Original Article

Ubiquity in search of an identity: A dissection of listed buildings from the twentieth century

Received (in revised form): 23rd February 2009

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ABSTRACT A listed building of any period, or one that contributes positively to a conservation area, will require an appraisal as to its management and maintenance. Buildings of the twentieth century which are now eligible for listing pose many unforeseen challenges because, and this applies particularly to those built after 1950, they are only just being assessed. Considerable risks can arise for the owner and/or a consultant producing an appraisal of a twentieth century building for purchase, alteration or adaptation. In this paper, the significant and widespread changes in buildings of this period are outlined, together with strategies for management of the risks inherent in buying or altering a potentially listable building, or one adding positive value to a conservation area.

Journal of Building Appraisal (2009) 5, 41–54. doi:10.1057/jba.2009.12

Keywords: technology; materials; management; flexibility; conservation; client bodies

OVERVIEW

A listed building of any period requires careful assessment, but buildings of the twentieth century present a challenging new range of risks. Earlier buildings which warrant listing have generally been identified and understood by both conservation specialists and the general public, but those of the twentieth century are unique in their areas of special interest. One significant difference is that traditional buildings use an established and widely recognised language of materials and detailing, whereas in contrast modern buildings often use one that is unique to the building or to the designers concerned (Drury, 2003, Section 6).

In introducing a conference arranged by English Heritage in 1998 (Macdonald, 2001), Bridget Cherry mentioned that these buildings were still relatively rare, that many conservation officers were baffled and that ridicule was a common reaction. Now, 10 years later, buildings of the twentieth century are eligible for listing, even if only under the 10-year rule or when at risk, and most conservation areas will also include unlisted examples that need to be assessed. John Allen has identified the ‘need to consider the ordinary as well as the iconic’, placing an emphasis on revaluing resources

(Macdonald, 2001, Chapter 16) and taking into account a wider range of interests. Bob Kindred in his introduction to *Conserving Modern Architecture* (Macdonald *et al*, 2007) echoes these concerns, believing that conservation of modern buildings provides new challenges. In addition to the technical issues of modern conservation, there is a whole world of public interest and policy which must be considered. Andrew Saint, in a paper to the Council of Europe Colloquium on the Conservation of 20th Century Architecture given in Vienna in 1989, claimed not only that there was more of it, but also that opinions about it differed widely.

The focus on the widespread changes which have taken place over the last century and the consequent demand for changes in conservation practice can also inform our approach to the use and care of unlisted but often equally important buildings.

Changes in construction techniques do not fall conveniently into centuries. James Strike (1991) has noted that it can be many years before a new technology is put into common practice, often because of the constraints of legislation. Alan Powers (2007, p. 15) considers that the career of Louis Mouchel demonstrates the reluctance of the building industry in England to accept technical innovation before 1900.

It is clear that there were substantial changes in construction practices, management of buildings before, during and after construction, scale of developments, and also in the client organisations. Equally important are the new materials and technologies which even if envisaged before the turn of the century, took time to put into practice. Strike considers that one of the most significant changes is the breakdown of local tradition in favour of a more universal form of design.

In this paper, it is argued that the changes that have taken place are so broad in their application, the new range of interests so pressing and the conscious management of a building so ubiquitous that a new tradition has evolved in which potential change and flexibility are a necessity. This is not new, however: in 1931 at a conference chaired by Frank Pick at the London School of Economics (LSE), C. J. Kavanagh noted that buildings should be designed for a maximum life of 40 years, after which they would be obsolete.

A NEW TRADITION

The first decades of the twentieth century saw dramatic changes. Bill Risebero (1982, p. 164) states that 1917 saw a culture that was dedicated to a new order. 'Homes fit for Heroes' and permission for ribbon development were a response of the landed classes to the prospect of social revolution (Linsley, 2008, p. 16). Building designs demonstrated a freedom from structural constraint: architects were free to develop forms to reflect the materials used, although J. M. Richards (1979) considered that they were often welcomed because they provided a justification for a break with the past and seemed to include little regard for long-term durability or weathering. Lionel Esher (1981, p. 38) wrote that '... the highest common factor was their abstract beauty in sunlight before their first winter's staining ...'. Images of cars, aeroplanes and liners (Crosby, 1973, p. 32), symbolic of the new freedoms in transport and society, were seductive. Houses were designed not only to echo industrialised methods of fabrication, but also to incorporate similar concepts as to the need for maintenance. The Lustron House developed between 1946 and 1950 used interchangeable panels so that the building could be modified, and bore a plaque giving the model and serial number with a statement to call your dealer for a service (Mitchell, 1991, p. 44).

