

The Value of
Architecture
Design, Economy
and the Architectural
Imagination
Ken Worpole

RIBA Future Studies



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Ken Worpole
October 1999

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The Economy of Architecture

Foreword

RIBA Future Studies was formed in late 1998 as a group which would investigate, debate and promote topical issues about architecture. We agreed at the outset that the most urgent topic for review was the 'value of architecture' from the angle that 'good design makes economic sense'. We architects are very good at blowing our own trumpets about award-winning design quality. However, in the outside world, where public and private clients are increasingly influenced by accountants and auditors, we still have a lot to prove to avoid the 'well-they-would-say-that-wouldn't-they' criticisms. In a similar vein adverse comments are passed, sometimes with justification, on buildings with a high capital cost. The other side of such an equation is seldom brought into the domain of public debate (lower cost-in-use and the regeneration effects of flagship projects etc).

I am pleased to endorse this essay by Ken Worpole, which sets out the various issues which should be considered before any assessment of the 'value' of architecture is made. We would encourage it to be read in conjunction with the companion essay by Eric Loe titled 'The Value of Architecture – Context and Current Thinking', which describes the various ways that economic and value measurement is made, and sets this work in context.

Both of these publications are intended to raise the issue of the economics of good architecture and set the scene for further research into the value of design in areas such as housing, healthcare, infrastructure, commercial development, cultural and educational buildings, etc.

It is a deliberate choice that this essay is written by a non-architect, Ken Worpole, who is a celebrated writer on social and urban issues. We hope it will help readers to consider contemporary architecture in a fresh light, and also help architects to frame their work in a more persuasive economic context.

I would like to thank the Head of Future Studies, Claire McCoy, for her work on this publication and to the committee for their ideas and support.

John Lyall
Architect and RIBA Vice President
of Future Studies

‘The faces of buildings which are turned outwards towards the world are obviously of interest to the public, and all citizens have a property in them. The spectator is in fact part owner. No man builds to himself alone. Let the proprietor do as he likes inside his building, for we need not call on him. Bad plays need not be seen, books need not be read, but nothing but blindness or the numbing of our faculty of observation can protect us from buildings in the street. It is to be feared that we are learning to protect ourselves by the habit of not observing, that is by sacrificing a faculty.’

W.R.Lethaby, Architect, 1922

01

‘Behind every distinctive building is an equally distinctive client.’

Michael Wilford, Architect, 1991

02

‘Tenants now influence building design to a far greater degree and it is tenant power which is leading the incorporation of green principles into the commercial property market.’

William McKee, Director General,
British Property Federation, 1998

03

01 **Form in Civilisation:**
Collected papers on Art and Labour,
Oxford University Press, 1957
(originally published 1922)

02 **Cited in How Designers Think:**
The Design Process Demystified,
Bryan Lawson, Architectural Press, 1997

03 **Green Buildings and the UK Property**
Industry, in Green Buildings Pay,
edited by Brian Edwards, E & FN Spon, 1998

Summary

This essay seeks to outline a number of ways in which architecture and design create value in society, through the design of buildings, interiors, and public landscapes, with particular reference to developments in the UK over the past decade. It discusses the growing importance to urban economies of flagship buildings and well-designed public spaces; it looks at the site-specific, problem-solving skills which architecture brings to difficult sites and settings, and explores the contribution made to organisational change by interior design and the structural adaptation of existing buildings to new purposes and functions. It further looks at the place-making qualities of modern urban design, and concludes with a discussion of the significant contribution that architecture and design are now making to environmental sustainability. It is intended to provide a general overview to the discussion about the value and economy of good architecture and design, and is the first in a series.

The Most Public of Arts

Architecture is one of the most public of arts, and at times, one of the more controversial. To paraphrase the Arts & Crafts architect and writer, W.R. Lethaby, cited above, while we can choose to avoid most forms of art that we care little for or actively dislike, we cannot avoid buildings, or the designs of the streets and spaces around them. It is said that doctors bury their mistakes, but architects have to live with theirs for the rest of their lives – and so do the public. Today that public is increasingly having its say in the shape and design of the buildings in which they live and work – as clients, inhabitants, users, and as citizens concerned with the long term environmental sustainability of the planet. In a democracy everybody can become an architectural critic, and many do so. This can only be for the good, and it is hoped this short study can help further stimulate that debate.

Perhaps more than ever before, the relationship between architecture, design and popular interests and lifestyles is ubiquitous and even newsworthy. From the growing involvement of architects in the design of city bars, restaurants, shop and office interiors, through to the rising number of lottery-funded art galleries, museums and other cultural centres being constructed in towns and cities throughout Britain, architecture's signature is now to be found everywhere. It also is evident in the public interest in the growing number of green buildings which are appearing in both town and country. In addition there are many new and innovative housing developments on urban brownfield sites, a proliferation of loft conversions in the ex-industrial quarters of the larger cities, new public transport interchanges, and other smaller-scale infrastructure projects, including a new generation of health practices and surgeries resulting from changes in NHS fund-holding policies. All these projects are in addition to the big infrastructural projects – large commercial and industrial buildings, shopping centres, tunnels, roads and bridges – which people more traditionally associate with the contribution of architecture to the changing town and countryside.

It is also significant that the publication of illustrated architectural guides to cities is expanding, evidence also of the growing public interest in the buildings, parks and landscapes of cities, both old and new, and which surely implies a recognition that the built form of a city is a unique part of its identity and attraction. Of note too is the growing popularity of the architectural 'open day', where buildings of architectural interest and merit are opened to the public for closer inspection and enjoyment. All these trends attest to a wave of public interest – even if sometimes querulous – that architects would do well to engage with more directly. In turn, the public debate might be aided by being better informed about the very real complexities and sometimes intractable problems which contemporary architecture has to deal with, whether through juggling issues of design and cost, predictable and unpredictable use, internal and external engineering and safety constraints, and, invariably, the unique problems of the site.

There are some 30,000 practising architects in Britain, only 3% of whom are currently unemployed, a much improved position compared with ten years ago. About 350 firms – 7% of architectural practices – earn some 65% of UK fee income, with most architects however working in smaller firms, with some 70% of the 5,000 firms in Britain employing fewer than six people. In brief, architecture in the UK is patterned around a reasonably large number of successful bigger firms, a number of which also work abroad, surrounded by a hinterland of small businesses, often providing local services in towns and cities throughout the UK. In 1996, for example, UK exports of architectural services amounted to £51m, with imports of £5m, giving a favourable balance of payments surplus of £46m.

04

Architecture is both benefiting from, but also instrumental in creating, jobs in urban regeneration, which now accounts for one in every four construction jobs. The urban regeneration industry is generating 7,000 new jobs a year, on its current base of 220,000 people directly employed – larger than the insurance or the computer sector. The growing influence of architects is evident in bodies such as the Urban Task Force, the Urban Design Alliance, the British Urban Regeneration Agency, the new Commission for Architecture and the Built Environment, and in the work of innovative, campaigning organisations such as the Architecture Foundation (which in 1997, for example, organised a series of public debates about the future of London's built environment, attracting audiences of over 2,000 at a time).

