

The funding and development of the built environment

The research agenda

September 2004

This study was carried out by a team led by Michael Edwards of University College London. The research team comprised

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It forms one a of a number of studies that the RICS Foundation has carried out to try to identify the key issues that we are facing in the way in which we make best use of the built and natural environment, and is designed to:

- · Identify what the key issues are that we need to address
- · Suggest ways in which we might investigate these further

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Summary

The way we live in our towns and cities in developed countries is unsustainable; it risks breakdown or serious failure if we go on in the way we have been doing.

The question we posed for our research is whether there are new approaches to financing, development and investment that will help to develop the built form in a more economically, socially and environmentally sustainable way. We want to explore the relationships between the players in the property development process and see whether they can actually encourage sustainability, while still producing the outcomes needed by everyone involved in the process.

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Based on our analysis, we believe that research is needed around nine broad themes, with the first of these being the most important:

- Containment and its discontents; densification and land re-use as nostrums
- Regeneration funding
- Market specialisation and the spatial concentration of market activity
- How durable is today's building output?
- Pockets of concentration of class and ethnic groups/tenures
- Social housing production; sustainability with rising rents and benefit dependence
- Car-dependent development forms and transport dependence
- Funding collective needs from land development.
- Negative attitudes towards the built environment

This short report is derived from a much longer literature review, copies of which are available at www.bartlett.ucl.ac.uk/research/planning/ricsf

Introduction

For people in both the developed and the developing world, the urban experience is now increasingly the norm. While we may hark back to a utopian vision of country life and associate very strongly with the countryside when we evoke images of our identity and culture, it is the daily reality of living and working in towns and cities that confronts most of us.

Having said that, towns and cities are also where the wealth of our nation is increasingly created and where ideas and knowledge are generated. It is important that they work for us.

To these end, the RICS Foundation commissioned the Bartlett School of Planning at University College London to think about what the key issues are in respect of the long term sustainability of towns and cities and to suggest what that means in terms of the research priorities that we should set ourselves. This they have done and I am very pleased to be able to present this work, which contains many awkward truths about the way in which we think about cities, and sets us many challenges for how we should be best respond.

I do hope that you are as stimulated by their thoughts as I am, and I very much look forward to taking these ideas and challenges forward.

Stephen Brown Director of Research RICS Foundation



While we may hark back to a utopian vision of country life and associate very strongly with the countryside when we evoke images of our identity and culture, it is the daily reality of living and working in towns and cities that confronts most of us.

Background

While there is some level of agreement that we need to think more carefully and deeply about how we manage and develop the urban form, some of this apparent agreement is deceptive. It comes from the very different meanings people use when they talk about 'sustainability'. They have different kinds of breakdown in mind when they ask for change in the way we finance and organise development.

What are people concerned about? We believe there are three sets of issues:

Economic sustainability: can the economy – of a region, the UK or the world – sustain itself under today's practises and relationships? And can we maintain a skilled labour force, a steady balance of consumption and production and a prosperous life for everyone in the current competitive situation, world order and national and local practices?

For property development this is reflected in concerns about the balance of risk, profit and stability; the labour supply, skill and safety issues in construction and the geographic spread of activity. While producing the built environment often seems a benign sector, from time to time the role of property markets in the economy poses serious economic problems for everyone from central bankers to trades unionists.

Social sustainability: most of us in the UK have become used to a stable and even cohesive society. This relative social peace may also be because the UK attracts so much inward investment. We hanker after a society where people and households have a choice of where to live. And may, if they choose, leave or remain within the communities they come from – expecting decent and affordable

housing, and whatever services or employment they need, almost anywhere.

Social sustainability also presumes social peace, with people of different ethnicity, culture, social class and religion able to live tolerantly in the same society. Many parts of

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mainland Britain are regarded as successful in these respects, but there is widespread anxiety about social breakdowns. For the property development sector these concerns show up in the great debates about affordable housing in towns and the countryside, areabased regeneration initiatives and neighbourhood renewal.

Environmental sustainability: concerns range from the global, such as climate change, resource depletion and pollution, through to the intensely local (the passionate British defence of 'rural' settings for personal life, conserving local habitats and views). Somewhere between the extremes lies the tension between local self-sufficiency in food and consumption goods and the prevailing shift in the opposite direction: an ever-higher transport content in our food, manufactured goods, holidays and business.

Regardless of perception and background, there is real substance in this set of concerns and RICS Foundation believes that it is now time to open a debate on the key research needs on this topic.

Approaches and methods

We believe there are several key principles that need to guide the direction of research.

The economic, social and environmental dimensions of 'sustainability' are interwoven and should always be handled together where the built environment is concerned. The deeper we go into any of the three categories, the more we see that they interact with each other.

Attention to the timescale is important – in understanding the past, in analysing current practices and in designing the future. In the short run all of us have to do what we can within the laws, social institutions and settlement patterns we inherit.

Medium term we can make some changes (in laws, policies, behaviours governing the use we make of our environment). But the built environment itself is very deeply embedded and we can only bring about change in its structure very slowly. Short-term and medium-term actions have to take us towards a better long term.

A culture of blame is not helpful

In public debate, and within built environment professions, there is a strong tendency for simplistic argument. Laying the blame for problems on – for instance – greedy oil companies, unimaginative developers, restrictive planners, short-sighted governments, the World Trade Organisation, the selfish attitudes of people, the herd instincts of fund managers and so on is not helpful.

It is true that all these sections of society (and others) have contributed over the years to bring us to our present situation. And many of the problems of sustainable urban development are the unintended effects of earlier actions that were well-intentioned at the time.



The challenge for research is to **clarify** with impartiality the institutional relationships we work within and to point the way towards better ones.

