

## Abstracts of Periodical Literature

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SIMON PEPPER

JOHN H. APPLEBY, **Charles Dingley, Projector, and his Limehouse Sawmill**, *The London Topographical Record* XXVII (1995), pp. 179-193. The developer/ speculator and materials supplier are neglected figures in professionally-centred accounts of the construction industry. In these terms Charles Dingley deserves to be better known as one of London's leading mid-eighteenth century turnpike road 'projectors' and proprietor of the city's first wind-powered sawmill. Dingley made his fortune in the import-export trade with Russia, and it was no doubt his connections with the Baltic trade that prompted his involvement with timber supply. This last enterprise arose from an interesting conjunction of interests which brought together James Stansfield (proprietor of the water-powered sawmill at Bingley, Yorkshire; the Society of Arts (the RSA of today) which had sponsored through its prizes the development of the Bingley Mill, and Charles Dingley who was to win the Society's Gold Medal for 1768 for his initiative in hiring Stansfield to build and run a wind-powered sawmill at Limehouse. Dingley's enterprise allowed the capital to import raw timber from Scandinavia at much reduced costs to the nation's balance of payments. Others saw it differently, however, for in the same year a mob of some 500 sawyers and other rioters badly damaged the mill which was already undercutting their work.

ROBERT G. ARNS and BRET E. CRAWFORD, **Resonant Cavities in the History of Architectural Acoustics**, *Technology and Culture* 36, 1 (January 1995), pp. 104-135. The resonant cavity, a rigid enclosure connected to the external environment by a small hole, has been used and discussed in architectural acoustics since Ancient times. Vitruvius proposed the incorporation of empty bronze vases tuned to a range of notes on a musical scale in theatres and, although archaeological evidence is ambiguous for the Vitruvian proposal, there are numerous reports of European churches in which empty ceramic vases have been found embedded in stone or brick walls or vaults with open mouths facing into the church. By the middle of the nineteenth century these had become a matter of considerable interest to antiquarians, and the possible connection to the acoustic vases of Vitruvius had been noted. By the 1930s it was recognised that carefully designed arrays of resonant cavities could be employed to advantage in interior acoustics, not as 'sounding vessels' (the Vitruvian notion) but as sound absorbers. The belief in sounding vessels provides an interesting example of an unsuccessful but remarkably perseverant technological concept in building construction, which is studied here by two physics specialists.

JAMES BETTLEY, **A Checklist of Essex Architects, 1834-1914**, *Transactions of the Essex Society for Archaeology and History*, 24 (1993), pp. 168-84. The rise of the professions was one of the characteristics of the nineteenth-century, and architecture was no exception as many of the 'real professionals' attempted both to raise standards and to draw social lines between themselves and the industry's tradesmen. Bentley's checklist is presented here as a modest first step in charting the rise of the profession locally by identifying the 380 architects or architectural practices giving an Essex address in one or more of the directories published between 1839 and 1914. Professional affiliations, where they existed, are listed in individual entries, together with dates (where known), references

to obituary notices and addresses. Corrections and additions are invited by the author at The Old Vicarage, Great Totham, Maldon CM9 8NP.

MALCOLM BROWN, **St John's Wood: The Eyre Estate Before 1830**, *London Topographical Record* XXVII (1995), pp. 49-68. The early history of suburbia is a growth industry (see entry under Summerson, below) and this paper – prompted by the recent discovery at the Eyre Estate office of the earliest known map of the family's London property – provides some useful insights into the means by which the Eyre family, who owned farming land in Marylebone but no great inheritance, financed and managed their land. Without proper financial records a full history of the estate's development is hardly possible, but this article shows how much can be done with maps, deeds and ratebooks.

