. The latter was not included in the exhibition, although it did feature three of Sandby's twelve views of Luton Hoo Park, then newly purchased by John Stuart, third Earl of Bute, and recently deposed as George III's prime minister. The three views chosen are of ancient woodlands incorporated in Lancelot Brown's landscaping of the much



Fig. 1 Paul Sandy, *Someries Castle Gatehouse*: watercolour c.1765

enlarged park (cat. nos. 89-91): the last of these, also shown on the catalogue cover, reminds us that wood is a crop, with a pair of horses in file pulling a wagon laden with a large tree trunk. The importance of timber is also emphasised by three views of Windsor Great Park: two of the woodyard and one of tree felling (cat. nos. 98-100).

The three views of Luton Park are in the fourth section of the catalogue, 'Estates'. Most of the views in this part are pastoral or arboreal but one of the 1776 views of north Wales shows 'The Iron Forge between Dolgelli and Barmouth in Merioneth Shire' (cat. no. 93.3)

The exhibition, itself, was shown at the Royal Academy of Arts at the same time as the blockbuster Vincent van Gogh show; for this visitor it held the greater interest and, moreover, was much less crowded.

2. R.W. Brunskill, *Brick and Clay Building in Britain*,  
New Haven CT and London: Yale University Press in association with Peter Crawley,  
2009  
264 pages with 120 black-and-white illustrations  
ISBN 978-0-300-11687-8, price £30-00, \$85-00 hardback

Ron Brunskill's *Brick Building in Britain* (London: Victor Gollancz in association with Peter Crawley, 1990; revised paperback edition, 1998) is justly seen as essential for the bookshelves of members of the British Brick Society. The present book basically reprints Parts One to Three of the earlier book, to the extent that the pagination is identical; but the colour plates of the 1990 edition are omitted: they were also left out in 1998. To this is added a new Part Four (pages 193-234) on 'Variations in the Use of the Material', 'Regional Variations,' 'Earth Building in Ireland', and 'The International Context'. The Appendices, now called 'Special Topics' have been extended by the inclusion of a discussion of 'Header Bond Brickwork', with illustrations of a Victorian school in Alderley Edge, Cheshire, and a refaced Georgian House at Hughenden, Buckinghamshire. The Bibliography has been revised to include items published up to 2007.

3. Alan Cox, 'The manufacture of Bricks for the Construction of Canals',  
*Railway & Canal Historical Society*, 36, part 9, no.209, November 2010, pages 179-190.  
Canals were prodigious users of bricks in their construction, to the extent that the 54 per-cent increase in brick production in England between 1789 and 1792 has been suggested as largely due to the needs of canal contractors. Brickmaking and brickwork was also a significant part of

the expense of creating a canal, representing in some cases almost a fifth of the total cost.

It can also be argued that the widespread availability of clay allowed so many canals to be built in Britain. Right from the outset those surveying the line of a proposed canal would be on the lookout for likely sources of brickclay. For, frequently, the earth dug to form the canal could be used to manufacture the bricks needed in its construction. In particular, the excavations required for tunnels, basins and even locks could furnish considerably supplies of clay for bricks. Remarkably, in the early nineteenth century, it was at first thought that the ground through which Blisworth Tunnel in Northamptonshire was to be driven was so treacherous that a new line would have to be taken, until it was found that the same ground contained good brickclay.

Making sure that sufficient bricks were always available, when and where needed on the line of a new canal, presented logistic and organisational challenges. In 1773, no less than fifteen brick kilns were operating along the line of the Chesterfield Canal, while in 1797, for a section of the Grand Junction Canal, four million bricks were disposed in strategic places along the route. In theory, and often in practice, building materials, including bricks, could be transported along existing parts of a canal. Indeed, on the Chesterfield Canal, in September 1774, bricks could be distributed by a completed section of the canal at a time when local roads were impassable. Unfortunately, the construction of a canal did not necessarily start at one end and gradually proceed to the other. In fact, the presence of good brick clay might justify a start being made on a particular section of canal, while its absence might defer work. In 1797, the engineer John Rennie abandoned the middle section of the Kennet and Avon Canal because of the lack of brickmaking clay in the area. Instead he concentrated on the eastern and western ends, so that, when completed, these could be used to ship bricks for the central section.

