

The Callcutt Review

of housebuilding delivery



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Front cover photography.

Top: An award-winning scheme at Gun Wharf, Plymouth.

Middle: A wide range of architectural styles ranging from traditional town houses and mews to more contemporary homes. Upton, Northampton.

Bottom: Building for Life winners at Butts Green, Warrington.

The Callcutt Review would like to thank English Partnerships for the use of many of the photographs which have been used in this report.

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INTRODUCTION



Cherrydown, Basildon

This Review was commissioned in December 2006 by the then Secretary of State for Communities and Local Government, Ruth Kelly MP. The terms of reference were:

To examine how the supply of new homes is influenced by the nature and structure of the housebuilding industry, its business models and its supply chain, including land, materials and skills;

To consider how these factors influence the delivery of new homes to achieve the Government's target (200,000 new homes per annum), meeting housebuyers' requirements and aspirations, achieving high standards of energy efficiency and sustainability as set out in the Code for Sustainable Homes, and progressing to a zero carbon standard; and

To make recommendations.

The Housing Green Paper¹, published on 23 July 2007, increased the Government's target to 240,000 homes² per annum by 2016, and we have reflected that in this Review.

Government has at various times commissioned other reviews of housing and housebuilding, most recently Kate Barker's Review of Housing Supply, whose final report³ was published in March 2004. The need for an adequate supply of good quality new homes has been a recurring theme of Government policy, for instance in the Sustainable Communities Plan⁴, published by the Office of the Deputy Prime Minister in February 2003.

However, these reviews and policy statements have generally focused on the public interest in there being an adequate supply of homes to meet people's needs. More recently there has been an additional focus on wider sustainability objectives. None has looked specifically at housebuilding from the housebuilders' point of view. That is what we have aimed to do.

¹ *Homes for the Future: more affordable, more sustainable*. CLG, 2007.

² The target is for 240,000 net additions to the housing stock, including conversions but net of demolitions. In recent years, conversions have exceeded demolitions by an increasing margin (provisionally 21,000 in 2005/06) and have contributed usefully to net increase in the housing stock. However, by far the most of the additions will need to come from new building. For data on net additions to the stock, see CLG Housing Research and Statistics, Table 111 Housebuilding: Conversions and demolitions – estimated annual gains and losses. Online at www.communities.gov.uk/documents/housing/xls/table-111.

³ *Review of Housing Supply: Delivering Stability: Securing our Future Housing Needs – Final Report* HM Treasury, 2004.

⁴ *Sustainable Communities: Building for the Future* ODPM, 2003. See also the follow-up document: *Sustainable Communities: Homes for All* ODPM, 2005.

Housebuilders are not in business to serve the public interest, except incidentally. Their primary concern is to deliver profits for their investors, now and in the future – in other words, to ensure that their business is a good investment. Housebuilding executives are answerable to their investors, not to Ministers or the wider public.

It follows that Government is not in a position to place general delivery obligations on housebuilders and we have made no recommendations that it should attempt to do so. Opportunities certainly exist for partnership and we have highlighted a number of these. Government also has some powers to direct the industry by making regulations, but it should do so with a light touch, since regulation creates cost and risk, and is more likely to put production at risk than to deliver the objective of growth.

On the other hand, the industry's access to private investment funds far exceeds the Government's ability to buy housing outputs with public money. The objective for Government should therefore be to create a framework in which the industry's freely taken investment decisions deliver the target for new housing and the other outcomes specified in our terms of reference.

For Government to achieve this objective, it must understand and exploit the sector's key business drivers. In particular:

- Government can encourage increased production by reducing the risks and increasing the opportunities for investors in the industry;
- Government can specify outcomes, such as good quality or environmental performance, but should allow the industry to determine the best means;
- a level playing field in regulation and enforcement is essential to assure potential investors of fair competition;
- public funding which creates opportunities for investment has a multiplier effect in drawing in investment, which is far more effective than buying or subsidising outputs directly.

In this Review we have focused on understanding housebuilding as a business, and what that should mean for policymakers. We also look at the implications for the quality and sustainability, in particular the energy efficiency, of new housing. In Part 2 we have provided a detailed account of the prevailing business model in the housebuilding industry.