But we are reasonably optimistic in facing this challenge. In our view, the United Kingdom has the opportunity to lead the world in innovations, which the world desperately needs, learning from other countries in doing so. This has happened before and could happen again. For example the UK system of site leasehold development was, at its best, a uniquely powerful way to develop high-quality built environment, with built-in maintenance mechanisms, able to contribute to the early development of capitalist industrialisation with little state intervention.

Much later (in the 20th century) the UK was also able to develop powerful instruments of collective planning (alongside public and private investment and development companies) able to adapt the urban system to the needs of mass production, mass consumption and mass mobility.

Research needs to be global

The research strategy needs to work at various geographic scales. Within the UK, some problems, in particular, need analysis at regional scale: there is a cluster of sustainability problems that come from the mainly high demand, growing areas of southern England; others from low demand regions.

We believe there is a definite **global perspective to this research** agenda, but that such an approach needs to be taken with caution. While some problems present themselves at global scale or at least cross national boundaries, the mechanisms that cause the problems and need to be transformed are almost always very specific to each region, country or continent. We see a great deal of scope for international comparative research, providing that the research is designed to be alert to these differences. Crude studies that simply decide '…let's do what they did in Barcelona' can be dangerously misleading.



The research agenda

Because of the way topics are connected, we have grouped the research issues in nine broad themes. We believe the first of these is pivotal, and we elaborate on this theme in some detail. The other themes link to this first one, and in some cases to each other. The themes are:

Theme 1: Containment and its discontents; densification and land re-use as nostrums

London, the South East and much of prosperous England experiences powerful pressure on available space. Rising and changing demands for residential, commercial and public space have to compete for built space and for development land in the context of:

- The policies for containing development, which have been so effectively pursued by national and local governments in England for decades
- The tendency of these regions to attract investment at the expense of other regions and countries and the absence of effective counter-measures
- Environmental concerns (especially the movements to prevent development in the 'countryside') which are widely assumed to reinforce the justification for containment policies.

Public policy necessarily has to be based on some robust assumptions about what works and what doesn't. The stress created by containing development in booming regions has led to two consensus policies in the UK, neither of which could be described as 'evidence-based':

The first of these is **densification**. British urban and housing policy now seems to be based on the largely untested assumption that building at higher densities is a 'good thing' for the environment. We believe there is an urgent need for research to unpack the relationships between higher density (and the various ways of measuring it) and the environmental, social and economic outcomes that are supposed – or alleged – to flow from it.

The second of these policies is **land re-use**, which is treated as a cure all for many modern urban ills, usually alongside density increases. The proposition is that previously developed land should accommodate as much as possible of forecast growth. The argument goes that if Britain is not to be 'concreted over' while towns and cities sink into decay, new investment capital has to be redirected from greenfield development to brownfield redevelopment.

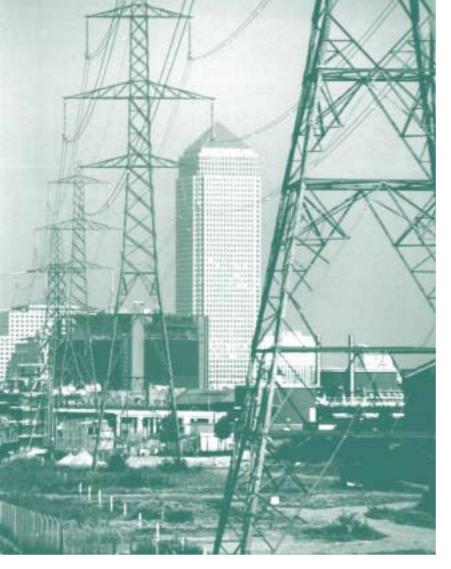
Sustainability issues of containment

The stresses of containment are fairly recent and specific to some regions (in Britain and abroad). Containing urban growth, which has been the cornerstone of planning policy since 1945, worked well until – in the 1980s – economic restructuring speeded up and almost every other feature of economic life was de-regulated. Over the last 20 years the rates of regional growth have diverged and placed unprecedented stress on this time honoured and (by many people) much loved set of controls. The sustainability effects of this are only very poorly understood. We suggest that they have, however, led to:

- Acute problems for the social sustainability of low-income, mixed-income and ageing communities in cities, towns and villages as housing rents and prices increase
- Direct effects on business and public services from the high costs of space. Many businesses, charities, educational and other organisations have had to move because they cannot sustain high value locations
- Indirect problems for the economic sustainability of business (especially in highly competitive and export sectors) derived from the effects of high housing costs on the costs of recruiting and keeping labour; parallel problems arise in public services with national pay scales
- The development and construction sector having to adapt to surviving profitably in conditions where markets are highly volatile and development gains/losses tend to swamp considerations of productivity – with knock-on effects on the sustainability of skilled labour (retention, training and safety)
- Powerful income and wealth redistribution effects, which will have macro-economic and distributional impacts, feeding social exclusion. In particular there are heavy transfers from tenants and from new owner-occupiers to established owners. The property market becomes part of the machinery creating inequality.

We also believe this has led to a complex web of both positive and negative environmental outcomes:

- The positive value created by preserving open land, natural habitats, pleasing natural scenery and agricultural land for food production
- Poorer building stock: over-crowding, smaller plot and house size, lower quality



standards. However, research suggests the density response to price increase is relatively limited with price increases mostly taken up by change in type of housing. Merely relaxing of planning controls would probably lead first to increases in plot and secondly in house-size, so expanding urban areas. House prices per square metre might fall, but prices per house perhaps not. However these findings are based on study of change in current markets while enduring relaxations and new control instruments might produce stronger price effects

- Travel patterns, which are in some respects extended rather than contained by containment. Containment can be seen as creating swathes of countryside between people's origins and destinations, greatly lengthening trips and congesting rural roads
- Energy inefficiency, not only for transport but also for heating, lighting and air pollution caused by too much commuting and urban sprawl.