05

We have also recently seen a major international event, Glasgow: City of Architecture and Design, which has helped consolidate this new interest in the changing relationship between built form, urban history, and social and economic renewal. The Homes for the Future exhibition at Glasgow, a development of over one hundred new homes in the centre of the city designed by leading local, national and international architects, including Ian Ritchie Architects, Ushida Findlay Partnership, Elder & Cannon, as an innovative model for urban living, has even been compared, modestly but favourably, with the famous 1927 Weissenhof Siedlung at Stuttgart, where architects such as Gropius, Le Corbusier, J.J.P Oud, and other avatars of modernism first made their name.

06

However, as the controversy which has recently arisen around the Greenwich Millennium Village has demonstrated – where it appears that architectural, environmental and social aspirations have clashed with more cautious investment interests – there are still unresolved issues concerning how architecture and design can be best allied to other aspirations which the government and the wider public also wish to see addressed. These include issues of social exclusion in towns and cities, issues of economic and environmental sustainability, and the long-term physical improvement of the 90% of the existing built form which will last long into the next century, but which in many places, particularly in the inner cities, appears neglected, poorly connected, ill-fitting, and even ugly and depressing.

Architecture alone cannot solve all of these problems; it is doubtful if it could solve any of them single-handedly. On the other hand there are enough examples in recent years of places in which clever, thoughtful and ingenious architecture has put the élan and optimism back into the urban setting, and where architectural thinking has widened out to become generic problem-solving around urban issues – and done so successfully. Yet there is still a defensiveness about architecture amongst architects, and a reluctance to engage with the public in open discussion about the problems they often have to face.

04 All figures derived from Creative Industries:
Mapping Document, DCMS 1998

05 Defining the Urban Regeneration Sector
prepared by Business Strategies Ltd
for the CPRE, 1999

06 Naomi Stungo, 'Urban Bright',
The Observer Review, 4 July 1999

One reason why architects have been perhaps reluctant in recent decades to enter the debate about the role and value of their profession, has been because, at the high point of modernism, a number of architects over-excitedly proclaimed themselves to be engaged in the wholesale shaping of human aspirations and endeavours through the large-scale planning of new towns and cities. This led to the accusation of 'environmental determinism', or in other words, the god-like wish of architects to mould human behaviour to their own ends. Yet this should not blind us to the general truth that, as the then untitled Winston Churchill once famously asserted, 'There is no doubt whatever about the influence of architecture and structure upon human character and action. We make our buildings and afterwards they make us. They regulate the course of our lives.'

07

The public role of architecture has also been diminished by the loss of so many local authority architecture departments and functions. The position is similar for national government. As the Urban Task Force report noted, over the last 15 years the number of qualified planners in the Department of the Environment, Transport and the Regions has fallen by 50% and architects by 95%. It also pointed out that in England, less than 10% of all architects are employed by local authorities, while the figure is 37% in Germany. No wonder it has been so hard to integrate architectural thinking into urban regeneration in a number of places, as so much in-house expertise has been lost.

08

It is not likely to return in any significant way, or at least in that older form. As the architecture and design critic, Jonathan Glancey, has argued: 'The one-nation, post-war world of municipal public architecture is finished.' Today architecture is now almost exclusively located in the private sector, and is having to make common cause with planning, landscape architecture, engineering, transport planners and urban design to develop a new model and aesthetic of the public realm. In this new world, the architect is often a team member, alongside other professional colleagues, again a theme of the Urban Task Force report, and one which has caused architects some heart-searching.

09

Yet despite all these pressures and constraints, the power of architecture to excite the imagination, to construct buildings and places of great beauty, to address complex problems of light, space, time, function, efficiency and adaptability even in the most difficult environments and settings, is still a source of great inspiration, and a skill that is in greater demand perhaps than ever before, particularly as environmental concerns rise up the political agenda.

Four principal arguments

There are four principal arguments to this study. These focus on the contribution that good architecture and design can make to:

- 1 the wider economic impact of attractive buildings and settings;
- 2 achieving greater value for money through technical and intellectual expertise;
- 3 enhanced individual and social well-being, and therefore quality of life;
- 4 greater adaptability, energy-efficiency, and environmental sustainability.

Given the interrelationship and interdependence of many of these aspirations and outcomes, there is at times a considerable overlap between them, and the reader might feel that some case studies are in the wrong place, or are thought to illustrate another point more significantly. Such problems cannot be avoided. Isolating any one factor for examination is difficult, and it is hoped that dividing the discernible benefits into four broad areas is more helpful than just making a general case for the contribution that architecture and design make to the wider economic and social good. It is also hoped that during the course of publishing these studies, the ways in which we discuss architectural value and economy – and seek to measure it in more sophisticated ways – will become clearer and more deliberative.

07 Churchill's several pronouncements on architecture are discussed by Stewart Brand in his delightful book, *How Buildings Learn*, Viking, London, 1994

08 *Towards an Urban Renaissance, Final Report of the Urban Task Force, Chaired by Lord Rogers of Riverside*, E & FN Spon, 1999, p159

09 Jonathan Glancey, personal interview, 18 June 1999

The Economy of Architecture

The Flagship Effect

The Flagship Effect

Let us start with some of the clearest examples of how ‘flagship’ architectural projects can have a clear economic impact on the towns and cities in which they are located. The most well known recent example has been Frank Gehry’s spectacular design for the Guggenheim Museum in Bilbao, Spain, regenerating a run down part of a failing industrial riverside site, and already attracting some 3 million visitors a year. The spending power of these visitors not only supports the running of the museum but has helped revive the economy of the city as a whole. There is no doubt that people are coming to see the building as much as the artefacts it contains. It also proves, in the words of the architectural critic, Katherine Shonfield, that:

‘Architecture can break spells. Gehry’s museum and Foster’s underground have transformed Bilbao from a terrorised city to a site of life and construction.’

10

At the other end of the scale, the stunning architecture of the Tate Gallery at St Ives, designed by Eldred Evans and David Shalev and opened on 23 June 1993, has also exhibited the same magnetic effect upon the local economy. Within 2 years of opening, people who’s primary reason for visiting St Ives was to visit the Tate Gallery were contributing £16 million to the local economy. While generating tourist economies was never the principal aim of the architects involved, nonetheless all parties are now aware that beautiful, and successfully articulated and functional buildings, are themselves visitor attractions in their own right. The Architectural Brief for the Tate Gallery at St Ives, was explicit about this from the start:

11

‘Apart from the obvious attraction of the exhibits, the Gallery should attract visitors in its own right in the way that the Pompidou Centre and the Lloyd’s Building do... the building should be stimulating, imaginative and excellent.’

12



Tate Gallery, St Ives
Pompidou Centre
Stuttgart Staatsgalerie

The Tate Gallery at St Ives, opened on 23 June 1993, has had an enormous impact upon the local economy. Within 2 years of opening, people who’s primary reason for visiting St Ives was to visit the Tate Gallery were contributing £16 million to the local economy.