Wherever possible, we have used data for the housebuilding industry in England. Where we have used data for England and Wales or Great Britain, this is clearly indicated. However, we have found a surprising lack of robust, consistent data throughout GB on the industry's outputs and performance, and a number of our recommendations seek to rectify this deficiency.

On 22 June 2007 the Office of Fair Trading announced that it planned to undertake a review of housebuilding. The OFT's study covers the extent to which consumers have power to drive competition, the level of consumer protection and redress, and the extent and nature of competition in the housebuilding industry.

We welcome OFT's involvement, not least for the analytical expertise and capacity which they will bring to the issues. We are in close touch with the OFT review team and at various places in this Review we indicate aspects which we understand OFT will be addressing, or where we have suggested that they do so.

EXECUTIVE SUMMARY

England's housebuilding industry is in shape to deliver the homes we need for future generations and is capable of delivering 240,000 homes a year by 2016. Our challenge is to deliver a supply of housing where it is needed, for those who need it, at a price which is affordable for the homebuyer, which is commercially viable and which contributes to our ambitious zero carbon targets.

Land is key to housing delivery. Our Review has reached the conclusion that given sufficient land, and subject to our recommendations, the industry and its supply chain has the capacity to meet the Government's objectives on volume, quality, environmental performance and affordability.

Planning Policy Statement 3 (PPS3), published in late 2006, provides a sound policy framework for ensuring that an adequate supply of development land is available. A number of our recommendations build on measures already introduced by PPS3. We recognise that it will take time for the effects of PPS3 to work their way through the system and have made only minor recommendations designed to underpin its objectives.

New settlements and edge-of-town development will be needed if the target is to be met, but we must avoid urban sprawl: it is wasteful, both of valuable green space and of potential value in our urban areas. Edge-of-town developments can often entail a less environmentally sustainable lifestyle with commuting to work, access to services, and leisure. We can do better.

Much more previously developed land, particularly in our towns and cities, should be used and the proportion of green field development minimised. The strong imperative for this is that unless we continue to regenerate our towns and cities they will decline and in turn force more development out into our countryside.

Our towns and cities offer a huge potential for housing development and renewal: some on former commercial or industrial land which can be brought into housing use, some where the existing housing is of poor quality or makes poor use of the land. The scale can range from a scattering of small sites to large areas where redevelopment can not only contribute to housing goals but will make a major difference to the quality of life.

For the housebuilder or developer many of these previously developed urban sites are not immediately attractive to build on. They are generally slower and more expensive to redevelop and they may not deliver the returns which investors in housebuilding expect. Such sites are also much more sensitive to cost increases, whether through build inflation or increased regulatory standards and costs.

At a time when resources are stretched, the challenge for the Review has been to set out the means by which we capture the potential of some of our nonviable inner city areas and transform them into desirable places to live, whilst at the same time making them commercially attractive to investors. This in turn will help secure private investment funding for regeneration and community management on a much larger scale and at a faster pace than can be achieved with public resources alone. It should be a primary goal of public policy to secure that investment.

Developers and their shareholders consider such redevelopment as risky. They are concerned that both housing and commercial value growth will not be delivered, or sustained in the longer term. It is strongly in the interests of central government and local authorities alike to address these risks, since that is the key to unlocking urban land which is low in commercial viability. We have made a number of recommendations that should provide developers and their shareholders with the confidence that they require.

To secure the required increase in housing numbers with the maximum use of brownfield land, local authorities will need to work much more closely with developers. Historically their relationship has often been one of mutual suspicion and mistrust. That must change but can only do so if the basis of their commercial relationship is agreed and fixed at the very beginning of the site identification process.

From that point, the local authority and the developer should have a common interest in value creation and the delivery of projects that offer both physical and social regeneration. Experience in the housing market renewal partnerships and from a number of progressive local authorities elsewhere has shown the potential of such partnerships especially in areas of low land value. We believe that this is key to housing delivery and that partnership working between local authorities, developers and others should be taken up much more widely.

Already more enlightened developers, housebuilders and local authorities have recognised the opportunities that this kind of mature partnership can provide. Many of our recommendations focus on creating this new partnering approach between government and industry not as the exception but as the normal working culture.