New ways to build

From the beginning of the century, Fredrick Taylor advocated the proper management of all activities, and published his findings in 'The Principles of Scientific Management' in 1911. His colleague Frank Bunker Gilbreth, whose background was that of a builder, applied and developed these ideas with specific relevance to the building industry (Steel and Cheetham, 1993, pp. 51–69). The breadth of their influence can be judged by Le Corbusier's reference to his development at Pessac as being built in accordance with Taylorian principles (Ferrand *et al*, 1998, p. 120).

The interest in efficient means of production was not of course confined to construction of the building.¹ Mechanical servicing (Statham, 1897, p. 9 and Thomas, 1947, p. 67) allowed freedom from the constraints of natural ventilation, and the depth of a building was no longer dictated by the need for natural light. Heat gain or loss could be controlled by artificial means, allowing managers to organise a workspace using the most efficient production processes. In response to the increased management of buildings, the occupants became more demanding and the profession of 'Facilities Manager' developed during the second half of the century.

This management interest was manifest in the provision of cleaning rails and cranes on buildings, ranging from a 'cornice' device such as that on the Daily Express offices in Fleet Street London (Figure 1) to the more overt version in Manchester from the 1930s. In the 1970s, James Stirling's variable geometric cleaning gantry was developed for Olivetti in Haslemere, together with Foster's 'arms raised' support vehicle at Ipswich.

Changes in scale

The scale of development in this century (especially since the 1950s) provides a new aspect of conservation. Buildings for universities or areas of urban renewal can equal a small town in size.

Although listing a complex such as Lasdun's University of East Anglia (under the control of a single owner) may be appropriate, it may not be for a residential estate such as the Barbican, City of London or Alexander Road, Camden, as it might involve the need for consent to alter internal fixtures such as kitchens or built-in cupboards. The difficulties in administration, to say nothing of the resentment of the owners, demands a new approach.

New client bodies

During the twentieth century, many new forms of building (Forsyth, 1982) were developed, including airports, multi-storey car parks, cinemas, power stations and department stores and, from the 1950s onwards, shopping centres. These buildings were not only larger, but often more complex in their planning than anything that had been seen before. Some were still for owner-occupiers, but many were for organisations procuring buildings on behalf of users unknown at that stage. Andrew Saint recognised the change, with architectural opportunities being in the hands of administrative authorities, rather than in those of private individuals (Saint, 1987, p. 16). In the period between 1920/1923 and 1935/1938, the annual level of spending by public authorities increased fivefold, involving replacement of slums (Herbert, 1984, p. 20), and building new town halls, health centres and education buildings (Powell, 1980). Also significant were the newly formed public corporations such as the Central Electricity Board and the London Passenger Transport Board.

Figure 1: Daily Express Building. The presence of a rail to support a cleaning cradle is typical of many buildings of this period, and it evolved during the rest of the century to take ever more significant forms. The Daily Express building in Manchester had supports that had an even greater impact, and the original Sainsbury's headquarters on the South Bank in London had a series of small supporting brackets. All of these consciously displayed the maintenance systems, often contributing significantly to the appearance of the building.

In the private housing sector, speculators, who in the 1930s were primarily investing in land and selling individual plots, gave way to builders and others who developed large estates for sale, using standard designs and layouts (Weightman and Humphries, 1984, p. 107). This building boom is exemplified in Birmingham, where in 1938 a third of all the housing stock was less than 19 years old.

Commercial development was taken over by entrepreneurs who would build offices, factories or shops to let or to sell. By the late 1950s, these developments represented 25 per cent of national building. Changes in scale also occurred, and by the 1960s

the average size of an office development was 40 000 square feet, often to be let in several units (Powell, 1980, pp. 145–146). Shopping centres steadily increased in size until developments of 200 000–500 000 square feet were commonplace.