ANGUS BUCHANAN, STEPHEN K. JONES and KEN KISS, **Brunel and the Crystal Palace**, *Industrial Archaeology Review* XVII, 1 (Autumn 1994), pp. 7-21. The story of the Great Exhibition of 1851, and the development by Joseph Paxton of the Crystal Palace design for its accommodation, is well known. Less well known, however, is the role played by Isambard Kingdom Brunel in helping to get the revolutionary design accepted and in overcoming the practical problems of its construction. Brunel, with others, advised on column spacing and the introduction of the transepts to provide stability. When the Crystal Palace was re-erected on a larger scale at Sydenham, Brunel was again called in to advise and eventually supplanted Paxton's assistant, Wild, in the design of the two 10-storey water-towers which survived the fire of 1936 only to be demolished during the war as potential useful landmarks for German air raiders. The authors provide many interesting details on the construction of these early multi-storey cast-iron structures.

JOHN CROOK, **The Medieval Roof of Marwell Hall, Hampshire**, *The Antiquaries Journal* 73 (1993), pp. 37-68. In 1981 a previously unknown medieval roof was discovered at Marwell Hall, submerged within a mainly nineteenth-century building. Recent repair works have facilitated the investigation and analysis of the roof of the medieval hall, which appears to have been constructed c. 1315-25, probably for a relative of Henry Woodlock de Merewell, Bishop of Winchester. The three-bay structure was an aisle-derivative type known as a base cruck roof, several other examples of which have come to light in recent years. The roof is described in detail and a full reconstruction attempted of what is seen to be a fine example of the flourishing period of English carpentry when builders were boldly experimenting with new ways of roofing a wide building without resorting to aisle posts.

JOHN J. DOBBINS, **Problems of Chronology, Decoration, and Urban Design in the Forum of Pompeii**, *American Journal of Archaeology* 98, 4 (October 1994), pp. 629-94. Pompeii was engulfed by ash from Vesuvius in AD 79. The city had suffered damage from a severe earthquake in AD 62, and conventional wisdom has seen the forum and its formal civic monuments as a 'building site' still cluttered with incomplete building operations repairing the damage of seventeen years earlier. Dobbins disputes this view, arguing that the buried forum represents a practically completed urban design scheme. Rather than being a symbol of the depressed economic condition after AD 62, the forum with its vigorous and ambitious post-earthquake building programme reveals both a desire to build on a grand scale and an ability – perhaps with assistance from Rome – to carry it out. His revised chronology leans heavily on a close analysis of masonry techniques, and is recommended for anyone seeking an up-to-date view of this aspect of construction.

H. J. K. JENKINS, **Medieval Barge Traffic and the Building of Peterborough Cathedral**, *Northamptonshire Past and Present* VIII, 4 (1992-93), pp. 255-61. Stone from the Barnack quarries played a major part in the construction of the great church that became Peterborough Cathedral, and it has long been assumed that waterway traffic through Fenland carried the stone from quarry to construction site. This article explores the likely route for such traffic along the River Nene, and reconstructs the barges and the means by which they negotiated the rapids at Wansford and Alwhaton which are now controlled by locks. Oak barges weighing 4 tonnes empty had a carrying capacity of 8 tonnes or so, and could be handled by teams of four men, poling or hauling. The timber sledges used to haul the blocks from the quarry to the waterway were probably pulled by oxen.

NINA JENNINGS, **The Buildings of Moorhouse, Burgh-by-Sands**, *Transactions of the Cumberland and Westmoreland Antiquarian and Archaeological Society* XCII (1993), pp. 237-68. This paper provides a complete survey of the two dozen buildings in the farming village of Moorhouse, which forms part of the Cumberland parish of Burgh-by-Sands. Moorhouse underwent two main periods of building activity, the first from the early to mid-sixteenth century, and the second from 1689 to the early eighteenth-century when the sale of commons and wastes resulted in the expansion of farms, the addition of full upper storeys, and building in cobb and brick in place of the earlier clay wall construction. The project amounted to a 'census of construction' and provides much detail on the materials, walling and roof structures employed at different stages of development.