Many local authorities have demonstrated strong leadership and expertise in working with developers to deliver regeneration. Not all have the same skills; and there is a danger, too, of delay while delivery structures are reinvented. We are recommending specific roles for the new Homes and Communities Agency in facilitating partnership working between the public and private sectors.

Value growth in regeneration areas does not occur immediately; it is secured over time as values catch up. For this reason, some developers are looking at alternative business models in which they retain a financial interest in the property, either through market renting or shared ownership schemes. This is a familiar approach from the commercial property sector and may generate interest among commercial developers. It has the potential to introduce a significant element of affordability into new housing supply. However, both developers and local authorities have expressed concern that regulatory issues may inhibit its growth. We are recommending additional work to examine whether these obstacles are real and how best they may be addressed.

The growth in housing values from a redevelopment scheme can quickly go into reverse unless integrated within a settled and well managed community. This requires organisation, long term resources and fully funded proposals for community management which must be an essential part of a local authority's brief to its preferred partner.

We do not expect housebuilders necessarily to engage in community management themselves, but to look for partners with the necessary expertise. Consequently we expect many of the local authority's "preferred partners" to consist of consortia of deliverers such as housing associations, management companies and financiers.

The potential of both physical renewal and community management will not be fully realised, and may fail altogether, if it stops at the boundary of the estate. Where appropriate the scope of an area designated for physical regeneration should bring in the wider community. This will not only facilitate community integration but will also pump prime a market-led process of conversion, gentrification and smaller scale "piggy-back" commercial and residential development, which is an essential component of a market-led recovery.

This raises potentially difficult questions about overlap with services provided by the local authority. We are recommending further work to ensure that this overlap does not become an obstacle.

While we see partnerships between local authorities and developers as key to unlocking the urban land supply that is needed to deliver housing growth, it is essential not to neglect other parts of the market. In the past, it has been the smaller and medium sized housebuilders who have delivered much of the volume growth. We must continue to support and encourage this segment of the market and provide opportunities for the small and medium sized firms to be part of the industry's growth. We have made a variety of recommendations to achieve this, including securing a supply of smaller sites and ensuring that they are viable.

We have recommended that no general action should be taken to force the faster build-out of land banks; we are clear that this will put production at risk, not add to it. However, there is no reason why Government or other public agencies should not stipulate faster build-out rates when disposing of land for housebuilding or within partnering agreements, so long as they can justify any loss of value this may incur. We have also made some recommendations for more transparency in the use and status of land for future housebuilding.

Similarly we have not recommended that Government stipulate the use of specific methods of construction. Our view is that over time the industry itself will determine what are the most cost-effective techniques. We welcome the new higher performance standards now being required by both the Housing Corporation and English Partnerships. This is certainly the right approach to promoting innovation and quality.

In the current housebuilding market, however, there are insufficient incentives for quality. The returns to housebuilders for investing in quality barely justify the effort.

In the drive for increased quality, we are recommending that within the next two years, housebuilders seeking Government grants or other public subsidy must achieve customer satisfaction standards which have been established by an independent led survey. Efforts should be made to make sure this stipulation does not inhibit small and medium size builders and developers.

The existing regulatory and warranty frameworks are an inadequate substitute for market disciplines. We are therefore recommending new arrangements for design review and for construction which incentivise good quality and impose real penalties for poor quality.

One of the most challenging aspects of our Review was to consider the increase in housebuilding alongside the Government's aspiration to be world class in the delivery of zero-carbon homes by 2016.

We conclude that with multiple technical options and long lead times in the production supply chain, the industry itself will be stretched to meet the goals in this very tight timeframe, but with the Government demonstrating strong leadership, direction and being firm in its commitment, the industry and its supply chain, including construction products manufacturers and energy suppliers, can meet our zero carbon targets.

We have provided a delivery timetable which shows a number of actions that need to be set in hand now to make this happen. In particular we consider it is essential to establish a delivery body which will lead and co-ordinate the efforts of all parties towards the zero carbon target.