Is higher density a solution?

A general shift towards denser housing and commercial building is clearly a convenient short term solution for landowners, developers and planning authorities in areas of excess demand – as we see in the Mayor's Spatial Development Strategy for London. But this does not mean it is an optimum strategy anywhere or everywhere, or for the longer term.

Because people are looking for, and are able to afford, more floorspace per person, larger rooms, more rooms or more dwellings per household, society will need more built space just to satisfy a static population and to keep catchment populations of local services constant. The same applies with offices, which need increased space per worker.

Density increases over certain ranges will rule out the use of some technologies for waste re-cycling, energy generation and (of course) domestic food production, including permaculture. Over other density ranges there may be positive technological potentials. It has also been suggested that, when density pushes building heights radically upwards, the buildings are likely to have more embodied energy and use fewer renewable materials.

Some problems of density policy come from the wrong people being housed at the wrong densities. For instance, tall blocks of flats are often unpopular with families but gain a new lease of life when occupied by those who enjoy them; students are sharing many semidetached houses in low-density suburbs and others are occupied by elderly people unwilling or unable to care for the large gardens they happen to have. A further weakness in the density debate comes from the fact it is often conducted as though, if higher housing densities were adopted, they would be imposed retrospectively on everyone, whereas they could influence only about 1-2% of housing a year, slightly changing the available mix. Many surveys have shown how most British households prefer single family houses with gardens. That is just as well because most homes in Britain will be of that type, however dense the next few years' output is. It only needs a minority of people to be willing to live at the density of, say a five storey Georgian terrace, to transform urban areas.

Is the re-use of brown field land a solution?

The distinction between 'green' and 'brown' is crude. Previously used land often has significant amenity and environmental value. This will be lost if land is uncritically re-used. Equally there is land, such as military bases, for which the ideal future is probably to return it to agriculture, rather than urbanise it as isolated settlements.

It is unclear whether cities can actually cope with the extra burden put on their infrastructure at a macro-scale. Transport, education, health, waste management may all need **extra investment** to cope with new demand in certain areas, while in other areas re-use might increase the use of pre-existing underused infrastructure. In both cases the effects on economic and social sustainability are potentially significant but remain largely un-researched. This issue calls for a more place-specific approach to policy: national blanket targets are bound to be wrong.

It is not known what the effect of land re-use may be on the price of new and old built space. Prices may indeed rise in the short run but re-adjustment of the industry and production of new types of built environment may eventually lead to lower prices. Similarly unknown are the potential effects on land price.

Very little is known as well on the final effect of internalisation of externalities or creating new ones as far as land re-use is concerned. At the worst, in parts of London, we can see 'brownfield land' busily being produced



through the loss of previous uses, which in other respects were perfectly viable.

Leading edge practices in the construction sector are mostly to be found in commercial development and pose problems when applied to the piecemeal and small scale sites implied by urban land re-cycling. We can imagine the construction industry is hard pressed to change well established ways, techniques and structures of production with potential negative effects on its competitiveness, profitability and survival in the current form.

Research priorities

A comprehensive research programme spanning this set of issues, and the scope for future changes is a **high priority** for the UK. While the built environment professions and industries (and indeed many businesses and people) have found ways to work within this system, the cumulative effects of what we are all doing is to produce some thoroughly negative structural problems for us all, or at least for most of us. Alternatives are never discussed or evaluated. Simply squashing our growth into 'brown fields' cannot be the only or the best strategy. On the broad issue of containment policies and their effects (compared with the effects of imaginable alternatives) we propose that the UK needs research on several fronts:

- Macro-economic study of the problems posed for **management of the national economy**, savings and investment rates and wealth generation and distribution
- Fresh thinking on what used to be called regional policy – on the geographical disparities which drive (and are driven by) the current mechanisms.



Prices may indeed rise in the short run but re-adjustment of the industry and production of new types of built environment may eventually lead to lower prices.

The related density question is a complex one in terms of specifying variables, identifying cause-and-effect chains and finding research methods to clarify the relationships. **Key density issues** to address are:

- Examining non-linearity, to look at the ranges over which density increments yield specified benefits
- Distinguishing the densification of established areas of various kinds from altering the densities at which we build new settlements
- Exploring the scope for performance standards to replace direct density rules in regulating development

- Dealing with residential and non-residential development
- Relating the housing issues to changing demography and market segmentation
- Paying attention to the scope for creative design innovations, in the UK and abroad, which seek to secure (at all scales, from the region to the village/urban district) the positive merits of high density while saving the positive features of lower ones.

This list of issues is a challenge which cuts across the boundaries of professions.

On the brownfield land issue, we see a need for research to:

- Examine structural reasons why the construction/building sector might find it difficult to cope with the change from green to brownfield development in terms of scale economies, choice of technologies, perceived risks and other factors
- Determine whether land re-use makes economic sense with regards to the costs and benefits for local economies, the location of businesses, infrastructure and service capacity, internalising or eliminating some externalities but exacerbating others or creating new ones
- Examine the loss/benefit from land re-use, methods for evaluation, the ability of the planning system to make flexible and informed decisions rather than relying on crude percentage targets. Economic and social costs and benefits are as important as the environmental ones here: there is a risk that mitigation measures are taken where wild life is displaced by development, but not where manufacturing, small service businesses or vulnerable households are displaced.

What are the benefits of this research?