The reference to the Pompidou Centre is crucial, for it was the design of the Pompidou Centre by Renzo Piano and Richard Rogers, opened in 1977, that provided a model as to how radical or provocative architecture could excite public interest and affection, as well as solving the conventional problems associated with housing artworks and managing visitor numbers efficiently and effectively. The radical idea of the Pompidou Centre (now more usually called ‘the Beaubourg’) was to allow over half of the designated site to be used as public space – achieved by building upwards. The piazza has become one of the most dynamic meeting places in the city, indeed a focal point of Paris in all the guide-books. Putting the escalators and elevators on the outside of the building, in transparent shafts, also allowed all visitors access to some of the most stunning views of Paris as an added bonus. The original brief for the centre anticipated some 5,000 visitors a day; today it often has in excess of 25,000. The Pompidou Centre revived the fortunes of the district in which it was located in a matter of months.

A similar story can be seen as a result of the success of James Stirling’s design for the Stuttgart Staatsgalerie, which opened in March 1984 to great acclaim. In the first seven months it had nearly a million visitors, and the gallery moved from 56th to 2nd place in the league table of attendance figures for German museums. Such ‘externalities’, as the economists call them, cannot be easily dismissed. The economic regeneration occasioned by innovative and successful architecture, is no longer regarded as an unexpected bonus; for the best architects see their work as being integrally involved in the renewed vitality of urban life and culture.

13



- 10 Katherine Shonfield,
The Architects’ Journal, 8 July 1999
- 11 Tate Gallery, St Ives
1994/5 Visitors’ Survey
- 12 Jane Axton, Gasworks to Gallery:
The Story of Tate St Ives,
Jane Axton & Colin Orchard,
St Ives, 1995, p109
- 13 Mark Girouard Big Jim:
The Life and Work of James Stirling,
Chatto & Windus, London, 1998

The impact of good architecture is often incremental, and matures over time. In 1935 the De La Warr Pavilion, designed by Erich Mendelsohn and Serge Chermayeff, was opened at Bexhill, on a site overlooking the sea. Ahead of its time then, it still retains the ability to dazzle and delight to this day. It is a fine example of early modernism. After many years of neglect, it is now being restored to its former glory, principally because in recent years the building has attracted more favourable attention in the travel and architectural press, than any other feature of Bexhill; in short it now dominates the town's tourist literature and features as its principal attraction, and is realised to be a priceless asset to the town.

Such projects also contribute to what is today described as 'cultural tourism', the enormous demand by people, nationally and internationally, to visit places of interest, including galleries and museums, as part of their use of leisure time, and evidenced in the proliferation of public art and architectural guides, already mentioned. Since the publication of 'The Economic Importance of the Arts in Britain' by John Myerscough in 1988, with its detailed account of the crucial role that arts buildings and arts events play in tourism, more and more towns and cities have sought to consolidate their attractiveness to both residents and visitors alike by investment in new galleries and museums. In recent years this has been aided by lottery grants, with large scale architectural developments such as The Tate at the Bank, the Lowry Gallery in Salford, and many others. The critic Hugh Aldersey-Williams has written interestingly about how both Glasgow and Edinburgh have in recent years striven to impress a new identity upon the world through the conscious use of architecture:

'The idea that an identity – for a city, or region, or country – can be physically constructed troubles many people in Britain. Manchester is now learning, but in England generally the invention of tradition through architecture is not a conscious process.'

14



De La Warr Pavilion

Research for the Myerscough Report into the economic importance of the arts found that, when middle managers of selected business were asked which factors might affect 'the selection of a region in which to live and work', the joint factor of 'Pleasant environment and architecture' came out top:

Percentage regarding as important:	All respondents
Pleasant environment and architecture	98%
Good road, rail and air links	84%
Outdoor recreation and sporting facilities	81%
A wide choice of housing	80%
Good choice of schools for children	76%
Museums, theatres, concerts and other cultural facilities	74%

15

This concept of the pleasant environment, including amenable and good quality architecture', is clearly central to people's perception of what makes a town or city a good place in which to work and live.

While the UK is enjoying a boom in new cultural buildings, often funded by the lottery, which are helping to regenerate city districts, there are regrettably few of the large-scale modern park developments similar to Parc Villette, Parc André-Citroën and Parc Bercy in Paris, which have done so much to establish new, high value districts on the sites of previously run-down areas or redundant industrial sites. One awaits development of the new Mile End Park in East London with keen interest. The Parisian authorities used the device of a very large level of public investment in these parks deliberately to raise land values and rental values in the areas surrounding them – in short to kick-start the process of urban regeneration, commissioning some of the best architects to achieve this: Bernard Tschumi at Parc Villette, Alain Provost and Gilles Clement at Parc André-Citroën, and Bernard Huet, Marylène Ferrand, Jean-Pierre Feugas and Bernard Le Roy at Parc Bercy. All have succeeded in bringing about a new vitality to the areas in which they have been developed. While British architecture today enjoys an international reputation, landscape architecture in the UK sadly languishes, perhaps more to do with a lack of political will to take large-scale urban landscaping projects seriously, than with available expertise.

(Following page)
The Dragon Slide, Parc Villette

14 Hugh Aldersey-Williams,
Building on Tradition, New Statesman
3 May 1999

15 John Myerscough,
The Economic importance of the Arts,
Policy Studies Institute, 1988, p140



The Economy of Architecture

Achieving greater value
for money through
technical and intellectual
expertise

We have noted already the important economic and cultural impact which great flagship projects can have on the successful re-invention or re-positioning of a town or city. The second argument of this paper is a more technical one. It is how the skills and expertise of the architect can provide cost-effective solutions to complex problems, not only saving money, but providing extra benefits in terms of increased space, easier access, more efficient working and living conditions, which 'off the shelf' design, while sometimes ostensibly cheaper, frequently fails to achieve. Being creative to order, and within very tight physical and financial constraints, is the unique architectural skill, according to Roger Zogolovitch.

16

The investment in 'quality' has always been a key issue among architects naturally, but recently it has begun to attract the interest of government too, perceiving how poor quality in the built environment can have long-term repercussions. There is still a tendency to think mainly of the costs of building as a one-off capital outlay, rather than consider the savings which might accrue from lower maintenance and depreciation arising from an investment in good design. The detailed economics of this issue are dealt with more fully in Eric Loe's second paper in this series.

One government report which raised this specifically was the discussion paper 'Quality in Town and Country' published by the Department of Environment in 1994, and intended to raise awareness as to the importance of good design, particularly in the long-term sustainability of both town and countryside. 'Quality is sustainable' and 'Quality pays' were two of the most important rallying themes of the report. Very recently the developer Stuart Lipton, the new chairman of the Commission for Architecture and the Built Environment, has warned that the City of London must promote the best quality architecture, or it will be threatened as an office location by more dynamic areas in other parts of the city. 'We need more towers of great quality, new landmarks, great spaces with buzz,' he said.

17

In 1996 the Royal Institution of Chartered Surveyors (RICS) commissioned research which culminated in the report, 'Quality of Urban Design'. This review looked at a number of case studies of recent developments where quality seemed to make a difference to the long-term value of the development, though in general the report emphasised the current reticence of investors to go beyond 'appropriate' quality to 'sustainable quality'. This may be changing however. In an interview about sustainable construction, the purchasing director of Tarmac, Neil MacKenzie, recently observed that while many companies may at present be put off by the perceived additional costs of sustainable construction:

'...all the "state-of-the-art" clients the company wants to work with are asking tough questions in this area and Tarmac needs to impress them with its knowledge.'