RUBA KANA'AN and ALISON McQUITTY, **The Architecture of Al-Qas on the Kerak Plateau: An Essay in the Chronology of Vernacular Architecture**, *Palestine Exploration Quarterly* 126 (1994), pp. 127-53. The Kerak Plateau in Eastern Israel, is sandwiched between the Southern Jordan valley (to the west) and the desert to the East. In the late nineteenth and early twentieth centuries the number and size of settlements started to grow. The vernacular architecture survey (VAS) was started in 1990 and aims to provide a broad picture of settlement and housing types on the Kerak Plateau, rather than a detailed study of one settlement. This well-illustrated study concentrates on the physical form and construction of relatively modern vernacular building, but the premise of the VAS project is that the recording and analysis of the physical and social aspects of the recent past can contribute much to the interpretation of more ancient settlements – a consideration that many disciplines ignore at their peril.

ROBIN LUCAS, **Ely Bricks and Roof-tiles and their Distribution in Norfolk and Elsewhere in the Sixteenth to Eighteenth Centuries**, *Proceedings of the Cambridge Antiquarian Society* LXXXII (1993), pp. 157-62. Although by no means the earliest brick and tile manufacturing site, bricks and roof-tiles were made in Ely from at least the mid-fifteenth century and, by the sixteenth, were well-known and valued over a wide area of Eastern England. The buff – often known as 'white' – bricks made from the local gault clay was valued both for its colour and its hardness, while the location of Ely on a network of waterways running into the Wash provided a splendid regional distribution system.

JAN LUCASSEN, **The Other Proletarians: Seasonal Labourers, Mercenaries and Miners**, *International Review of Social History* 39 (1994) Supplement, pp. 171-94. Instead of concentrating on the urbanisation and proto-industrialisation which have been seen as the major influences in the formation of the wage proletariat, the author looks at a wide variety of labour processes such as mining, infrastructure construction, work in transport – mainly

at sea – and even in the armed forces. The role of seasonal brickworkers is examined in some detail, focussing on those from the German principality of Lippe-Detmold who worked in the Netherlands, Scandinavia, Germany and other countries from the seventeenth to the nineteenth century. Typical itinerant gangs comprised ten men, with six or seven in the brick-making team and the other three or four turning out tiles. At the height of their activity as many as 10,000 such specialists were available, working on piecework rates per thousand well-fired brick or tiles. Dyke construction navvies in Holland are also considered, together with systems devised by employers to stimulate competitive production between different gangs, and to counter nascent ‘organised labour’ practices.

J. PHILIP McALEER, **Encore Lindisfarne Priory and the Problem of Its Nave Vaults**, *The Antiquaries Journal*, LXXIV (1994), pp. 169-210. An examination of at least six views of Lindisfarne Priory dating from the late eighteenth century, at which time most of the nave was still standing, led to the surprising conclusion in an earlier study that the nave was covered by groin vaults. Because of the unequivocal evidence of ribbed vaults in the choir, transept arms and crossing, as well as in the nave aisles, it would be expected that the form of the nave vault was the same. Since the evidence provided by the early views has been greeted with some scepticism, this study documents the collapse and restoration of the nave during the nineteenth century, closely examines the only two points at which the springing of the former nave vault is preserved, and finally considers the continued use of groin vaults in England after the appearance of ribbed vaults at Durham cathedral, c. 1093-1100. None of these further investigations produced any evidence that contradicts the conclusions based on the early views as initially presented. Whether logical or not, the nave of Lindisfarne was covered by groin vaults. This finding leads to the suggestion that groin vaults, not ribbed vaults, may have been used over the choir of Durham.