For development, and development finance, this arena of research should lead to institutional changes that would re-balance profitability and risk (and perceptions of these) in favour of peripheral regions and parts of cities, in favour of new types of settlement, which have long term prospects of success.

It should provide for developers and long term investors a basis in evidence for a much more diverse range of long term investments: more diverse kinds of locations, mixtures of uses and configurations of urban and rural.

For mortgage lenders, success in the reforms foreseen here would tend to reduce differential price escalation, but also to reduce volatility and thus default.

For house building companies these reforms would tend to reduce the importance of land banking and permission-gaining, and increase the significance of production and design skills and market research as sources of profitability.

Key reading on containment, density and brownfield land

It is extremely difficult to pare down a brief list of references, given the nature of the topics and the length of time over which they have been debated.

To find out where containment all began one should read Sir Peter Hall's book, The Containment of Urban England (1973). A good review of most of the topics regarding containment is given in the work of Michael Edwards, (2000a, 2000b, 2002). All the work of Alan Evans, Paul Cheshire and Sheppard listed here is important from an economist's point of view, while Glen Bramley and Jan Brueckner also have very interesting angles on the topic from the same perspective.

With regards to densification and brownfield redevelopment, the Urban Task Force report (1999), the Urban White Paper (DETR, 2000) and the Commission of the European Communities (CEC, 1990, 1994) give a pretty accurate picture of what the discussion is about. Michael Breheny (1996) has a good overview of the tidal flows occurring in planning thought and Sir Peter Hall (1999) makes a most interesting argument in favour of higher (but not very high) densities. Elizabeth Burton (2000) handles the social aspects very well. William Anderson et al (1996) provides a very good general framework, and is very good on issues regarding urban form and energy consumption and puts Peter Newman's and Jeffrey Kenworthy's findings into perspective. Mike Jenks (1996) and Katie Williams (2000) bring together some of the most authoritative writers on sustainability and urban form. Finally, Gwilym Pryce (1999) makes a first attempt to explain the 'inflated pricesdropping housing production' paradox.

For a review of the vast US literature a good starting point is Diamond and Noonan, (1996); Ewing, (1997); Gordon and Richardson, (1997); Lincoln Institute of Land Policy (1995) and Fischel, (1990).

All these references can be found in the bibliography at the end of this report.

Theme 2: Regeneration funding

A fundamental part of a sustainable approach to the built environment is rehabilitating urban areas that have suffered from the effects of technological/economic/social changes.

In the UK, the impact of such changes has been particularly acute in and around former industrial towns and cities, especially in northern regions, due to such factors as de-industrialisation, collapse of heavy industry and labour market mismatch, and in coastal

resorts, due to the collapse of traditional tourism. But also within some of the richest regions as the new profile of the economy tends to increase social inequalities.

As regards the built environment, a fundamental policy strategy has been the provision of funds to stimulate new investment and development in the affected areas, usually by covering the extra risks and costs associated with

investing/developing in those areas (gap-funding). In principle, new investment would provide the space and the jobs to turn around the areas' fortunes by incorporating them into the mainstream economic dynamics. The results so far have been variable. Some areas have been extremely successful, others not so.

Sustainability issues

Part of the problem seems to be about the funding instruments themselves and their requirements, which seem inadequate to deal with the diversity of situations faced by declining urban areas. Funding rules and audit regimes appear to have been developed mostly with new buildings in mind.

Whereas this might suit some areas, it does not help in refurbishing property and keeping occupiers in town centres which are at risk of being abandoned (often for new buildings nearby developed with the help of those same funds). Often it is easier to demolish existing structures and build anew, with all the waste of resources this can imply, than to refurbish

> them even where that would be a better strategy on other grounds.

All this adds to the bias towards new buildings in financial and fiscal policy in general, shown by the differential rates of VAT for new as opposed to refurbished buildings. Also, there is some evidence that regeneration funding in support of commercial property in its current form is biased towards larger projects, larger developers,

including Registered Social Landlords, (RSLs) and institutional investors, which might suit only London and some specific locations in a few provincial cities.

With the end of the previous regime of 'gapfunding' due to European competition rules, there is a chance to devise a replacement that can better tackle the diversity of situations in which investment in the built environment can help urban regeneration. Programmes also tend to have a stop/start quality, making it hard to sustain professional teams and to internalise the learning from one project into the preparation of the next.



A further, and serious, sustainability problem in urban regeneration is the continuing disregard of management and maintenance, especially of shared and public spaces. The UK is too full of examples of fine development projects that have quickly declined into squalor – and even been abandoned in some cases – because neither the funding nor the structure of agencies was there to staff, supervise and maintain what was produced.

Research priorities

We believe that research in this theme should focus on:

- The relationship between regeneration funding and audit rules and different profiles of developers and investors
- The impact of different kinds of financial help in achieving regeneration objectives
- The dynamics of regional/local property markets and what kinds of financial and fiscal incentive would best suit each of these markets
- Methods for assessing the environmental costs (local and general) of regeneration interventions.

There are issues here too for professional practices and education – relating to the need to devote substantial resources to participative design and engendering local control and 'ownership' of regeneration schemes.



Theme 3: Market specialisation and the spatial concentration of market activity

The complexity of property markets in the UK had led to the consolidation of highly specialised market segments with their own rules, players and geography

The complexity of property markets in the UK had led to the consolidation of highly specialised market segments with their own rules, players and geography. Financing mechanisms are different between markets. Investors, developers and agents active in the office market are not the same as those in the housing market. Similarly, those operating in the London market are not the same as those in Manchester, Newcastle or Bangor.

The dominance of the office investment market by institutional investors means that office development is confined to the locations that those investors are prepared to accept.