Shortages of bricks, as opposed to lack of clay, were a frequent problem, given the vast numbers required, the logistics of getting them to where they were needed and the seasonal nature of brickmaking. In March 1798, delays were caused on the Grand Junction canal by the non-arrival of bricks to the area around Berkhamstead, Herts. They had to be shipped up the completed part of the canal from Middlesex, but at that time of year, all the horses needed to pull the barges had been taken for farmwork. The scale of brickmaking required could put a severe strain on canal companies' finances. In several instances, brickmakers had to be told to stop for a time and occasionally they might have to wait to be paid.

Canals were constructed at a time when there were still itinerant brickmakers, some of whom travelled some distance to work on canal projects. A brickmaker from Hampshire made bricks for the Wyrley and Essington Canal in the Midlands, while in the north, two Northamptonshire brickmakers were contracted to produce bricks for the Lancaster canal.

The quality of bricks was another common concern for canal companies and they often also specified the size of bricks to be produced. The committee of the Horncastle and Tattershall Canal made the mistake of stipulating the size of the moulds to be used for bricks supplied to them rather than, as was usually the case, specifying the size of the actual fired bricks. The committee failed to realise that several sources of clay were going to be used which shrunk by varying amounts, giving bricks of differing sizes. In turn, this made regular bonding of brickwork difficult, as a result of which, together with the use of poor lime mortar, Tattershall Lock and other works on the canal collapsed.

In some cases canal companies went even further and undertook the manufacture of bricks in the own brickyards. One such was the Oxford canal's yard at Fenny Compton, the subject of an article by John A. Selby in *BBS Information*, 85, October 2001, pp.21-35. This yard continued to provide bricks for improvements and repairs to the canal long after it had been completed.

ALAN COX

4. Leslie Geddes-Brown, 'Perfect in every detail: Hindringham Hall, Hindringham, Norfolk', *Country Life*, 15 September 2010, pages 118-123 and cover photograph.

In the 'Smaller Country Houses' issue of *Country Life*, the gardens article is devoted to those at Hindringham Hall, a house of flint and red brick; it was being built in 1562 for a member of the Hastings family on an older moated site: the moat is recorded in the twelfth century. The moat is partly brick-lined on the inner face and there is a two-arched brick bridge giving access to the property. The 1664 hearth tax for the parish is missing. The photographs show twelve chimney pots, many on renewed stacks but with at least one original at the junction of the east wing (the left-hand one) with the spine of the E-plan house. Gables are stepped to the apex on the east wing but a straight gable terminates the west wing, where there is also a brick mullioned window. One hint, perhaps, of an earlier brick house on the site; the greater use of brick in the west wing might also be suggestive of this. Much of the mullioned and transomed wooden fenestration is original or a very clever early-twentieth-century restoration.

Both the cover photograph and the double-page spread which begins the article show the idyllic setting with the house reflected in the relatively clear waters of the moat. The presence of algae is due to modern farming methods; field run-off infected the moat and its feeder stream, the tiny River Hind, from which sluice gates, either Victorian or earlier, control the flow of water into the moat. One must correct certain impressions given by Geddes-Brown. To walk across the local countryside is not to encounter "the flatlands of north Norfolk" and eel spears could equally well be to provide for the diet of secular residents as for that of monastic ones. In 1562 the landlords were the Dean and Chapter of Norwich Cathedral.

5. Michael Hall, 'Artistic Insight Leighton House Museum' *Country Life*, 6 October 2010, pages 76-80.

In 1864, the artist Frederic Leighton commissioned his friend, the architect George Aitchison, to design a combined studio and bachelor's house. Number 12 Holland Park Road has an austere three-storey, three-bay street frontage in plain red brick, to which Aitchison added a further three, slightly narrower bays with windows only on the ground floor between 1877 and 1881. The addition masks one of the most magnificent rooms in London: Leighton's Arab Hall, built to utilise the artist's 'magnificent collection of Islamic tiles' (illustrated as figs. 1 and 3).