18

The RICS report did cite research from the USA (Vandell & Lane 1989) of an innovative approach to measuring the financial benefits of good design by asking a panel of architects to evaluate the design qualities of 100 commercial properties in Boston and Cambridge, finding that even compensating for the scale of the original investment, rental values were higher where good design was seen to be evident, and could be regarded as having long-term economic benefits to investors.

Even so, good design need not be necessarily more expensive than bad design – or no design at all. In a symposium organised by the Royal Society of Arts in 1993 under the title, 'Better Buildings Mean Better Business', Christopher B Carter of Northcliffe Newspapers spoke about the stunning design for the new Western Morning News headquarters in Plymouth which his company had commissioned from architect Nicholas Grimshaw. He asserted that:

'We started from the thesis that good design need not be expensive. Northcliffe has commissioned several buildings in recent years and an analysis of costs, updated for inflation and adjusted for site factors, indicated that good design of itself was not a prime determinant of building cost.'

19

16 Personal communication, 28 September 1999

17 The Architects' Journal, 9 September 1999

18 Quoted in 'What is sustainable construction exactly?', BUILDING, 22 January 1999

19 Better Buildings Mean Better Business. The Proceedings of a Symposium to discuss the quality of the built environment. Organised by the Royal Society of Arts on 18 January 1993, edited by Michael Wigginton, and published by the RSA 1993

The reason why the newspaper group were keen on a well-designed and distinctive building was that in their opinion, 'good local newspapers are deeply rooted in the communities they serve. We saw an opportunity to raise the profile of our newspapers in the community by constructing a landmark building on the new site'. The project also benefited from early and close dialogue between client and architect which arose because the company were used to dealing with architects and had themselves short-listed practices whose work they already knew and liked. It was a competitive process at the beginning, but from the interviews onwards it became a two-way discussion.

Architects not only have to design buildings that look good and work well, but another of their key skills, often less appreciated by the public, is the ability to fine-tune the design of a building to meet the demands of a very difficult site, while still working within fairly major cash constraints. Mixing off-site preconstruction with onsite planning and detailing can produce buildings which are both economic and bespoke, as the story of the Sterling Hotel at Heathrow demonstrates.

Hotel at Heathrow

Designing a hotel next to Terminal Four at Heathrow Airport, where Concorde takes off and lands daily within several hundred metres, was a serious challenge for the architectural firm Manser Associates, but the result, completed in 1989, within 18 months of commission, is already regarded as 'a modern miracle in British architectural circles'. Not only did the firm design a wholly modern building that has, in the words of an admiring French architectural critic, renewed the genre of the overnight travel hotel, but it did so on a tight budget by artfully combining industrial quality core structures with high quality domestic finishes. The 400 bedroom Sterling Hotel (now the Hilton), which could easily have turned into another bland motel or anonymous apartment block, is already regarded as a modern classic, and is today the most profitable hotel in the Hilton worldwide chain.

20



Heathrow Hilton, Terminal Four

Developing imaginative forms of new housing is also a challenge to the architect, for while many builders or developers could 'knock something up' in the form of a standard family house on a flat, greenfield site, shoe-horning a complicated building into a gap left by other buildings and the existing street plan is a real test of the architect's design skills.

It is interesting to note that the four winners of the Housing Design Awards for 1999 all involved either the re-use of existing buildings, or new build schemes in city centres. The new Focus Foyer in Birmingham designed by Ian Simpson Architects had the difficult job of squeezing a building into a steeply sloping site, bounded on one side by what is effectively an urban motorway, which included residential accommodation, training areas, reception and communal eating areas and quiet areas for 80 young people who would otherwise be homeless and unemployed – and the staff to look after them. Plus the required car parking spaces. The result has been described as 'magnificent'. Not only does the building fit every space and function neatly into a clear and understandable pattern, but it also enhances the area surrounding it. Standardised building design systems simply couldn't do this. Nor could they do what has been achieved at 14 Stukely Street in Covent Garden, where Jeff Kahane and Associates have achieved a meticulously designed development for the Soho Housing Association which squeezes into a heavily hemmed-in site, six light-filled flats. As the judges remarked,

'The care and attention to detail shown here, and throughout the flats in components like the high quality kitchens, speaks volumes for the dedication of the designer and client to produce the maximum return from a restricted budget: a commitment clearly recognised by residents.'

21

20 The Sterling (now Hilton) Hotel is discussed at length by Hugh Pearman in *World Architecture*, Issue No 11, 1991, and by M.H.Contal in *Architecture Interieure*, April/May 1991

21 Home: A Place to Live, The Housing Design Awards 1999

Another two storeys

In Sutton, the Hanover Housing Association commissioned Rock Townsend Architects to design a series of flats, but stipulated that a two-storey building would be needed as older tenants were not able to climb more than one flight of stairs. The architects worked out that the cost of providing a lift to the top floor – allowing tenants to walk down a flight to the third floor – would be more than compensated for by building to four storeys and getting twice as many flats on to the site.

The skills of fine-tuning a complex building and fitting it into a difficult site are going to be needed more in future, as pressures to build on urban brownfield sites, or adapt existing buildings, continue and increase. In such circumstances standardised forms of construction and formulaic design simply won't work. A swimming pool designed by Will Alsop and John Lyall at Sheringham, and completed in 1988, managed to deliver an elegant and flexible building for £730 per square metre at a time when many other leisure pools were being built for up to £1500 per square metre. This was achieved by keeping the plan form simple, using more timber than usual, and coming up with the ingenious idea of incorporating oval-shaped starting blocks in the pool, 25 yards from the deep end, to allow for competitive swimming in what was mostly used as a leisure pool. Other space-saving devices such as counter-balanced staircases to the flume, also allowed the pool to meet different needs at different times without unnecessary duplication. The critic Hugh Pearman praised the building as 'an example of thinking of ways to reconcile architecture with a rock-bottom budget for a local client... resulting in a building that was jolly without being kitsch'.

22

Clients often have many needs and functions which the architect has to try to combine in imaginative ways. Here is one client's brief, for a disused, three-story, H plan school, in Birmingham:

'Our brief for new premises identified a number of important requirements: a location close to other activities, accessible to passers by, good gallery spaces for showing contemporary works, a café, public WCs, a shop, workshops, storage, facilities for touring exhibitions, and an education room. Full access to people with disabilities was crucial.'

23

In response, architects Levitt Bernstein Associates, have produced an exemplary conversion that meets all the client's requirements, as well as establishing the new IKON Gallery in Birmingham's Brindleyplace as a focal point and attraction. Similarly Richard Murphy's design for the new Dundee Arts Centre had to fit into an existing site where the street frontage was extremely narrow, and so had to find a way of pulling people into a building that was mostly 'out the back', on a site which fell by eight metres from one side to the other, and abutted the Roman Catholic Cathedral. Into this difficult space the architect had to design a building with galleries, two cinemas, café, activity rooms, workshops, as much natural light as possible, and secure views of the Tay Rail Bridge to the west. The result is greatly admired and well-used, and is already contributing to the revival of Dundee's city centre. It is in such unpromising conditions that architecture as a design skill comes into its own.