ALAN McWHIRR and DAVID SMITH, **A Brickworks in Ashworth Road, Oakham**, *Transactions of the Leicester Archaeological and Historical Society* LXVIII (1994), pp. 87-93. Before industrialisation many if not most villages in clay areas had a small brickyard which operated on a seasonal basis, often as a family concern. Clay was dug in the Autumn and allowed to ‘weather’ over the Winter, occasionally being turned over. In the Spring the clay was finally prepared for brickmaking, then dried lightly before being fired in a kiln. The paper reports a 1987 rescue record made just before the nineteenth century kiln and associated buildings were demolished to make way for housing. They provide a clear description of the Scotch kiln, then still standing to a height of 12-15 ft. Another barn-like structure with evidence of ash may well have been the drying shed.

JANE MORLEY, **The Importance of Being Historical: Civil Engineers and their History**, *Journal of Professional Issues in Engineering Education and Practice* 120, 4 (October 1994), pp. 419-28. Should civil engineers be interested in the history of their profession? The paper gives an affirmative reply to this question as it examines the different approaches to the history of civil engineering. Biographical or ‘heroic’ studies of famous engineers or artifacts attract young people to the profession. Historical knowledge provides designers or managers with new perspectives on contemporary design problems, or problems within the organisation for which they work. Historical case studies instill a sense of professional identity, values, and responsibility in students, as well as broadening their technical experience. Knowledge of history and of methods of historical research also helps the profession deal with its burden of history and old infrastructure.

MAUREEN OGLE, **Domestic Reform and American Household Plumbing, 1840-1870**, *Winterthur Portfolio* 28, 1 (Spring 1993), pp. 33-58. The activities of the public health movement and the development of civic water supply and drainage systems provides only the most obvious – and that inadequate – explanation for the growth of household plumbing systems serving sinks, washbasins, baths and water-closets in mid-nineteenth-century USA. The technical breakthrough had been much earlier in hotel buildings, and only later did the building codes and the near universal availability of water supply and sewer systems deliver these potential advantages to most American city dwellers. Dr Ogle’s paper concerns the perceived social and cultural value of modern conveniences in their initial period of growth; but in the course of this discussion a great deal of information is provided for students of building services.

CHRIS PICKFORD (ed), **Bedfordshire Churches in the Nineteenth Century, Part I: Parishes A to G**, *Publications of the Bedfordshire Historical Record Society* 73 (1994), pp. 1-318. The entire number is dedicated to the first of a three part publication of Bedfordshire Anglican churches in their ‘unrestored’ states, i.e. before the ‘improvements’ carried out with a greater or lesser degree of skill from the 1840s to repair structures and rearrange the interiors in conformity with the precepts of the ecclesiological movement. The old ‘preaching boxes’ of the eighteenth century gave way to plans which focussed attention on the chancel and the holy table in the sanctuary. Sources of information include the Glebe Terriers prepared in 1822, the visitation notebooks of the Archdeacon’s tours of inspection in the early 1840s, the descriptive articles by the improvement-minded librarian to the Duke of Bedford published in local newspapers, and the mid-century notebooks of Sir Stephen Glynne – an avid church visitor. It is a detailed evocation of the county’s churches before their great rebuilding.

SHARON V. SALINGER, **Spaces, Inside and Outside, in Eighteenth Century Philadelphia**, *Journal of Interdisciplinary History* XXVI, 1 (Summer 1995), pp. 1-31. Recently American historians have focussed considerable attention on the character of eighteenth-century Philadelphia, the largest city in British North America on the eve of the American Revolution. Using the records of the ‘Philadelphia Contributionship for the Insuring of Houses from Loss by Fire’ the author records how the city’s growth and concentration of wealth affected the sizes of house exteriors and interior spaces, the relative size of houses within the economic strata of the city, and how these features changed over time. The Contributionship was founded in 1752 as the first successful fire insurance company in the North American colonies and its pre-cover surveys provide a valuable source on the ownership, value, construction and condition of insured properties, as well as what amounted to an unofficial building code by its refusal to insure wooden houses in 1769 and its offering reduced rates for houses with 9 in (as opposed to 4 in) brick party walls. The thrust of the article is on the social stratification of Philadelphia’s insured housing, but the paper is a mine of information for historians of building construction.