The effect of separating the commissioning body from the final user led to a need for closer investigation of users' needs (Saint, 1987, Chapter 1), and for the development of a 'loose fit' approach to design. M. Thomas claimed in 1947 that 'The rapidity with which buildings nowadays become obsolete long before they wear out makes the question of designing buildings with a view to subsequent alterations one of the major architectural challenges of the day' (Thomas, 1947, p. 70). Offices would be designed as open spaces for sub-division by tenants, whereas the Board of Education 'became increasingly conscious that school activities were hampered by the inability to make economic adjustments to the fabric' (Powell, 1980, p. 103).

New technology

The development of artificial ventilation, heating, lighting and power has already been noted. Mechanical means of transport, with lifts in the second half of the nineteenth century, and escalators from the end of that time, had a dramatic impact on the design of buildings and the management of pedestrian traffic. Not only did this result in taller buildings, but also allowed control of ingress to an underground platform or a department store floor.

Computers were to become commonplace. In office buildings, the early mainframe equipment of the 1960s required higher floor loadings and increased clear heights, and later the introduction of large open-plan floors resulted in a need for deep floor voids to accommodate cabling.

The application of this technology has, however, had an even greater impact on the management of building systems. At Lloyds, for instance, the services provision was arranged so that spaces could be subdivided or opened up almost overnight, with allowance for individual services and environmental control.

Load-bearing gives way to frames

The significance of the separation of wall and skin may, according to Louis Kahn, be traced back to Paestum, which he asserts is '... the beginning of architecture. It is a time when the walls parted and the columns became and music entered architecture. It was a beautiful time and we are still living in it' (Collins, 1965, p. 139). The importance of the frame has been summarised by Colin Rowe: 'The frame has been the catalyst of an architecture, but one might notice that it has become architecture ...' (Brookes, 1990, p. vii).

The flexibility implicit in the frame-and-skin approach fascinated designers. Mies van der Rohe spoke of function being very short-lived, much less than the buildings, and so it only made sense to make the plan very flexible (Sharp, 1978, p. 151). Perrett introduced concepts of different time scales of permanence for different elements, a key concept in Brand's analysis of how buildings age (Brand, 1994, Chapter 2). Perret undoubtedly had a strong influence on Charles Jeanneret (Corbusier), who worked for him in 1908–1909 (Jenks, 1987, pp. 27, 37), and this was to be expressed in Corbusier's 'Dom - Ino' system for low-cost housing in 1914, which established a basic frame, independent of the room layout or cladding (Figure 2).

At the Bauhaus, similar influences led to the development of industrial buildings with light curtain walling that were clearly non-load-bearing (Banham, 1969, p. 157). 'Factories in steel and glass are buildings in forms that are triumphs of rational planning and of the sense of the objectives of industry' (Sparke, 1992, p. 49).

Figure 2: Dom-ino House. Le Corbusier developed a number of building systems during the first two decades of the twentieth century, including an asbestos sandwich panel (Monol) and a system based on concrete and rubble for the Citrohan; both date from 1920. The 1914 Dom-ino system exemplifies much of his thinking about the freedom that could be achieved by separating the frame and the skin, allowing new aesthetic principles to be applied to many of his projects.

This celebration of flexibility and change in architecture reflects the increasing demands from owners and users of buildings that they be readily adaptable in response to changing demands.

Different building types have varying needs for flexibility. Retailing represents a particularly acute expression of change: products are often promoted on a seasonal, fashionable basis, and this is reflected in the perceived need for fashionable changes in shop and retail centre design. A survey carried out in 1991 (Walker, 1992) indicated that significant change is expected in shopping centres within a 10–15 year period, and that minor changes such as finishes, decorations and mall design are anticipated over a shorter time scale. Longstreth (1991, p. 15) wrote in the APT Bulletin that shopping centres that had had major cultural and social impacts had been changed out of all recognition.

New materials and new applications

Statements by the Pioneers of the Modern Movement reflect the relationship between new materials and the architecture of their time. ‘All modern forms must correspond to new materials and the new requirements of our time, if they are to fit modern mankind’ (Sparke, 1992, p. 42).

Many of the materials used by and since the Modern Movement were not necessarily ‘new’, but have features in common that justify their recognition as a group.

- They are generally man-made materials that, instead of being worked like timber or stone, are moulded while in a fluid state, allowing complex forms and revolutionising the joints between components.