After Lord Leighton's death in January 1896, the house became a museum, although the contents had been sold; it was taken over by the Royal Borough of Kensington and Chelsea in 1925 and extended to provide a further picture gallery in 1927-28. Replacement of electrical wiring and other services in the early years of this century has led to a major restoration project in an attempt to show the house as it was when Leighton was resident. This included making copies of significant pieces of furniture, such as the artist's desk, and fittings including the upholstery of the built-in sofas in the Arab Hall and a fireplace in the studio, removed in 1920. Copies were commissioned of the paintings known to have been in the drawing room, whilst some of the other paintings owned by Leighton have been temporarily returned to the house.

6. Peter Blundell Jones, 'Helmond City Library', *Architectural Review*, 1365, November 2010, pp.38-45

One of the more idiosyncratic of twentieth-century buildings in the Netherlands is the structuralist complex of pole dwellings (1974-5) at Helmond, 8 miles from Eindhoven, by Piet Blom (1934-1999); there is another version, of 1978-84, in Rotterdam. The houses are cube-shaped with six faces at 45° to the vertical/horizontal, perched on hexagonal brick supports. The new Helmond Library stands immediately north of this, and the challenge lay in bordering,



Fig. 2 Bolles & Wilson: City Library, Helmond, Netherlands, using bricks supplied by Hagemeister of Nottuln, Germany

without clashing with, such a strange neighbour whilst respecting the far more conventional two-storey terraces to the north of the site.

Bolles & Wilson of Münster, Germany, were engaged as architects. On the north, the brick-clad building has a three-storey façade, with variegated fenestration, including some shopfronts on the ground floor, and a plain-coped parapet. At each end is an 'an angular turret' (more properly *bartizan*-like) accent 'cantilevering out' (p.38) and announcing the function of the building with BIBLITOHEEK in applied vertical white lettering (fig. 2). On the south, facing Blom's work, the 'elevation is more clipped, [and is] raked in plan and section' (p.41, caption). The east wall adroitly unites these two very different façades with what we may call a dip-slope/scarp-slope formation, the 'scarp' being a 60°-curtain-wall with aluminium light baffles. The west wall is blank, allowing for future additions. To judge from the drawings and photographs (by Christian Richters), the building must be an extremely pleasant series of spaces in which to browse or read — or to enjoy refreshments in the ground-floor café, which also has an outside patio.

For BBS members, the principal interest will lie in the brickwork. The bricks are described as 'grey' (but appear brown in the photographs) and are of thin format. They were supplied by the Nottuln (Germany) brickmaking firm Hagemeister: see their advertisement at p.31 of the same issue. The bricks are laid in stretcher bond with muted vertical joints and stressed horizontal joints, thus imparting a strong linear emphasis. Even the expansion joints are not *too* distracting, especially where they coincide with other verticals such as window jambs.



This is an attractive building, beautifully articulated, and exhibiting 'a knowing tectonic playfulness' (p.43), whilst responding to and respecting its disparate neighbours.

T.P. SMITH

7. Josephine Kane, *The Chapter House, St Albans Cathedral*,  
St Albans: The Cathedral and Abbey Church of St Alban and the University of Hertfordshire,  
44 pages (including cover), numerous unnumbered colour and black-and-white illustrations,  
Price £4-50, booklet.

At the dissolution of St Albans Abbey in 1539, the great church was spared but the claustral buildings were demolished. When the church became the cathedral of a new diocese in 1877, that created a problem, for there were no buildings to cater for its novel function. The predicament increased in the twentieth century, with, in the 1970s, 'regular congregations of up to 400 on Sundays and 16,000 school children visiting each year' (p.7), quite apart from other (religious and secular) visitors. Schemes for additional buildings of 1944 and 1969 had come to nothing, and 'it was not until the arrival of a new Dean [Peter Moore] in 1973 that a realistic solution was proposed' (p.7), encouraged by the then Bishop of St Albans, Robert (later Lord) Runcie. The scheme was for a new Chapter House (though encompassing more than a medieval chapter house) on the site of its pre-Dissolution predecessor.