> In fact, it tends to go further than this. There are clear differences even between those at the 'investment-grade' end of the office market (dominated by institutional investors, large developers and property companies and specialised consultants) and the rest, or those whose focus is in the prime pitches of the City of London, the West End and Canary Wharf, as opposed to the rest of London.

> On the other hand, demand-side market research tools well-established in other industrial markets' research are practically unknown in real estate probably because real estate research, is somehow distanced from the dynamics of final demand.

Sustainability issues

On the positive side, this specialisation is a reflection of the degree of 'maturity' of the market, capable of serving effectively several diverse interests and expectations, and therefore part of the conditions that make Britain's development industry the most professional in Europe.

On the negative side, specialised segmentation causes serious distortions that might compromise economic, social and environmental sustainability.

The dominance of the office investment market by institutional investors means that office development is confined to the locations that those investors are prepared to accept. This may be less a reflection of rational economic calculation by developers and investors than of a self-reinforcing mechanism combining pre-conceptions, conservative approaches to perceived risk and herd instinct. As a result, investment and the supply of premises are concentrated in a few places, and attempts at attracting investment to alternative locations and cities have been costly and of only limited success.

There is research showing the reluctance of institutions to invest in English regions away from London, unless profits are abnormally high or someone else picks up the perceived risks. The lack of alternative players means those regions do not realise their full potential as investment destinations. This indifference of investment capital to regional variations also means that investors do not maximise the returns from their choice to invest in property.

The compartmentalisation and specialisation of market sectors also militates against mixeduse environments. The fact that each sector has developed its own rules, practices, expertise and financial mechanisms means extra costs for property products stretching across sectors. These could result from increased complexity of project appraisal, difficulties in assembling differentiated finance, more complex property management systems and more complex risk and profit assessment procedures.

To avoid these problems, developers have often zoned a mixed-use development into single-use parts (eg the housing bit and the office bit). These are then treated as separate developments, each addressing its own separate investor and market sector. Results so far have been variable, even in the more prestigious examples, such as Brindleyplace in Birmingham, and more often than not the potential and vibrancy of real mixed-use environments have not been achieved. These effects are rather exacerbated by the lack of information on demand characteristics and this lack of knowledge leads to oversupply of particular types of space, for example over-specified air-conditioned office space.

Research priorities

We believe that research in this topic should explore the implications of market specialisation for regional development strategies and for the economies of provincial cities, and sub-centres in the metropolis. This could also focus on the role of current sources of development finance in determining the geography of property investment and development. Prospective research could look at alternative market mechanisms that would suit different locations and what the barriers are to the implementation of such mechanisms.

Research could also explore in more detail whether or not market segmentation can be made compatible with mixed-use environments more effectively, and how bridges can be built between sectors without compromising the gains in efficiency that come with specialisation.

European comparative research could be especially valuable in this respect since:

- Regionally-based (and thus locally knowledgeable) financial institutions seem to have been particularly useful in some highly dynamic regions (eg in Italy and Germany)
- We need to compare the costs and benefits of our investment/rental market system for commercial buildings with the relatively strong owner-occupier/direct commissioning systems found in many parts of Europe.
 Each appears to offer some flexibilities and benefits and we might learn how to get the best of both worlds
- A higher degree of use-mixing within buildings and within developments is the norm in many countries and learning from these practices should be a continuing process.



Theme 4: How durable is today's (mainly house-) building output in terms of flexibility, extensibility, and quality of design?



We did not intend to consider detailed issues of building design. However, we realise it is impossible to ignore some of the design and architectural issues.

Some parts of the British built environment have proved highly popular and durable, thanks in part to their flexibility in responding to changes of use and to occupier needs. Georgian and many Victorian terraces and some versions of the 20th century suburb, particularly lend themselves to extension and conversion.

Some former warehouse and industrial buildings are also finding new lives as flexible living and working space. Maintenance and upgrading of these types of properties can use DIY skills, small savings and small building firms. Contemporary housing output, however, frequently has characteristics of plot size, floorspace, configuration and technology, which limits the scope for such adaptation.

Sustainability issues

In a detailed survey of British developers, it was discovered that developers will only adopt 'sustainability' criteria in their developments **when the market gives them a positive motive for doing so**: when occupiers, buyers and users show that they will pay the best rents and prices for more sustainable buildings.

Developers will also respond to the attitude of lenders and investors – those who finance development, buy completed schemes as investments or who (especially in the housing market) lend to owner-occupiers to finance purchase. Developers were reluctant to respond to cajoling from central government or to pressures, often inconsistently applied, from local authorities. Innovative use of building materials combined with more flexible building techniques have led to **efficient 'volume' production**. At the heart of this lies the use of timber frames and pre-finished offsite assembly instead of the traditional masonry approach.

The catalysts have undoubtedly included increasingly demanding building regulations – especially on thermal performance – and the need to adjust speculative output quickly to a volatile market. But...

- To what extent has longevity, adaptability and lifetime been affected?
- Can properties last as long as their stone or brick built predecessors?
- What potential impact is there of significant maintenance and refurbishment costs decades from now? For example with glass and curtain walling in high density residential units, what attention is paid to long lasting seals?
- In terms of social sustainability, do the constraints of contemporary private housing designs cause the frequent need to move, limiting the survival of local communities?

• Are there constraints on the ability of families to take in their elderly or dependent relatives and so realise the notion of 'community care'?

One group who has the ability to make a difference in development are social housing providers and it is here that much innovation is to be found. Longevity, lifetime performance, maintainability and perhaps flexibility appear to be high on their agenda. The revival in the UK of investor ownership of rental housing could also prove a spur to longer term perspectives being seen in the market and therefore taken up by developers.