24

With regard to long-term considerations of life-cycle costs in the public sector, a case is argued in Eric Loe's paper that the introduction of the Private Finance Initiative (PFI) in the UK has been an important influence on the quality of the buildings constructed under its aegis, since the life-cycle costs of the building are much more likely to be taken into account under PFI, as are the costs of long-term facility management and maintenance. This is an interesting argument, though some may find other problems with PFI that counter-balance these benign effects, including the argument that such considerations often lead to very dull buildings. However, more and more companies may be considering taking into account the financial benefits of life-cycle design, as an investment in the future.

25

22 Hugh Pearman, *Contemporary World Architecture*, Phaidon, 1998

23 *The Architect's Journal*, 30 April 1998

24 *Architecture Review*, August 1999

25 This argument is supported in a letter published in *The Guardian* on 30 September 1999, from the Chief Executive of University College London Hospitals who believes that PFI procurement will help solve maintenance problems and give greater consideration to long-term viability



(Right)
Dundee Arts Centre

(Following page)
Sheringham Pool



The design of organisational change

Architecture is concerned with more than just the frame, skin and external detailing of a building. One long-standing – though no longer universally shared – assumption about architecture, deriving principally from the Arts & Crafts movement, is that a building is a 'total work of art', and that every detail from the garden layout, the detailing of the elevations, to the floor surfaces, doors and even door handles, should effect an integrated vision of the whole experience. Many architects, Frank Lloyd Wright and Alvar Aalto perhaps most famously in this century, also designed furniture and interior fittings. The integration of exterior and interior design becomes more difficult as Information Technology and lifestyle changes proceed at a faster rate than building design or adaptation. As the well-known architect and designer, Francis Duffy, has pointed out, while cities last for many hundreds of years, and some buildings last for centuries, interiors and interior uses often change every decade or so.

26

One of the key architectural and design skills today, Duffy would argue, is the continuing and effective design and re-design of building interiors, particularly office interiors, as companies are keen to use design-architecture to complement, and even accelerate, organisational change. In the old fashioned, hierarchical office, design was about the separation of powers and responsibilities, today in the most advanced companies, it is about aiding greater workplace informality and communication. Modern office design recognises that in an era of mobile phones, laptop computers, team working and the increasing value of new ideas, traditional office design often obstructs and confounds good communication. Money saved by cutting out unnecessary desk space, unused Board Rooms, or re-designing space that is badly used, can be spent on improved workplace facilities, or reinvested. The work of Duffy, and his company DEGW, in recent years has concentrated on three key issues: 'how volatile organisations can be accommodated in long-term architecture, how the design process can be managed to achieve business objectives, and how the capacity of design to add value can be measured.'

27

Given that office buildings are said to be now the largest capital asset of any developed nation and are where over half the workforce are employed, then the role of architecture and design in creating, efficient, employee-friendly, productive and adaptable settings is of major economic importance in its own right. Indeed many of the most dynamic companies, according to Duffy, 'now want to use design-architecture to accelerate organisational change'. Today interior design and architecture are no longer separate from the management ethos or even the day to day working practices of the new company, but are integrated with the management style. In order to achieve the maximum benefits from design, the architect has to study the working practices of the company, how its employees use their time and space, how they relate to each other, and how greater interaction and communication can be achieved through new layouts and facilities.

28

The initial investment in customised architecture and design can often be recouped within a few years, after which savings on office rents and greater productivity come into their own. Duffy cites the example of Andersen Worldwide, whose investment in tailor-made design for their newly occupied buildings in Chicago achieved by 'space-use intensification' a reduction of 30% of the space that would have been used by conventional layout designs, with the overall savings on rent and occupancy costs paying for the initial capital outlay within four years.

For Duffy and other colleagues working on these crucial issues for modern businesses, it is not simply that savings can be achieved by good design, but the price for not seeking to adapt the work environment to the new organisational cultures which are emerging everywhere is potentially disastrous:

'At the dawn of the age of knowledge work, conventional offices retain the insidious power to drag whole organisations, and even whole economies, subtly backwards and downwards.'

29

26 Francis Duffy, in personal conversation.
See also *The New Office*,
Conran Octopus 1997

27 Francis Duffy, *British Airways at Waterside:
a new model office?*, arq,
vol 3, no 2, 1999

28 This assertion is made by Stewart Brand
in *How Buildings Learn*,
Orion books, 1997, p3

29 Francis Duffy and Jack Tanis,
A Vision of the New Workplace Revisited,
Industrial Development, forthcoming

The Economy of Architecture

The value of design and
architecture in enhanced
individual and social
well-being

The value of design
and architecture
in enhanced
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social well-being

In the past two decades a number of influential architects and planners have returned to the issue of how good design can enhance human values, notably Christopher Alexander (with Sara Ishikawa and Murray Silverstein, *A Pattern Language: Towns, Buildings, Construction*, 1975) and Kevin Lynch (*A Theory of Good City Form*, 1981) in the US, and the work of Francis Tibbalds in the UK, among others.

All these writers have prioritised the human use and experience of buildings and places – the ability of buildings and places to provide both heat and coolness, light and shade, companionship and sanctuary, excitement and rest. They were also ahead of their time in appreciating the value and cost-effectiveness of using good design to create more natural micro-climates in buildings, avoiding where possible artificial light, air-conditioning, and central heating, not just on cost grounds but on grounds of psychological and physical health too.

In the UK the work of Francis Tibbalds was important in creating an approach to architecture, landscaping and town planning which we now call 'urban design'. It was salutary to be reminded by Les Sparks, until recently Birmingham's Director of Architecture and Planning, that Lambeth Council, where Tibbalds also worked, already had an Urban Design Group in the 1960s, responsible for local planning and the management of General Improvement Areas (GIAs). Urban design is now one of the key ways of understanding the relationship between people and places, and the ways in which good architecture and design, can have benefits and impacts beyond aesthetics – in greater feelings of safety and security, greater legibility and assurance, and in a greater sense of locality, identity, civic pride and belonging. In achieving this, architecture can be a vital part of a wider notion of 'quality of life', which today is increasingly how towns and cities compete for inward investment and population growth.

Brindleyplace, Birmingham

Brindleyplace in Birmingham is the largest city centre mixed use development in the UK today, and regarded as a model for developments elsewhere. It covers a 17 acre canal-side site and includes 1 million sq.ft of commercial offices, 1.1 million sq.ft of retail and restaurants, 143 homes, the National Sea Life Centre, a hotel, theatre, the IKON Gallery (already mentioned), two public squares and a multi-storey car park. The site was acquired by compulsory purchase in the mid 1980s and the development brief emphasised 'people-attracting' activities.

While the development ironically was aided by the collapse of the original developers in 1992, which wiped out the burden of historic costs and enabled a fresh start financially, its success is also due to two other significant ingredients. Firstly, that the City Council had a City Centre Design Strategy which ensured that quality and integrity of design were paramount in the overall scheme, and secondly that there was a masterplan drawn up by John Chatwin of Terry Farrell and Partners, which worked out how all the ingredients fitted together and worked to support each others activities. Brindleyplace supports and enhances the other areas of the city centre, particularly Centenary Square where the International Convention Centre and the Birmingham Repertory Theatre are located, and is now the centre of Birmingham's café and restaurant quarter, which is today enormously popular with young people.