Figure 3: Railway relay cabin. The use of new materials allowed these buildings, constructed with complete panels and often designed for remote locations, to be light enough for handling by two or three men. Detailing of the junctions was simple and easily demountable.

- The development of materials science in general throughout the nineteenth century and in particular the establishment of the Department of Scientific and Industrial Research in 1915 and the British Standards Institute in 1901 (Saint, 1987, pp. 12–13), led to a far better understanding of the technology of materials, their chemistry and how their structures and properties can be tailored to meet the specific requirements for a component. Despite this interest, Yeomans claims that architects generally took little interest (Brady, 1927 and Yeomans, 1997).

Figure 4: Sainsbury Centre. A special aluminium alloy 'Superlast' allowed the original panels to be formed with complex and tight profiles. The gasket system was designed to allow simple modification to the layout of the panels. When they needed to replace several, the detail allowed a new design of panel to be incorporated easily.

- Materials can be used in relatively thin sections, light enough for large panels, thereby accelerating the commercial development of pre-fabricated and packaged systems which started with iron structures in the nineteenth century (Figure 3).
- Composite materials are frequently used, physically and/or chemically bonded together.

Architects emphasised the lightness of a building's construction, and J M Richards wrote in 1940 (p. 54) that 'lightness and poise instead of solidity have become the architect's aim'.

Possibly in reaction to the pollution of the nineteenth century, architects saw the new architecture in terms of clean, unweathered buildings gleaming in the sun: 'shimmering fabrics, woven of rich glass'.² Lightweight materials encouraged larger prefabricated elements, factory-made to achieve cladding panels several stories high, or even complete rooms (Richards, 1940, p. 32). '... the more mechanical the process, the less direct should be the imitation of natural forms' (Sparke, 1986, p. 41).

The rise of the zip-in building

Part of the impact of pre-fabrication lies in the new jointing systems, providing a readily demountable exterior. This is exploited by many designers as part of an aesthetic deliberately intended to allow the cladding to change to meet new needs or for maintenance and repair.

The Sainsbury Centre by Foster Associates is a case in point (Figure 4). A cladding system with purpose-made gaskets was developed to allow complete flexibility and interchange of the panels and, when the cladding panels failed, allowed the complete recladding of the building.

Designers and new interests

English Heritage specifically identifies design by 'a notable architect' as grounds for considering a building for listing or for rating an unlisted building in a conservation area as of positive value and worthy of protection (English Heritage, 2006). Most of the architects from earlier periods who are considered to be of note have been identified,

but the importance of many from the twentieth century is only just being established. There are far more practices in existence today, with wide coverage in magazines and similar publications.

Emergence of the managed building

Halsey Ricardo, in building houses in Melbury Road at the end of the nineteenth century, used semi-glazed brickwork, and was willing to sacrifice some of the initial appearance of the buildings in return for a durable look (Anon, 1894). His concern was because of the smoke-laden atmosphere, but there was an equal interest in hygiene that led to the use of materials in restaurants that were demonstrably easy to clean. Ability to maintain a building both internally and externally was becoming paramount.

The theme that emerges from all these considerations is that the building process, including design, construction, use, regeneration and even demise, has become increasingly managed and organised. The team of experts involved has become increasingly complex, as has the documentation now required for even a simple planning application. The Paul Drury Partnership posits that the unique language of a modern building demands that an understanding be obtained of that which is sought, as well as that which was achieved. The breadth of media coverage and the fact that with more recent listings the designer is still available to comment makes this a feasible objective.

CONSERVING VALUE

‘The past is not always behind us but more often in front blocking the way’.

(Crook, 1987, p. 242)

‘Conservation in the ecological sense is on the whole progressive, concerned with the future and therefore with political change; conservation of the built environment is almost always about the past and, more immediately, about the preservation not only of a physical but also of a social and political tradition which is seen to be under threat’.

(Risebero, 1992, p. 39)

The creation of a building is a response to a demand, an aesthetic and functional expression often involving diverse disciplines working towards a single objective. Conversely, conservation of a building involves an analysis with regard to many different interests. Its importance may lie not only in its physical manifestation, but also in its designer(s) (Anon, 1993), the degree of innovation, social issues,³ new materials or a connection with a historic figure or event.