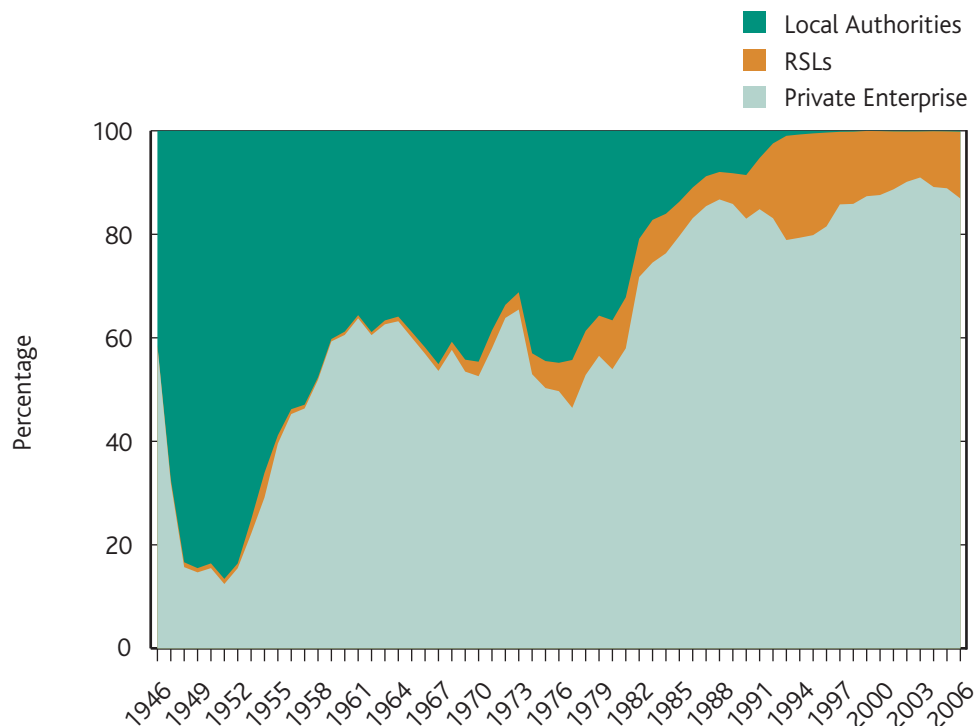
In conclusion, our Review shows clearly that the housebuilding industry and its supply chain have the potential to deliver 240,000 new good quality homes a year by 2016 and to achieve the zero carbon targets. However, the industry is answerable only to its investors and shareholders and not to the public interest. This is why most of our recommendations are addressed to central and local government. It is their business, not that of the industry, to deliver public goals. We are clear, however, that by following our recommendations Government will put in place a framework of incentives and opportunities which will create a strong commercial motive on the part of the sector and its shareholders to deliver the Government's targets for 2016 and beyond.

THE HOUSEBUILDING INDUSTRY IN ENGLAND



The private housebuilding industry is the major provider of new homes in England, as may be seen from Figure 1 below. It has been so since the late 1950s; overwhelmingly so, since the mid-1980s.

Figure 1: New Housing Construction by Tenure: England



Source: CLG Housing Research and Statistics¹

Arguably this understates the true picture. Since the early 1990s, when housebuilding by local authorities effectively ceased, virtually all houses have been constructed by private housebuilders, though in some cases under contract to registered social landlords or for sale to them. A handful of housebuilders specialise in this sector of the market; for most, however, it is only an incidental part of their business. Chapter 3 discusses the different business models involved.

The housebuilding industry is very diverse, ranging from very large companies operating nationally to very small businesses serving individual local markets.

¹ Full details of data sources for this and other Figures are listed at the end of the report.

**Figure 2: Numbers of housebuilders, by number of units completed, 1989-2006:
Great Britain**

Year	1–10 units	11–30 units	31–100 units	101–500 units	501–2000 units	2000+ units
1989	9771	1194	496	165	29	8
1990	7671	901	353	130	24	8
1991	7069	827	311	111	28	9
1992	6257	696	329	128	22	10
1993	6231	834	367	140	29	14
1994	6370	827	379	140	33	17
1995	5643	745	317	131	28	11
1996	5098	658	283	105	25	12
1997	5199	667	291	107	21	15
1998	4712	618	271	92	23	14
1999	4633	598	245	101	21	14
2000	4313	559	205	101	22	15
2001	4255	567	258	94	23	12
2002	4343	640	250	114	20	13
2003	4421	712	264	112	20	14
2004	4604	799	302	122	22	14
2005	4612	742	303	132	27	11
2006	4566	844	286	118	23	13

Source: NHBC

The data should not be over-interpreted. However, a few trends can be discerned:

- there was a significant decline during the 1990s in the number of small housebuilders producing 10 or fewer units, probably attributable to the housing recession of the early 1990s. This decline has now stabilised;
- since 1994 the number of companies in the largest category has remained stable;
- there is a good deal of dynamism in the market, as firms enter and leave, or move between size categories.