JULIE STEVENSON, **The Journal of Transport History, 1953-92: A Cumulative, Classified Index**, *Journal of Transport History* 3rd series, 14, 2 (September 1993), pp. 181-203. The title describes the content very well but fails to draw attention to a useful source for work on a variety of major construction projects with sections on inland navigation (canals), maritime (docks), rail (railroads, stations and tunnels), roads (turnpikes and bridges) and other categories including biographies. The fortieth anniversary issue of JTH includes survey articles on work in these areas over the life of the journal.

M. J. STOYLE, 'Whole Streets Converted to Ashes': Property Demolition in Exeter during the Civil War, *Southern History* 16 (1994), pp. 67-84. Urban communities suffered considerable physical damage during 1642-46, a phenomenon attested by much recent archaeology in Chester, Gloucester and Worcester. At Exeter – and in some other places – the worst destruction resulted not from enemy bombardment, but from the defenders' decisions to deny their besiegers cover and to clear fields of fire by demolishing the suburbs that had grown up outside the walls. Here the losses amounted to between one-third and a half of the town's building stock – a far higher proportion than that caused by German bombing in World War II. Post-war homelessness became a major problem, prompting urgent measures to repair damage and to rebuild city-owned properties so that rental income could be quickly recovered. The construction history of post-Civil War 're-construction' awaits its author.

JOHN SUMMERSON, *The Beginnings of an Early Victorian Suburb, London Topographical Record* XXVII (1995), pp. 1-48. This article is the text of two lectures given by the late Sir John Summerson in 1958 to the LSE and entrusted shortly before his death to the London Topographical Society for publication. They have been edited and referenced by Dr Ann Saunders, editor of the *LTR* and one time Borough Archivist of St Marylebone, where much of the original research was carried out. The paper takes a close look at the architectural and business context for the development of a group of streets in Chalk Farm, North West London, in the 1840s and 1850s. The first part discusses the evolution of the semi-detached house from a pair of end-terraces into the 'villa' form, its identification by the early nineteenth century with the small suburban house, and its employment in a number of suburban developments from Regents Park to Hampstead. Part 2 (the second lecture) examines in detail the Chalk Farm development, its promoters, and the commercial as well as architectural and social factors which shaped it. Although nearly 40 years old, Summerson's work still provides valuable insights into the mechanisms of suburban growth which has subsequently interested Dyos, Reeder, Olsen, Thompson and others. (See also Malcolm Brown, above.)

D. L. B. THOMAS, *The Chronology of Devon's Bridges, Report and Transactions of the Devonshire Association for the Advancement of Science, Literature and the Arts* 124 (1992), pp. 175-206. The engineer author discusses the problems surrounding the dating of Devon's bridges by three types of evidence: date tablets (and their inherent unreliability as proof of age), structural type and style, and documents. The appendix (pp. 203-6) listing the county's bridges with their National Grid references will be a valuable source of information for others, but the main interest for construction historians is to be found in a very well-informed historical and technical discussion of the different beam, arch and suspension systems employed from early medieval times to the nineteenth century.

JO THOMAS, *Building Stones of Dorset: Part I. The Western Parishes, Proceedings of the Dorset Natural History and Archaeological Society* 114 (1992), pp. 161-8 and *Part II, Ibid.* 115 (1993), pp. 133-8. The first two parts of a detailed county-wide survey of different building stones and brick-making earths. Information on their provenance and application in a variety of building types and construction phases promises to provide a valuable contribution to those working on construction materials. Maps are provided for each group of parishes, on which are marked the quarries and brickfields. Short gazetteers provide the National Grid references and local names for the quarries, together with notes on the type of stone and dates of extraction.