30

What is more, a number of the speculative offices developed by Argent Group, and designed by architects such as Porphyrios Associates, Stanton Williams, Allies & Morrison and Siddell Gibson, have won plaudits for their green credentials.

This approach to the planning of new public spaces, and mixed use districts, has been aided by various kinds of statistical analyses of how people use space, including the computer mapping work of Bill Hillier and his notions of 'space syntax', which have helped give architecture a new concern not just with space per se, but the use of space through time. The insights gained by these new techniques apply not just to city centres, but to residential districts too.

For example, research described by Hillier (and Hanson) demonstrated how if one compared a quiet through street in a town with feeder road on a high-density, low-rise estate, then the through street offered 9 times as many human encounters to the pedestrian as the estate road. More recently Hillier has argued that the configuration of the urban grid itself is one of the principal generators of movement, interaction and therefore in a way, a richer urbanity, which is historically based on flow rather than disconnected, instrumental movement in time and space.

31

In planning of this kind, the architect, as Steen Eiler Rasmussen once wrote, 'is a sort of theatrical producer, the man who plans the setting for our lives'. Give or take the slightly anachronistic hyperbole, there remains some truth in this bold claim. The architect Eva Jiricna who has variously worked for the GLC Architects' Department, worked with both Jan Kaplicky of Future Systems and Richard Rogers, and designed many widely-copied restaurant and shop interiors, has said that:

'Architects don't produce the final product, architects produce the background and far more things are going to happen in front of the background, activities, people, clothes, merchandise, books in libraries.'

32

Rasmussen was also preoccupied with the quality and texture of the materials used in urban architecture. Today quality is the key concept in urban design. As Pasqual Maragall writes in his introduction to the Urban Task Force report, explaining the success of Barcelona's great programme of urban renewal,

'The trick in Barcelona was quality first, quantity after. At the heart of our renaissance, the marriage between City Hall and the School of Architecture has been a happy and strong one.'

Oriol Bohigas of MBM Arquitectes endorsed this position when he received the RIBA Gold Medal in 1999 on behalf of the city of Barcelona – the first time a city rather than an individual has won the prize – when he also asserted that 'No urbanistic proposal will make any kind of sense if it does not rest on architectural quality.' But he also warned that such a proposition was not without difficulty, as architecture was often prophetic and on occasions in opposition to current aesthetic values and understandings, and only public debate and understanding could aid the process of integration of the new with the old.

33

Similarly, the distinguished architects Jan Gehl and Lars Gemzøe, from the Royal Danish Academy of Fine Arts in Copenhagen, in their many books and writings on the urban public realm, have consistently asserted that,

'The quality of the public realm in city centres has become a concept which is highly valued by local people. ... We have seen that more good quality public space results in more urban life.'

A 25 year programme to pedestrianise and improve city centre streets and squares in Copenhagen, the slow but sure approach, has been vindicated by the extraordinary quality of the city's street life noted by all visitors, in contrast to former years when the streets were dominated by car use, and drinking and eating were 'basement' and 'back room' activities.

34

31 Bill Hillier, *Space is the Machine: a configurational theory of architecture*, Cambridge University Press, 1996

32 Cited in *Design in Mind*, edited by Bryan Lawson, Butterworth Architecture, 1994

33 'Ten points for an urban methodology', Oriol Bohigas, *The Architectural Review*, September 1999

34 See 'Bringing Quality into City Streets', Helen Bristow and Ben Kochan, *Urban Environment Today*, 1 April 1999. For the full and extraordinary story of Copenhagen's pedestrianisation programme, see 'Public Spaces, Public Life', by Jan Gehl and Lars Gemzøe, The Danish Architectural Press, Copenhagen, 1996

Wonderful Copenhagen

As a result of clear policies on well-designed pedestrianisation, the long-term reduction of car parking spaces, and other urban design initiatives, principally conceived and directed by Professors Jan Gehl and Lars Gemzøe of the School of Architecture at the Royal Danish Academy for Fine Arts, the amount of car traffic in the City of Copenhagen has been almost unchanged for the past 25 years, bicycle use has increased since 1970 by 65%, and the number of people who spend time in the streets and squares of the city centre has increased by 350%.

This is not environmental determinism in a Darwinian sense, but basic common sense thinking about how traffic and spatial layout can either enhance or detract from human interaction. And human interaction, and the principle of the natural surveillance of places through high levels of use, can help reduce opportunistic crime. Using spatial design to create more liveable, sociable places, is now part of the architectural palette. The refurbishment of the Holly Street Estate in Hackney by the architects Levitt-Bernstein, had within months reduced the numbers of people attending a doctor. The economic externalities of good estate design, clearly may include lower crime rates, lower demand on health provision, and possibly even better educational attainment in the long term.

Housing and Health in Hackney

A study of tenants on the Holly Street Estate in Hackney, refurbished by the architects Levitt Bernstein Associates in close consultation with tenants, found that 'the effects of improved housing also appear to be reducing the demands made on the local health service and leading to an increased level of confidence and involvement in neighbourhood affairs'. The survey found that attendances at local surgeries were decreasing, in the total of those surveyed from an estimated 538 visits when they lived in the previous property down to 376 visits while in the new property. The authors of the study suggest that 'it would appear that demands on the NHS have fallen by around a third in the past six months to a year'. (Just What the Doctor Ordered, Wadhams Associates, 1997)

One also needs to note the increasing importance which is attached to design as a means of forestalling and preventing crime. The arguments about the relationship between housing layout and design and crime became rather contentious in the 1980s, because they appeared so deterministic, but the fact is that most police forces in England and Wales today do have an 'architectural liaison officer' who may be called upon to comment on planning applications, and architects are becoming much more conscious of the impacts for good and bad which the design of buildings and their configuration can have. It has recently been argued that,

'The design-affects-crime debate may well become increasingly important. Indeed, the courts in America are increasingly holding landlords and others liable for failing to take sufficient security precautions to prevent criminal attacks on their tenants and guests. third parties are being increasingly sued for premises liability, especially if a criminal attack can be partially attributed to poor design. The rise of the victim's rights movement in the USA in the 1980s forms the foundation for this trend. If it were to migrate to Britain, it would have a significant, far reaching impact upon town planning, criminal justice agencies and residents alike.'

35

This is why the award-winning design for Alma House in Hackney, by the London Borough of Hackney with PRP Architects, shows what thoughtful design can achieve in terms of creating more secure, but also more publicly convivial places and spaces. As the judges of the 1999 Housing Design Awards reported:

'Alma House represents the first phase of an ambitious rehabilitation and improvement scheme to re-tune the estate for the next century... The no-man's land at the base has been secured with extended gardens, and the flats in the middle of the sandwich fitted with beautifully detailed balconies which extend them not only physically but psychologically into the central square. And, in a simple but highly effective intervention, the access galleries have been transformed by punching through smaller balconies which act as natural meeting places and plant pot space, providing instant surveillance of the previously invisible area below... It represents design excellence of the highest order...'