This dynamism can be seen in changes over time in the top ten housebuilders, ranked by number of units produced.

Figure 3: Top ten housebuilders by unit completions, 1995-2006: Great Britain

1995		2000		2006	
Wimpey	7609	Wimpey	11437	Persimmon	16701
Beazer	6679	Barratt	10636	Barratt	14601
Barratt	6601	Beazer	8223	Wimpey	13616
McLean/Tarmac	6140	Persimmon	7035	Taylor Woodrow	8294
Wilcon	3873	Bellway	5714	Bellway	7117
Bellway	3813	Westbury	4435	Wilson Bowden	5628
Bryant	3733	Wilcon	4215	Redrow	4735
Persimmon	3593	McAlpine	4007	Miller	3960
Raine	3458	Bryant	3961	Gladedale	3854
Lovell	2943	David Wilson	3604	Bovis	3123
Top ten	48442	Top ten	63267	Top ten	81629

Sources: (1995 and 2000) *British Housebuilders History and Analysis*²; (2006) *Housing Market Intelligence Report 2007*³, Company reports and accounts

Most of the changes here are attributable to mergers and consolidations in the industry. This is not a new process. Only two of the top ten housebuilders from the 1930s, Wimpey and Taylor Woodrow, retain that position in 2006, and they will disappear as separate entities following their merger in July 2007. However, as the table also shows, there are always ambitious companies just below the top ten ready to move up to take their place.

Most of the larger firms are publicly quoted companies: the three largest, Taylor Wimpey, Barratt Developments and Persimmon, are all included in the FTSE 100 Index. Further down the scale, private ownership is increasingly common. Below the top ten, housebuilders are also increasingly likely to concentrate their activities in specific regions, rather than operating nationwide; some focus their activities in Scotland or Wales, rather than England. Figure 4 shows ownership and regional focus in England.

² *British Housebuilders History and Analysis*, Fred Wellings, Blackwell Publishing, Oxford, 2006

³ *Housing Market Intelligence Report 2007*, Housebuilder Media, October 2007

Figure 4: Ownership and regional focus of the top housebuilders in England

Publicly quoted companies are shaded									
	NE	NW	EM	WM	Y&H	L	E	SE	SW
Taylor Wimpey	●	●	●	●	●	●	●	●	●
Barratt	●	●	●	●	●	●	●	●	●
Persimmon	●	●	●	●	●	●	●	●	●
Bellway	●	●	●	●	●	●	●	●	●
Redrow	●	●	●	●	●	●	●	●	●
Miller	●	●	●	●	●	●	●	●	●
Gladedale	●	●			●	●	●	●	
Bovis	●	●	●	●	●	●	●	●	●
Crest Nicholson			●	●		●	●	●	●
Berkeley						●		●	
McCarthy & Stone	●	●	●	●	●	●	●	●	●
Bloor		●	●	●	●		●	●	●
Lovell Partnerships	●	●	●	●	●	●	●	●	●
CALA				●	●		●		
Galliford Try			●		●	●	●	●	●
Kier Residential				●			●	●	
Fairview						●	●	●	
Countryside Properties		●				●	●	●	●
Inspace	●	●	●	●	●	●	●	●	●
Haslam Homes	●	●	●	●	●				
Morris Homes		●	●	●			●		
Stewart Milne		●							
McInerney	●	●	●	●	●				
Crosby Homes	●	●		●	●				
David McLean		●		●					●
Telford Homes						●	●		
Croudace							●	●	

Source: Company websites and Callcutt Review research

Notes:

- Lovell Partnerships is part of the quoted Morgan Sindall plc
- Crosby Homes is part of the Australian international company, Lend Lease Corporation.
- McInerney Homes is part of the Irish international property development company, McInerney Holdings plc.