Research priorities

We believe that there would be great benefits from comparative study of the sustainability attributes (widely defined to include economic, social and environmental features, including flexibility) of housing. The comparison would be between **contemporary** 'systems of housing provision', with earlier forms seen in **older buildings** and with other countries where systems of provision, planning regimes and other factors are often radically different. The UK is, for example, an extreme case in its very low proportion of self-built or self-developed housing.

As the population becomes more diverse in terms of demographic patterns, ethnicity, culture and employment patterns, the challenge is to find developments that produce more diverse and flexible homes without sacrificing the economies to be gained from advanced production methods.

On the demand side this is partly an issue of consumers' preferences. From a more long term point of view, however, it is fruitful to analyse markets as social institutions, made up of all those involved (legislators, financiers, users) over long periods, and in which the 'preferences' of final users may have only very weak and indirect influence. Consumers can only show what they prefer in choosing from what is available and, in the built environment sphere, the range of choices available tends to be very narrow indeed and consumers have (at least before the arrival of the internet) faced high costs in discovering what is available.

Theme 5: Pockets of concentration of class and ethnic groups/tenures: funding collective facilities

British towns and cities have widely different patterns of concentration and segregation (as against mixing) of ethnic groups and of social classes.

Further variations are found elsewhere in Europe and (typically with more extreme levels of segregation) in the USA. These patterns are the outcome of complex interactions of housing market processes, welfare regimes, the cultures and preferences of the groups concerned and the access they have, given their economic position and the opportunities open to them.

Segregation is often blamed for triggering interethnic conflict and for encouraging extremist political activity. On the other hand clustering of communities is often seen as having benefits for the sustainability of cultures or religions, for the support of community business and for mutual self-help.

Sustainability issues

Supply problems dominate the South East of England, with the opposite the case in the North. Ethnic minority communities have a strong focus in London but are also densely present in many Northern and Midland towns and cities. These communities fall into an income spectrum from poor to rich but some are, to varying degrees, united through culture and/or faith. Many of these communities share common issues, yet some have distinct problems. Underlying this for many is a strong owner-occupier streak and, among Muslims, a predominately, faith- and culture-based aversion to interest financing.

Trans-generational issues such as **parental care and inheritance** are now beginning to show up in communities that are in their second or third generation. Whereas first generations often showed strong local loyalties (or were forced together by lack of choice), ultimately reinforcing segregation, newer generations are sometimes keen to move into other areas.



Many ethnic minority groups need space for large or extended families. However, this is expensive and is not well served by current developer thinking, or by RSLs. While some may be able to afford large homes, many cannot.

Some ethnic minority groups, for example first generation Bangladeshis, live mainly in social housing. Others, such as many Pakistanis, are relatively able and keen to be owner-occupiers but are faced with large families who, when married, need their own housing, with parents needing to stay with some of their children. Price inflation in the South East is leading to some very serious pressures building up in ethnic minority areas (and for poor whites). Will this have the potential to reduce segregation as gentrification invades and dilutes areas of former concentration? Or is the imperative of some communities to remain in a particular area adding to price inflation on a micro-level?

Lack of supply and space are now leading to new models of financing and purchasing among some minorities. In the North, falling or static prices could be reinforcing segregation as owner-occupiers have no great need to move or cannot realise any equity value from their homes. Interestingly, in some places where ethnic minorities have settled in districts of large housing, price inflation has increased at a higher rate than in similar areas of small housing.

Many ethnic minority groups have also widened their interest in the built environment to include community and religious institutions. With self employment, and business ownership being a core economic activity in many minorities, commercial property and office space and access to it, are becoming very important and there are cases where community savings are retained and invested within semi-distinct sub-economies.

Lack of supply and space are now leading to new models of financing and purchasing among some minorities. These are more collective-based, relying on mutual self-help.

Research priorities

Research areas could focus on what property market impact there is on segregation, mobility and social sustainability. Are the high house price pressures creating a cohesive social spirit leading to new ways of financing housing, commercial and community uses? A crucial background issue – a pre-requisite for any interpretation of segregation studies – is to generate a **better understanding of the positive and negative features of ethnic and class segregation**.

Theme 6: Social housing production: sustainability with rising rents and benefit dependence

Most regions of the country, and especially those in the south of England, are facing **dramatic affordable housing shortages.** The phenomenon is not restricted to urban areas only: many rural areas are facing acute shortages of housing at prices within the budgets of local people. In areas with strong demand for second and retirement homes, decent affordable housing is even scarcer. Providing social housing remains marginalised and undergoes significant restructuring. RSLs are finding it hard to cope with their hybrid role and central government support is inadequate.

Policies to tackle the problem are overdependent on providing social housing through planning gain and lack any attention to positive measures that would directly increase production of social housing.

Sustainability issues

Economic competitiveness is undermined because private business and public services are finding it **difficult to recruit at current** **salary levels**. This situation can potentially lead to salary increases greater than productivity gains, higher inflation, business relocations or closures etc.

The ever-increasing pressure for the provision of affordable housing through planning gain agreements may indeed have a perverse effect on total housing output by reducing profitability of marginally profitable projects. This may have the effect of reducing overall supply and exacerbating overall housing shortage.

Recent work argues that planning gain deals may have little effect on the total output of social housing – which mostly depends on the funding coming through the Housing Corporation. However, if planning gain is to become the long term source of social housing, then means may need to be found to make sure landowners' expectations for disposal prices can adjust downwards.

The social housing sector lacks the flexibility, the funding and the capacity to actively complement the market house builders.