BERNARD C. WORSSAM and TIM TATTON-BROWN, *Kentish Rag and Other Kent Building Stones, Archaeologia Cantiana* CXII (1993), pp. 93-126. As a very durable building stone, readily available, Kentish Rag was widely used in South East England from Roman times until the early twentieth century. Although its name suggests a stone suitable only for rough walling purposes, it was used for many centuries in more demanding roles until the development of railways made it cheaper to bring in more easily worked stone, relegating the Rag increasingly to rubble walling and road stone. The authors chronicle the long history of Kentish Rag's application and explore its quarrying, notably from the tidal foreshore outcrops at Hythe, Sandgate and Folkestone. Coastal quarrying was important in this area, sometimes permitting the removal of very large rocks freed from their beds by wave action. When Dover harbour was constructed in the sixteenth century large blocks of sandstone were attached by chains to barrels which – floating as the tide rose – lifted them so that they could be towed to the site.

CAMILLE WELLS, *The Planter's Prospect. Houses, Outbuildings, and Rural Landscape in Eighteenth-Century Virginia, Winterthur Portfolio* 28, 1 (Spring 1993), pp. 1-31. In this original paper the advertisements published in the *Virginia Gazette* are employed to form a picture of rural properties in tidewater Virginia. Generally the sample is weighted towards the larger holdings and, as with all advertisements, there is a tendency to emphasise the more marketable features. Despite these obvious shortcomings, *Gazette* advertisements offer the best available depictions of early Virginia houses and their outbuildings, most of which have long since vanished. After being sorted, counted, and scrutinised for the omissions as much as their points of emphasis, the advertisements contribute a source of information about Virginian building types, sizes, materials and construction that is more integrated and revealing than any other.

H. J. YALLOP, *Rousdon: A Victorian Enterprise, Report and Transactions of the Devonshire Association for the Advancement of Science, Literature and the Arts* 125 (1993), pp. 31-47. Now the home of Allhallows School, Rousdon was built in the 1870s by Sir Henry Peek, a self-made tea magnate and philanthropist, and his architect, Ernest George. Peek's fortune allowed him to return to his native Devon where his estate development scheme included a new church, school (serving the earliest known hot school dinners), home farm and an eclectic mansion with a basement bowling alley for the use of the servants. Considerable ingenuity was used to provide 3 ft thick waterproof walls on an exposed Atlantic site. These consisted of 2 ft 2 in of dressed flints, a  $\frac{1}{4}$  in layer of asphalt and 9 in of brick. Dressings were in Purbeck stone and the back joints were painted with a damp-proofing layer of a preparation known as hydrophylax. A special mortar was made by calcining flints and blue lias stone together, yielding a waterproof mortar comparable to cement in its hardness.

DAVID YEOMANS, *Sources for the Building Conservator and Historian, Journal of Documentation* 50, 1 (March 1994), pp. 24-35. The sources of printed information used by building designers are largely ephemeral and the survival of this material has been rather haphazard. This presents problems for both historians of modern buildings and building conservators, although the two have different needs. This paper examines the various kinds of printed material used in building and the factors affecting its likely survival. It also notes the extent to which historical material of various kinds has been collected. The vulnerability of many collections and the poor survival rate of many of the different kinds of historical printed material suggest a need for a more positive policy toward its collection. Some recommendations are outlined.



JIM YELLING, **Public Policy, Urban Renewal and Property Ownership**, 1945-55, *Urban History* 22, 1 (May 1995), pp. 48-62. Although plans for urban renewal after 1945 were largely based on clearance and redevelopment, the changed circumstances of post-war Britain also favoured a revival of interest in the repair and improvement of older housing. The article looks at the different approaches of Aneurin Bevan and Harold Macmillan and at the reasons why only limited, if useful, progress was made. It stresses the significance of a repairs backlog in conjunction with the politics of property ownership and political conceptions of the conditions under which public money could be invested in urban renewal. Repair and improvement presented far greater difficulties than clearance and redevelopment, and this was an essential element in the continuing popularity of the latter method.