36

35 Paul Cozens, David Hillier and Gwyn Prescott (1999) *Crime and the Design of New-Build Housing, Town and Country Planning*, Vol 68, No 7

36 *Home: A Place to Live, The Housing Design Awards 1999*

On a similar theme, the role that good design can achieve in making existing buildings work anew, has been demonstrated by the success of the Manchester development company, Urban Splash. This company was established by poster retailer Tom Bloxham and architect Jonathan Falkingham in Manchester in 1993. It now operates principally in Manchester and Liverpool refurbishing old buildings as loft apartments or managed workspaces, as well as building new developments from scratch. The refurbishments are usually able to attract grants from organisations such as English Partnerships, in order to get them into the market-place from a state of dereliction. Today the various companies associated with Urban Splash employ over 200 people and are developing projects with a total value of over £100 million.

The success of the company is attributed to the strong architectural and design qualities of its developments. Many of their projects have won awards from RIBA, the Civic Trust, Building Design, the Manchester Society of Architects, among many other bodies. The parent company, Urban Splash, employs twelve architects in-house, together with its own 70-strong construction team. Tom Bloxham insists that good design pays dividends, and that 'excellence in contemporary architecture is at the heart of the company's philosophy.' The company also runs its own architectural competitions; its new Timber Wharf development in Manchester is a new building designed by competition-winners Glenn Howells Architects. Contrary to the common assumption that modern design doesn't sell, there are often queues when a new development is announced, the majority of people buying off plan.

While some people question the long-term social impact of loft living, architectural writers Marcus Field and Mark Irving have no doubt that lofts have been a powerful force for the good on housing design in general. They cite the conclusions drawn by Lee Mallett, former editor of *Estates Times*, that 'The effect of lofts is absolutely real in economic and political terms. . . (for) if ever there was an industry that needed to refresh its product, it's the house-building industry.' The success of developer-led lofts and the media's coverage of loft lifestyles 'has led house builders to consider the potential of the inner city as a place to build; of open-plan domestic space as desirable; and of contemporary approaches to architecture as marketable,' argue Field and Irving with some conviction.

37

The Economy of Architecture

Using design to
achieve greater adaptability,
energy-efficiency, and
environmental sustainability

Using design to achieve greater adaptability, energy-efficiency, and environmental sustainability.

Increasingly architects are being asked to innovate and think much more creatively in order to achieve greater environmental sustainability. This means taking greater regard for the orientation of the site, local topographical and environmental factors which need to be taken into account, and designing and fine-tuning buildings that take advantage of these factors to minimise energy use – and therefore revenue costs – and provide comfortable and pleasant environments in which to work.

The DETR has already issued A Guide to Green Construction for Government Estates (March 1999) which, among other things, urges clients to consider the re-use of old buildings, the re-cycling of waste materials for new purposes, advocating low-energy design and designing buildings that are cheap to run, and adaptable to meet changing future needs. This is a tall order, but already interesting new buildings are happening which demonstrate that meeting all these varied and eminently desirable conditions can be done, as can be seen from the case of the ECO Centre in Jarrow.

The Eco Centre, Jarrow, 1996

Architect: Carole Townsend, Earth Sense
The Eco Centre was described by its principal client, Groundwork South Tyneside, and its architect, Carole Townsend, as 'a sustainable version of the speculative office'. Having solicited proposals from a number of architects to respond to a design brief set by the client, both client and the chosen architect worked together as the design team through the whole process. The original aim of the building was autonomy – it was intended to stand alone, making no demands upon local supply networks. It generates its own electricity through the use of a wind turbine (in fact has a surplus), and disposes of its own sewage through the use of composting toilets. A range of energy saving devices keep demands – and therefore costs – down to about half of most similar-sized office blocks. It is largely built using natural or recycled materials. For example, re-cycled bricks have been used throughout, and the reception centre incorporates glass from old washing machine doors!

Today, three years after taking occupation of the building, the principal client describes his company as 'very happy – this place works'. The building is also home to 10 other tenants, including a PR firm, a large security company, a recruitment company, and others, all of whom report high levels of satisfaction with their tenancy. The Eco Centre receives hundreds of visitors each year, according to its director, Lionel Hehir, including many contractors and developers, as well as environmental organisations, though 'surprisingly few architectural students'. The architect who designed the building, Carole Townsend, claims that many potential clients are deterred from thinking about commissioning environmentally-friendly architecture because of its perceived additional cost. Yet as the Eco Centre demonstrates, there have already been significant revenue savings through energy-efficiency, and both client and the clients tenants claim it to be a delightful building to work in.

Tenant satisfaction with green buildings – not because they save money so much as that they are often more pleasant to work in – is now a driving force for change, as William McKee of the British Property Federation acknowledges in the statement cited at the beginning of this study. When Marilyn Standley of the Addison Wesley Longman publishing group was involved in commissioning a new headquarters building in Harlow in the early 1990s, she admitted to being more concerned with meeting staff needs than environmental sustainability – but found she could have both.

Addison Wesley Longman Building, Harlow

A new headquarters was needed for the group, expected to cost £21 million, to meet the needs of the staff and their higher than average use of IT. The main elements for the building brief were that it should be:

- responsive to different management needs;
- flexible, especially with regard to IT use;
- encouraging to teamwork
- easy to maintain;
- cheap to run;
- low-energy in design;
- environmentally-friendly;
- a pleasure to be in.

The architects CD Partnership (formerly Conran Roche) were appointed, and the successful building was very much based on consultation with the staff. For as Standley states, 'Typically in a company such as Addison Wesley Longman, 75% of its total costs are in staff salaries. Anything the business can do to make staff more productive and to reduce absenteeism through illness pays dividends. Staff costs far exceed energy building costs so user contentment is more important to the employer than good environmental design. However, what this building shows is that by involving staff in the generation of the brief the framework for design evolves from the joint perspectives of good management practice and low-energy design. For a healthy and satisfying workplace is invariably one which is energy efficient and productive.'

38

One of the most attention-catching examples of energy-saving refurbishment, on a grand scale, was the re-design of the Berlin Reichstag by Foster and Partners, completed in 1998. The design was intended to achieve a new airiness and lightness to the building to emphasise the significance of Reichstag as a democratic forum, as well as incorporating a number of features to minimise energy use and emissions, including fuelling the cogeneration plant with rapeseed oil (which also produces lower CO₂ emissions). Another Foster & Associates building, the Mistral Building for British Gas in Reading, is likely to incur only 20% of the energy costs of a more conventionally designed building, with a pay-back period on the initial higher outlay on design of between 12 – 15 years, though the firm claims that they 'like to think that the approach to the design from an environmental perspective adds value to the building which would be reflected in any subsequent sale'.

39



However new attention to the design of volume house-building is where energy savings are likely to be most dramatically achieved. Prototypes for new kinds of housing are now being developed, such as the Beddington Zero Energy Development in Sutton, designed by architect Bill Dunster and Ove Arup environmental engineer Chris Twinn. This is a mixed-tenancy development, some for rent, some for part-ownership and some for direct sale, but the use of increased insulation, using sunlight to help power heating and lighting, a combined power and heat system fuelled by tree waste (until a fast-growing willow coppice fuel system is in place), are expected to cut residents' fuel bills by 66% per annum.