The RSLs' 'close-to-market' rent policy, dictated by their funding regime, imprisons households and the government into a housing benefit trap. If interest rates start to go up, everyone involved might actually find themselves in dire financial straits similar to the negative equity problem in owner-occupation.

The stigma sometimes attached to social sector housing makes the segregation and exclusion tendencies worse, and undermines the potential of whole urban areas because of perceptions linked to 'sink estates'. Homelessness and overcrowding, on the other hand, entrap people into social destitution and exacerbate a range of social ills and health problems. Consequences for social sustainability are seriously detrimental.

Sustained shortage of affordable housing can mean that established local communities are broken up and people end up migrating or commuting. This has detrimental environmental consequences, exacerbating housing and labour market overheating, and may potentially increase the need for expensive state welfare to replace family and community networks severed by the involuntary migration.

While the concept of lifetime costing is respected among professionals, it is very patchy in its implementation. Cases abound of high-quality new and recent housing going into rapid decline because funding for land and construction was not matched by funding (or institutional practices) for taking responsibility for management, care and maintenance.

Research priorities

Research in this field concerns a wide user community: tenants, government, local government, RSLs, private housing developers, financial institutions and all the professions concerned. Key themes are to:

- Seek to determine the structural problems (financing/funding, organisational, construction) that causes today's social housing production regime to under perform
- Measure the actual consequences of lack of affordable housing to the economy, in aggregate and locally, in urban and rural communities
- Count the wider costs and benefits of pursuing affordable housing through planning gain, and measure the effectiveness of the practice and of available alternatives
- Propose corrective measures or completely new social housing provision regimes
- · Despite the very 'national' character of housing systems, global comparison of innovations can be very helpful here, especially in cooperation with north west European countries. The scope of studies needs to include not only mainstream sectors and regimes, but experimental ones like co-housing and co-op schemes, tenant management organisations and co-ownership forms.





Theme 7: Car-dependent development forms and transport dependence

The car has brought with it many benefits. It has helped us use scattered settlements in new ways and has provided fresh possibilities in how settlement and activity patterns can evolve. Trucks for freight (combined with low fuel costs) have had similar effects on production and distribution of goods, while competitive air transport has helped boost longer distance passenger movement and intercontinental trade.

There is, however, a heavy downside, especially through their consequences for energy, the environment and local self-sufficiency. The issues partially overlap with others we have raised above.

Sustainability issues

While some of these downsides may gradually improve as engines become cleaner and more efficient, others appear to be endemic:

- Increasingly extended home-work and home-services patterns that waste time and cause mounting congestion
- Those without cars, in many types of locations, are immobilised
- Drivers have to spend time and fuel ferrying non-drivers around.

Some lateral thinking is needed about ways forward.

One set of issues relates to the suburbs – there are many 'nice' solutions that can be introduced in the denser urban centres and even in many renewal areas. But the solutions available in the suburbs are less obvious, as suburbs have often been developed with the car in mind.

A second set of problems is in the growth of long distance travel (both nationally and internationally) – for both freight and



passengers. It reflects new organisational structures, including sophisticated logistics in distribution – relating to flexible specialisation, new high technology industries, just in time manufacturing processes, inventory minimisation etc – this all creates demand for new types of buildings and spatial organisation.

Apart from the distance-related aspects, there are the opportunities offered through demand management, pricing, regulation and planning, and technology. It seems likely that even with the strongest politically acceptable forms of pricing and a hard push on environmentally sound technology, we are still a long way short of achieving sustainable transport.

The only way to move strongly in the sustainable direction is to push on these two policies and to reinforce them with planning measures to encourage shorter journey lengths and modal shift. There are also good opportunities to increase load factors in lorries and cars (and public transport). This is where there are strong links with the other themes that we have proposed, on density, mixed-use, green belt alternatives, urban renewal, intensification and reuse. The other issue is the size of settlements. Studies have found that thresholds of about 50 000 population offer a wide range of jobs, services and facilities, so trip distances can be kept to a minimum. Towns of this size are attractive to residents. In smaller places it is extremely hard to provide a good quality public transport system. This suggests that new settlements are not an option unless they are large, and that intensifications and town extensions are preferable, even if this means developing on green belts.

Technology also has a potential role in replacing journeys to work and business, and some shopping and service travel. There is much work on this, but so far it is inconclusive. The greater flexibility in times of travel and location of work etc are attractive, but this does not necessarily lead to new patterns, only greater to variability and complexity in travel. There are clear social and distributional issues in access to technology and the ability to use it.

Research priorities

While modifying the built form is a relatively slow way of changing travel patterns and of reducing environmental damage, it is one to which the built environment professions can make a distinct contribution. Long run changes that lead to a less car dependent society, and to greater efficiency in the use of cars, would benefit everyone and could be more acceptable to politicians than draconian tax or charging regimes.

We believe that research in this field should be linked into the work on issues of density, land-use mixing and urban configurations described earlier. Work is needed at a number of levels, from better understanding what determines individual behaviour to exploring the potential of hypothetical configurations. As our understanding expands we should expect to see the wider use of decision aids – already being developed – which can help planning authorities and developers to test the consequences of proposed developments, employment, housing or retail developments or intensifications.



Theme 8: The funding of collective needs from land development

The gross profits from land and property development (especially in high demand regions) have increasingly been seen as a potential source of funding for a bewildering range of needs:

- The funding of social housing
- The supply of infrastructure connections for new developments
- The improvement of public transport and of interchanges
- Expansion of school and service capacity
- The general revenue needs of local authorities.



On a principle that established residents of an area should not have to shoulder these costs for developments that house new residents.