There is a fuller description of the housebuilding industry, also covering its financial performance, in Chapter 1 of Part 2.

Potential for growth

To achieve production of 240,000 new homes a year by 2016 will require the housebuilding industry to grow by 4.75%, compounded, over the next nine years. Steady growth at that rate is not beyond the industry's potential. It will, however, require sustained growth at a rate unmatched since the 1950s, and unlike then, the growth will need to come overwhelmingly from the private sector.

There is no shortage of investment capital, but whether investors will have the appetite for the perceived risk is another matter. Chapter 3 describes how we expect the gross returns of housebuilders who follow the familiar "current trader" business model to be squeezed over the coming period. In order to maintain profits they have the option of increasing output, but only if there is an adequate supply of land which allows sustained growth. Failing this, there is a risk that output will stagnate.

Chapter 4 discusses the importance of land in the housebuilders' business model and welcomes the changes introduced by Planning Policy Statement 3 (PPS3)⁴, published last year. It suggests some measures which might facilitate the supply of land, but warns against regulatory measures which would add to risk and reduce housebuilders' willingness and capability to grow their businesses.

As described above and in Part 2, although the top end of the industry has recently gone through a period of consolidation, whose effects on production have yet to be seen, overall housebuilding remains a dynamic and buoyant industry. The top ten housebuilders now deliver around half of total production, and large sites account for an increasingly large share of new homes. But it is important to sustain and encourage the involvement of smaller builders (including self-builders) and to recognise the contribution that small sites will continue to make to overall production. In Chapters 3 and 4 we make a number of recommendations specifically aimed at this section of the market.

As margins tighten for traditional housebuilders, opportunities may open up for alternative business models which offer longer-term returns for their investors. The possibilities are examined in Chapters 3 and 5. For reasons discussed particularly in Chapters 2 and 7, experience of local markets is a significant competitive advantage to existing operators. However, there is potential for other commercial developers becoming involved in housebuilding, either in joint ventures or as long-term investors.

⁴ *Planning Policy Statement 3 (PPS3) – Housing* CLG, 2006.

CHAPTER 2

NATIONAL TARGET – LOCAL MARKETS



Adelaide Wharf, London

Although housing demand exists nationally, and the largest housebuilders have a national presence, there is very little housing demand that is truly national. The Government's target would not be satisfied if the new homes were delivered just anywhere. Housing demand and supply are local. There are areas of low housing demand, as well as areas where demand is very high. To meet the target effectively, homes have to be built in the places where they are needed.

They also need to be the right homes to meet local demand. Local markets which demand family homes will not be satisfied by two-bedroom flats while other markets with a preponderance of single people, say, will not want so many family homes.

Housebuilders therefore operate not in one national housing market, but in a large number of local markets. These markets have fuzzy boundaries, and many of them overlap. Home buyers can and do trade off the distance they are prepared to travel to work, or to reach schools or other local services, against the quality and location of their home.¹

In our Call for Evidence we asked respondents about sources of information on the demand for housing. What was clear in their responses was that, at the local level, housebuilders make it their business to be very well informed about what the market demands. Most new houses are built speculatively – that is, the developers do not have a specific purchaser in mind when they start work on a new house, or often even when it is finished, but are relying on their general understanding of the local market. To do this successfully requires good market information.

¹ See, for instance, *Identifying the Local Housing Markets of the South East of England* (DTZ Pidea Consulting, 2004) at www.southeast-ra.gov.uk/our_work/planning/housing/docs/dtz-part_c.pdf. This 2004 study into housing markets in the South East defined 21 possible housing markets, some of which overlapped. The markets were defined using migration and movement statistics, travel work patterns and areas, employment concentrations, retail catchment areas and population trends.

Local market information

In our Call for Evidence we asked contributors this question:

What published or private sources of information are used to determine current and future demand for housing, in terms of volume, type, price and location, and over the near, medium and longer term?