Do we conserve for ourselves or for future generations? The present defines the future: the conservation of a building or an artefact may limit the actions of future generations and impose financial burdens (Lowenthal, 1990, p. 205). Even in our own time the objectives of different forms of conservation may be in conflict. Those drafting the now deferred Heritage Bill found that they ‘could no more define the national heritage than we could define, say, beauty of art’ (Lowenthal, 1990, p. 37).

Every day new discoveries are made and more artefacts and buildings come to be valued as of special interest. Specialist groups flourish and hitherto ‘unsung figures and events gain fresh status’ (Lowenthal, 1990, p. 387).

The deterioration of many modern materials confronts the conservationist with choices between image and pure authenticity. The use of components manufactured in long

production runs presents a similar dilemma, as it is unlikely to be economically viable to set up a production run for a small restoration contract. Should the material be handmade to represent an original image? Jandl (1991), writing of the Aluminaire House, compared the approaches ranging from complete replacement to matching the original shiny exhibition finish to repair of the dull weathered appearance today. It is argued by some conservationists (Jackson, 1991, p. 9) that, although technically possible, the conservation of mass-produced elements is more difficult than that of earlier hand-crafted products because, whereas the latter still require a craftsman or small group of specialists, the former may well require a production run such as that for the special prismatic glass for Lloyds which, although the rollers are the property of the building owners, requires a run of 12 tons of glass to make it economic to use.

Recognition that many of this century's buildings are of interest on account of their technology or association with a particular person or event has led to the realisation that it may sometimes be more appropriate to record rather than actually retain the building or, if occasion demands, to do both.⁴ DoCoMoMo has recognised this in its title, although it is not always evident in its decisions. Paul Finch, in summing up a conference on education for conservation, claimed that documentation had hardly been mentioned, that there was no mechanism to ensure that a full record was produced when a building was listed and finally that the original architect's intentions should be considered.⁵

Identifying and managing risk

Most listable buildings before 1900 are already identified; a few may be added and some designations may change, but there are seldom surprises. The main risks are in defining curtilage and the possibility that an apparently unrelated building is in fact part of the listing (Mynors, 1999, p. 46).

With twentieth century buildings the situation is more fluid, especially with those from the second half of the century. Hitherto unrecognised architects are constantly noted as important, making their buildings worthy of conservation. Technological developments and an increasing range of conservation interests have also influenced consideration of buildings deemed to be worth saving.

There are thus a number of risks, not all of which will be evident or appear during a search or be understood by those involved in the running of the building (Walker, 1997, Chapter 5). At Cable House, Broad Street, London, the building had been listed for some original Voysey interiors but, after detailed analysis by DLG Architects, agreement was reached that the office interiors did not have the special architectural or historic interest relevant to listing and that, with certain provisos, alterations in these areas would not need listed building consent. This gave the developer and his tenants substantially increased flexibility.

A number of strategies may be adopted, some of which are outlined below, which are potentially useful for listed buildings or conservation areas. Many of the approaches can be equally beneficial in considering unlisted buildings, potentially increasing the understanding of the original design intention and the best use of the building.

Conservation plans

Conservation plans are documents produced by a conservation specialist to identify the key elements of a building and opportunities for change. They can provide a useful tool to assist the client's decisions about long-term plans.

They provide an understanding of the building and an assessment of its significance. The document will define the issues and set out relevant conservation policies. The first examples were studies by James Kerr⁶, but there is no single approach and the document can be varied according to the needs.

Conservation area character statements

Policy Planning Guidance 15 requires that any proposals in a conservation area protect or enhance the character of the area. Current enthusiasm for conservation has led to concern that conservation areas are set up without sufficient regard for the qualities that make them worth conserving (Morton and Ayers, 1993).

To assess this value, it is necessary to define the character. New conservation areas require a statement and for older designations local authorities are obliged to provide one. There are however many areas where this statement is still missing or is too old and/or incomplete.

Unlike most of the other plans listed here, these statements are primarily to protect the public interest. They often contain valuable information affecting individual properties or their context and, where this is not available, the owner can commission his own study for what may be a restricted area, and present it to the local authority as part of a planning application.