Since these payments have yet to be codified (either as a tax, a tariff or through new-town-type land development), they produce uncertainty in the land and development markets and can, in the short run, threaten the sustainability of urban developments. As with all fiscal issues, unintended consequences can be severe. Furthermore these sums are a one-off levy, which (a) misses all the subsequent value growth and (b) needs the developers to commit just when their uncertainties can be greatest.

Sustainability issues

From all three points of view (environment, economy, society) private urban space needs to be embedded in a high quality public realm, which has good infrastructure and services, and good continuing management and maintenance. Who is going to pay the capital and running costs of all this?

There have been many approaches. Ebenezer Howard, founding father of the Garden Cities movement in England, argued that towns, as they grow, generate potential rents and values that can be captured as public (collective) revenue to finance all these things without the need for taxation.

A weak form of this idea was embodied in the new towns (a great British innovation), and to some extent enabled Hong Kong to prosper under British colonial rule because land receipts allowed low taxation. Public responsibility for ensuring land supply in the Netherlands has been a highly effective mechanism, achieving some of these objectives (and reducing speculation), working well with private development agencies.

A private version of this approach is seen in some privately promoted new towns around the world and, on a smaller scale, in large scale leasehold developments like Bloomsbury in the 18th and 19th centuries and Canberra in Australia.

Another approach is for the state to pick up the bill (through taxation and/or borrowing) with the benefit returning to society through growth in GDP and in public welfare. This has been common in European social democracies and has perhaps lasted longest in France. The development of London Docklands was not the same because the environmental and social gains were rarely secured and the revenue flows were never secured for collective use because the freeholds were sold.

On a principle that established residents of an area should not have to shoulder these costs for developments that house new residents, systems have been developed, mainly in the USA, to force these costs to be borne by private developers. They can then pass these costs on, either back to landowners as lower land prices or onwards to customers who occupy the new spaces.

Finally, the concept of site value taxation was long ago proposed and is due for a fresh look¹. The great attraction of this approach, however, is that it would collect a share of land-value rises in perpetuity, strongly discourage the hoarding of empty land and buildings and actively encourage development (where development is authorised).

In the UK today we seem to be in the worst of all possible worlds. The orthodoxy of minimising public spending has ruled out the new-town-type and the simple state responsibility. Private versions have never been tried on a large scale. Our sole mechanism seems to be the use of Section 106 Agreements, which is a piecemeal and confusing version of US exactions/linkage. This works very badly in the UK for a variety of reasons:

- It combines less well with our flexible and discretionary planning system than with a fixed zoning system
- Because it is a one-off levy that (a) misses all the subsequent value growth and (b) needs developers to make commitments just when their uncertainties can be greatest

• Insofar as it raises the private costs of development it could further increase regional and intra-urban imbalances in where development takes place.

Research priorities

Aside from some carping about the use of Section 106 Agreements, we seem to have a conspiracy not to debate this fundamental issue. And it is an issue on which the UK has sometimes led the world. This is perhaps less a 'research' question, than a question of articulating and mobilising a grown-up discourse about the options which could be available.

We believe there is a need for a real debate on the whole range of strategies open to the society for solving this set of problems in the new framework provided by the sustainability imperative. The work would look at all the possibilities listed above, review their theoretical basis, practical features, experience with them around the world and likely relevance. Different frameworks could, after all, be appropriate in different kinds of areas or locations.

¹ The larger ambitions of Henry George and the 'single tax' campaigners that this tax should replace all other taxes is based upon assumptions which are both heroic and archaic. It is not that proposal which is being revived here.

Theme 9: Negative attitudes towards the built environment

It seems to be second nature for people in Britain to think and talk about buildings as though they were a form of pollution, to be resisted at all costs where they would replace anything remotely like 'countryside'. This cannot be welcome to built environment professionals. It is a counsel of despair.

A related problem is that, where property is scarce (whether in the Lake District or in Islington), those who occupy a lot of it (driving prices up by doing so) have the social image of selfish pests, using their market power to displace poorer people.

Both these perceptions about it are profoundly damaging, but both have roots in reality: they are not just matters of image.

Research issues

The built environment is a thorny, deeply controversial and emotional issue.

Firstly there is an anti-development issue. Buildings – whether in cities or in villages – can be, at their best, sources of intense pleasure and satisfaction, a joy to behold and something which we can be proud of having produced. Many of the world's great tourist attractions are examples, but so too are lots of more ordinary structures. Our problem is partly that the quality of so much that is produced is so poor. This must be capable of change, so that buildings would reinforce the delight of the landscapes in which they sit, or improve upon the landscapes they replace.

Then, there is a scarcity problem: the late Fred Hirsch long ago pointed out in his seminal work, 'Social Limits to Growth' the way in which competition for things which are scarce (including good environments) would become a divisive and destructive feature of society as more of people's growing discretionary income came to be spent on these commodities - forcing up their prices in the process. This will always be the case for paintings by Monet, but need not be the case for buildings: they are produced commodities and more can be created. We should note also that the production of buildings creates local jobs and can use local materials. If the people with discretionary money to spend in the society can't increase their consumption of buildings they are likely to consume other things - and things with a much higher transport and import content, like travel, IT and hi-fi equipment, cars and so on.

There is thus scope to outline a future in which we would produce and consume more buildings (and less of other things), increasing self-sufficiency in the process and reducing those scarcities which, today, make the holiday home, the city pied-a-terre (or even the two spare bedrooms in a council flat) instances of culpable greed.



What next?

These are our thoughts and ideas, but we are fully aware that many other people have views and opinions on these issues. We would be very pleased to:

- hear what other people think of the ideas that we have put forward
- learn more about what other people think the key issues are
- talk about how we might take these ideas forward

If you would like to discuss this further, please contact:

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