William (now Sir William) Whitfield, who had a worthy record of sympathetic additions to historic buildings, was chosen as architect. For various reasons, an initial proposal had to be modified; the result was a fine project. Even so, there was opposition, local and national, some of it from those who should have known better. Objections were not only aesthetic but also, more reasonably, concerned with the possible effect on the structural integrity of the existing building or with the potential destruction of the underlying archaeology. An official enquiry in 1977 wisely approved the new building 'on the proviso that the ancient site [be] thoroughly excavated before building work began' (p.13). The excavation was entrusted to Martin Biddle and the late Birthe Kjølbye-Biddle and was conducted in the summer of 1978. It revealed three phases of the chapter house between the 1080s and the fifteenth century.

Immediately after the excavation, work began on the new building, the challenging constructional problems entrusted to the experienced firm of Harry Neal Ltd. The 'design called for 500,000 reproduction Roman [red facing] bricks, custom-made by hand at Bovington, just 12 miles [19 km] from St Albans' (p.23). (But their format, one may interject, is closer to that of medieval bricks, being rectangular, 210 × 104 × 40 mm, approximately 8¼ × 4⅛ × 1½ inches.) Internally, standard-sized, machine-made bricks were used, necessitating scale drawings of the junctions, since there were three courses of backing bricks to four courses of facing bricks. The latter were chosen to accord with those reused, from the Roman *municipium* of *Verulamium* in the Norman cathedral. Also important was the choice of mortar, since, as Whitfield's assistant, Andrew Lockwood, explained, 'the mortar made up 80 per cent of the elevation' (p.23), and therefore had to be chosen carefully to achieve a suitable match with the earlier fabric.

The Chapter House — which includes a refectory (restaurant), gift shop, and visitors' toilets, as well as the more private library, choir school, and facilities for the cathedral staff — is an austere brick building blending well with its medieval neighbour without attempting mere imitation. Much of its attraction derives from the superb bricklaying, overseen by Jim Garner. The brick arches in particular presented a welcome challenge since, in Andrew Lockwood's words, their construction 'called for .... skills which the builders had all learned as apprentices but never actually [had] the opportunity to use' (p.22). It deservedly won first prize in the Brick



Development Association's national awards in 1981, and is well worth a visit — as, of course, is the cathedral itself.

This booklet offers a succinct and well illustrated guide to the Chapter House and its uses.

T.P. SMITH

8. Jeremy Musson, 'Picturesque Renaissance Bryngwyn Hall, Powys',  
*Country Life*, 14 April 2010, pages 72-75

Jeremy Musson, 'Treasure Trove Loudham Hall, Suffolk',  
*Country Life*, 14 July 2010, pages 63-67

Eighteenth-century country houses have a variable survival rate. Jeremy Musson's notes on these two show contrasting origins and subsequent fortunes, although both have the advantage of recent ownership by art connoisseurs, respectively Auriol the Marchioness of Linlithgow at Bryngwyn Hall and Keith Skeel at Loudham Hall, whose affection for their houses has resulted in restoration and up-to-date maintenance. In the 1980s, Lady Linlithgow had the more difficult task as Bryngwyn Hall had been closed up since 1928.

Bryngwyn Hall is a small villa built in 1773-74 to the designs of Robert Mylne (1733-1811) for William Mostyn-Owen, whose family had owned the land since the 1630s. Mylne provided a five-bay house with the three central bays protruding and surmounted by a pediment, the last restored in the 1980s by the architect Donald Buttress. The house was damaged by fire in 1793 and repaired a decade later by John Hiram Heycock (1759-1830), the county surveyor of Shropshire. Martin Williams, a Carmarthenshire man with planter interests in Jamaica, bought the repaired house and the Bryngwyn estates soon afterwards. In 1813, he commissioned Thomas Jones (c.1794-1859), later the county surveyor of Flintshire, to add a service wing and to render the red brick building. The 1980s work removed the render, leaving the good quality red brick exposed in its well-wooded setting: restoring the idea of the Picturesque as had been envisaged by Martin Williams. The house was inhabited until 1928 by Martin Williams' descendants who in that year faced double death duties. Lady Linlithgow is the great-great-granddaughter of Martin Williams. From 1895 to 1928, Bryngwyn Hall had been the home of her grandfather, Major-General Arthur Sandbach, a notable collector of oriental and Egyptian artefacts and himself Martin Williams' grandson.