Management agreements

One of the first attempts at an agreement was produced for Victoria House in Southampton Row. The objective was to produce a document in consultation with English Heritage and the Camden Conservation Officer to establish clear guidance about the acceptability of any proposals, allowing the owner to manage his building properly.

The first actual Management Agreement was produced in 1992 at the instigation of Diane Green of English Heritage and Bob Kindred, the Conservation Officer in Ipswich. This was in response to the listing at Grade I of the Willis Carroon building by Foster Associates, and was intended to help the building owner to decide what did or did not require listed building consent (Figure 5).

English Heritage subsequently produced a Guidance Paper, and there are now a number of such agreements ranging from a few pages to substantial documents (such as that produced for Golden Lane in London).

A survey carried out by Paul Drury Partnership has shown that nearly all the agreements entered into are for large and complex twentieth century buildings with a need for flexibility and frequent reorganisation. They identified a growing interest in such agreements.

Long-term management and maintenance

Those responsible for Church of England churches have for a long time been obliged to produce a quinquennial report to identify any urgent works to be undertaken within 18 months or so. Longer-term works required before the next report and those that provide opportunities to enhance or improve the property are also identified.

This provides a working document for the churchwardens, and is a process that is to be commended to any long-term owner of a building. The works identified can be carried out either under the direction of the author of the report, by other suitably qualified conservation professionals, or with guidance from the client body.

Figure 5: Willis Corroon. Mies van de Rohe, in his design for a glass skyscraper in 1919, identified the important quality of glass as 'its play of reflections'. Norman Foster achieved this variety of reflections in his building for Willis Corroon in the 1970s, but it does require that the façade be regularly maintained. This requirement is in fact celebrated by the 'arms raised' cleaning cradle running round the perimeter of the roof.

Not just conserving, but creating value

Conservation should not be looked on as an impediment. Facility managers interviewed about two post-war listed buildings commented that the act of listing had increased the workers' perceptions of their value (Walker, 1993a).

The major cost for any organisation lies in manpower. Using the fact of pride in a building to enhance motivation and long-term commitment is an effective way to improve productivity. It may seem obvious, but the benefits of a view from a building, particularly if it includes greenery, have been clearly demonstrated.

Conserving a building is not about freezing it, but about conserving its activity. To varying degrees, the building fabric must be preserved, but a listed factory may present more concern for its general form and insight into the evolution of industrial processes than preservation of material. Twentieth century buildings are more vulnerable

than most to the effects of change, but at the same time will often need the flexibility that embodies that change.

TO SUMMARISE

It is clear that buildings of the twentieth century have become increasingly managed at all stages of their development from design to construction and use and also to demolition or regeneration. It is not surprising that similar developments have taken place in the management of historic interests.

The conservation of buildings of the twentieth century has highlighted the need to consider protection not only of listed buildings, but also of the whole building resource, taking into account not only traditional interests, but also the wider range of user and public concerns for continued use and viability.

Buildings of this period, unlike their predecessors, have a unique language derived from the specific predispositions of their designers. They are also unique in the availability of information about original intentions and the extent to which these were realised.

Many of these considerations could apply to any building, and not just those specifically selected as of special interest; indeed the growth in conservation areas and the status often accorded to buildings of positive value within them means that many 'ordinary' buildings are accorded similar status.

There is a convergence between the interests of conservationists and building managers, and recognition of this will provide a continuing debate. More than ever, we need conservation based on public consent and not on remote and artificial constraint (Walker, 1993b).

NOTES

- 1 A number of new magazines dedicated to managing businesses appeared at the turn of the nineteenth century, including *The Counting House Manager* 1892, *Business Life* 1902 and *Business Organisations and Management* 1919.
- 2 Architect Builder Contractor and Developer, February 1993, p. 18: quote from Frank Lloyd Wright in 1928.
- 3 Willis Faber English Heritage letter, 12 November 1991, to Ipswich Planning Officer '... to convert the pool to office use would be to undermine the demarcation of the functions which is one of the principle qualities of the building'.
- 4 The only international conservation group, DoCoMoMo, reflects this interest in its name, which is Documentation and Conservation of the Modern Movement.
- 5 Modern Architecture Education for Conservation, 27 March 1993.
- 6 One of the first of these was produced in 1993 by James Semple Kerr for the Sydney Opera House Trust, with 67 pages including references.

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