Responses quoted the following sources:

- market research: performance of individual sites, customer and potential customer responses, customer questionnaires, focus groups
- local agents
- estate agents' publications and analysis: research bulletins from organisations such as Savills or Cluttons
- local knowledge of land ownerships
- local authorities: Local Development Frameworks, Strategic Housing Market Assessments, housing targets
- regional government plans: Regional Spatial Strategies, housing targets
- competitor analysis
- historical demand
- price information: Land Registry, National Statistics, Halifax, Nationwide, Government data, Hometrack
- published information in respect of mortgage approvals
- statistics on population demographics and migration patterns
- affordability tracking changes in earnings and interest rates
- Government policy: tracking decisions which could change demographics (e.g. Olympics, Thames Gateway, Growth Areas like Ashford, Cambridge and Milton Keynes), Strategic Housing Market Assessment guidance, growth targets, public infrastructure plans and policies

Indeed, one of the major assets of housebuilding companies is their knowledge of local markets, which enables them to assess accurately how to obtain the best value from the development of a particular site. As discussed in "What makes a development viable?" in Chapter 5, this ability gives existing companies a significant edge in the highly competitive market for land, and creates a de facto barrier for new entrants who lack the local knowledge required.

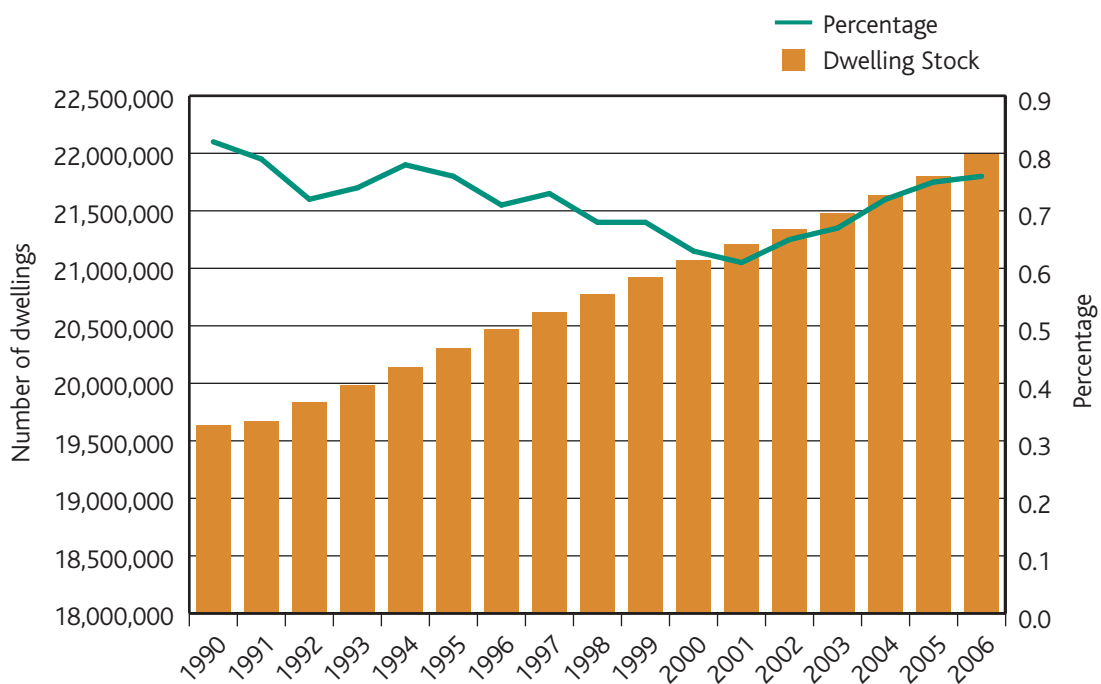
Although the housebuilding market nationally is highly competitive and diverse, there are some local markets in which individual housebuilders may supply all or most of the new homes. They may be locally based businesses, or local branches of national companies, but their local knowledge gives them a market edge. Even so, over time the local market leader may change, as was illustrated in a table published in the interim report of Kate Barker's Review of Housing Supply, originally published in 2003.

This table “examined local areas in which a single firm accounted for over 50 per cent of planning permissions granted” during the year in question.

In Figure 6, we have sought to bring this up to date, using the same basis and the same source. The data here cannot bear too much weight, since it does not differentiate between commercial housebuilders who are developers bearing all the commercial risks and building contractors – probably commissioned by Housing Associations – who bear only the construction risks (see Chapter 3). It also relates to planning permissions rather than homes built. Nonetheless, within those limitations, it does show how local markets can change. We have used the same group of local areas as in the Barker Report (including a handful from outside England), with a few others added for illustrative purposes.