40

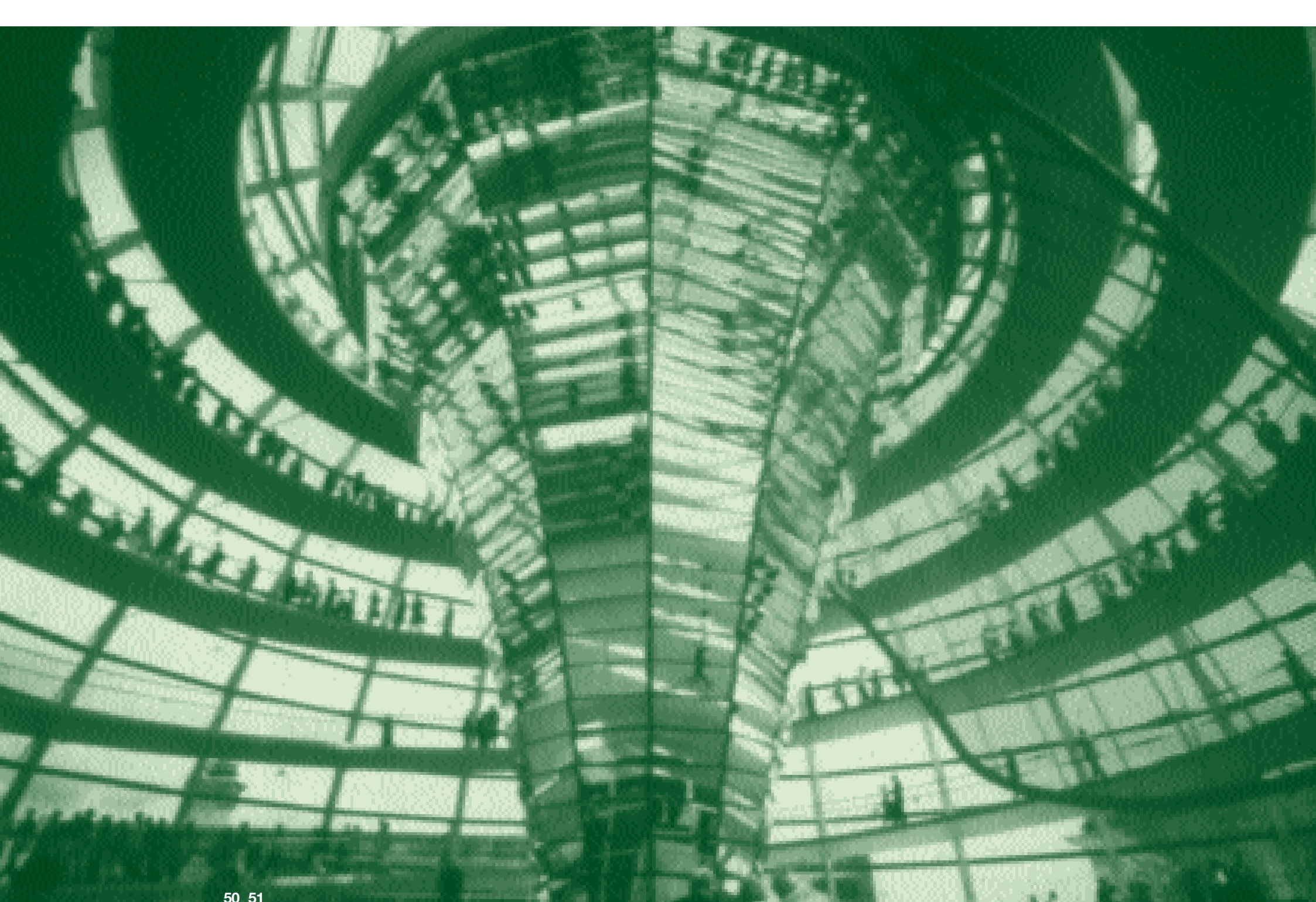
Not surprisingly architects have been foremost in the lobby advocating that the VAT currently imposed on the refurbishment or conversion of existing residential properties should be harmonised. It does seem to be a major anomaly that to build a new house incurs no VAT, but to convert an existing house for new residential uses (which may well be much more sustainable) does.

Sustainable construction is different to sustainable development. The latter is principally concerned with re-configuring the connections between home, work and leisure. It seeks to achieve this by minimising energy use through planning new developments to cut down car journeys and school travel distances, and by designing houses which can be used for home-working. In other ways, too, it involves thinking through the patterns of movement and function that can allow people to continue to lead varied lifestyles, while minimising demands upon energy-use, creating unnecessary pollution, or bringing transport networks to over-capacity, and possibly gridlock. More and more we are likely to see design solutions to these economic and social conundrums.

38 Cited in Green Buildings Pay, edited Brian Edwards, E & FN Spon, 1998

39 Cited in Green Buildings Pay, edited Brian Edwards, E & FN Spon, 1998

40 Beddington Zero Energy Development, Sutton, reported in BUILDING, 22 January 1999



Conclusions

The role that architecture and design are today playing in the regeneration of towns and cities, and in contributing to the greater sustainability of changing patterns of work, domestic life and leisure, is significant. The importance of new architectural landmarks and flagships to the renewed identities of Britain's cities is evident everywhere. The growth in popularity of architectural guidebooks, and public open days to visit buildings of historic and contemporary architectural interest, attests to the renewed interest in design and architecture.

Architecture and design are also playing an increasingly important role in the interior planning and refurbishment of industrial and commercial buildings, as part of the means by which businesses – and the organisational cultures which they develop – adapt to meet new circumstances and challenges. Growing concerns with environmental sustainability have been quickly responded to architecturally, and there are already a number of pioneering examples of sustainable buildings in Britain, which offer new ways of thinking about how the sophisticated use of new technology, coupled with innovative design, can achieve more for less, in the capital and revenue costs of adapting or designing buildings.

In Britain's city centres, good design is helping restore ex-industrial buildings to new uses. Given that more and more housing is going to be developed on urban brownfield sites, the skills of architects and designers in adapting old buildings, or in creating new developments on difficult 'infill' sites, are likely to be needed even more than ever. The glamour of prestige architecture may give way to a recognition that the key architectural skills in future will also lie in the sustainable adaptation of the existing 90% of the built form of cities. This is what Professor Roger Stonehouse would call 'architecture with a light touch'. In addition greater thought needs to be giving to the planning of urban spaces and functions to bring about sustainable long-term benefits.

Finally it should also be appreciated that good design need not be more expensive, whether in capital or revenue terms, and can bring about other benefits to users and the wider public – both of whom have to live with the buildings and settings that result. Architecture is one of the most public of arts, and good design can add enormously to the quality and vitality of the urban or rural setting. Indifferent design, or endless rows of standardised buildings and ill-fitting developments can, cumulatively contribute to a form of urban entropy, a general deadening of the visual and even spiritual qualities of the places in which we live and work, leading to what Michael Wigginton has described as 'the long term winding down of the system as a whole, in terms of aspiration and the quality of life.' Good design has the capacity to make everything work better, economically and socially, and bring benefits to all.

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This essay looks at the contribution which good architecture and design can make to successful modern towns and cities. It examines, in turn, how this is achieved through securing greater value for money through technical and intellectual expertise, through providing more enjoyable and productive settings at home and in the work-place, through greater energy-efficiency and adaptability, and finally through creating attractive – and crowd-pulling – places and spaces in their own right.

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