In contrast, as with so many houses which appear to have been built in the eighteenth century, Loudham Hall is the refronting and major remodelling of a house already a century and a half old. A drawing by Isaac Johnson 1789 records the new work carried out in the 1730s on a quadrangular brick house built in the 1580s. The new façade of eleven bays has a three-bay centre in a deeper red brick, rusticated on the ground floor and with four Ionic pilasters supporting a triangular pediment. The transformation of a late Elizabethan house into a Palladian one was instigated by Charles Wood (originally Cranmer), who had inherited the property from his mother, the sister of a purchaser in 1627, the financier Sir Henry Wood. By 1819, the house had been in the hands of tenants for at least a generation, and would remain so until the 1980s, thus preserving its eighteenth-century appearance.

9. John Martin Robinson, 'An English Fairy Tale Court of Noke, Herefordshire',  
*Country Life*, 20 October 2010, pages 62-65 and cover.

Court of Noke has a seven-bay main front in warm red brick, reflected in the expanse of water that surrounds the house and in the mid nineteenth century was adapted and enlarged to provide a sufficient head for the nearby mill, part of the appurtenances of the manor. The façade of Court

of Noke has the three centre bays set forward under a pediment and was created in 1708 by George Mason, who lived there from 1673 until 1718. His daughter, Elizabeth Halhead, and then her son, William, succeeded him, before the house and its farmland was acquired by the King family of Staunton Court.

To the south and west, Court of Noke has the appearance of a farmhouse, slightly irregular, even if the seven bays of the east front and the five of the north display eighteenth-century regularity. The interior has many features of a major refurbishment in the 1740s. Further work was done about a decade after the King family sold the house and farmland in 1884. Some of this — for example, the Victorian dormers — has been undone in the last eighteen years during which it has been owned by an interior designer, Edward Bulmer.

## **Bursledon Open Day**

Bursledon Brickworks, Bursledon, Hampshire

The brickworks museum, operated by the Hampshire Buildings Preservation Trust, is open to visitors on Sunday 17 April 2011.

Details from Hampshire Building Preservation Trust at Bursledon Brickworks, Southampton SO31 7OW.

## **British Brick Society is in need of a Chairman**

At the society's 2010 Annual General Meeting held in Reading, the present chairman of the British Brick Society, Mr Terence Paul Smith, announced that he intends to stand down with effect from the 2011 Annual General Meeting.

Mr Smith, who had earlier been the society's chairman between 1987 and 2006, stepped into the breach when Dr James Campbell felt the pressure of his other duties left him no time to devote to the post. Mr Smith has always made it clear that his resumption of the chairmanship in 2009 was an interim measure.

Members are asked to think carefully about this and either to suggest another person, with permission, or to put themselves forward. It should be noted that, despite the official title, the 'chairman' may of course be of either gender.

Members should be aware that the duties of the chairman are not onerous. The principal requirement is to take the chair at the society's Annual General Meeting which happens each year on a Saturday in mid June.

## **Changes of Address**

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

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

# BRITISH BRICK SOCIETY MEETINGS IN 2011

Saturday 18 June 2011

*Annual General Meeting*

Annual General Meeting at 11.00 a.m. in Newark Millgate Museum, 48 Millgate, Newark, Nottinghamshire, with afternoon visit to brick buildings in Newark.

A Weekday in August 2011

*Late Summer Meeting*

We hope also to arrange a visit to either the Blist's Hill Brickworks in Ironbridge, Shropshire, or the brick-built lime kilns in the quarry at Llanymynech Rocks on the Anglo-Welsh border between Shropshire and Monntgomeryshire.

A Saturday in late September or early October 2011

*London Autumn Meeting*

Hampstead Garden Suburb

Projected future visits include:

1. Early brick houses in West Norfolk  
To include some of East Barsham Manor, Oxburgh Hall, Great Gressingham Priory and Methwold Vicarage (these are all on or near the A1065 road from Fakenham to Mildenhall)
2. The Tilbury Forts

*The British Brick Society is always looking for new ideas for future meetings.*

*Suggestions of brickworks to visit are particularly welcome.*

*Offers to organise a meeting are equally welcome.*

*Suggestions please to Terence Paul Smith, Michael Oliver or David Kennett.*

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