Of course, new homes comprise only a small proportion of the total market. Most house purchases are of existing homes.

Figure 5: New Completions as a Percentage of Total Stock: England



Source: CLG Housing Research and Statistics

There are rare local exceptions, for instance in new towns or growth areas, where Government specifically promotes rapid housing growth, and invests in new infrastructure to support the new community. The scale of such developments far exceeds any local demand; in effect, the new community is created by inviting householders to move into the area from elsewhere.

Figure 6: Housebuilder concentration: planning permissions granted, by local authority area

	1997			2002			2006		
Area	Company	Units	%	Company	Units	%	Company	Units	%
Barking & Dagenham	McGinley Developments	23	100	Bellway	145	34	Galliford Try	96	62
Haringey	Keeney Construction	7	100	Berkeley	483	72	Kier Group	123	62
Harrow	Gleeson	4	100	Wilmot Dixon	110	81	Inspace	43	54
Newham	Wimpey	76	100	Wilson Connolly	250	32	Telford Homes	602	52
Isle of Wight	Mr A Thurman	11	100	Barratt	100	43	Barratt	150	69
Shetland Isles	James Halcrow Builders	28	100	Unknown	NA	NA	Lerwick Building Centre Ltd	12	100
Kingston-On-Thames	Persimmon	31	91	Berkeley	428	87	TRAK Group	69	32
Richmond-Upon-Thames	Berkeley	84	76	Berkeley	244	77	Brennan Ltd	69	32
Dumfries & Galloway	Robinson & Davidson Ltd	36	75	Robison & Davidson Ltd	168	82	Sandersons Contracts Ltd	9	90
Havering	Crest Nicholson	28	74	Dove Jeffrey Developments	19	42	Persimmon	197	37
Barnet	Wimpey	255	68	Bellway	301	36	Mount Anvil Plc	98	39
Camden	Redcon Building Contractors	14	67	Mansell	850	73	Taylor Wimpey Plc	71	23
Lambeth	Durkan Pudelek	28	67	Barratt	1019	27	Barratt	236	66
Gwynedd	Watkin Jones and Sons Ltd	106	64	Berkeley	275	42	Sibmar Construction Ltd	39	28
Gloucestershire	Morgan Sindall	98	60	R L Davies & Sons Ltd	73	22	Hollywood Construction	38	34
Greenwich	Fairview	652	56	Bellway	294	13	Taylor Wimpey Plc	460	22
Hackney	Berkeley	24	55	Barratt	1019	27	Ardmore Construction	500	76
Sutton	Wimpey	64	52	Durkan Pudelek	89	64	HG Construction Ltd	514	40
Merton	Wimpey	75	51	Bellway	175	76	Berkeley	163	36
Ealing	Rydon Group	26	51	Cranbourne Developments	169	73	Barratt	221	44
Kensington & Chelsea	Curzon Interiors	10	50	Kier Partnership Homes	164	46	Taylor Wimpey Plc	231	63
Hillingdon	Barratt	122	50	Unknown	NA	NA	Tolent Plc	18	100
East Sussex	Rydon Group Ltd	532	70	Barratt	24	52	Berkeley	574	67
Buckinghamshire	Taylor Wimpey Plc	401	66	Rydon Group Ltd	381	91	Rydon Group Ltd	341	82
Bedfordshire	Inspace	1,560	64	McCann Homes	141	19	Taylor Wimpey Plc	859	33
Cornwall	ROK Group Plc	455	51	Inspace	482	63	Inspace	1435	70
West Sussex	Taylor Wimpey Plc	323	50	ROK Group Plc	90	28	Molwin Homes Ltd	154	37
				Taylor Wimpey Plc	911	59	Taylor Wimpey Plc	152	25

Source: EMAP Glenigan

Even in those unusual local markets where most of the housing for sale is new, and even if a single housebuilder is a monopoly supplier to that market, its ability to set a price is constrained by neighbouring markets: potential purchasers will trade preferred location for better price. This is particularly true where, as in growth areas, the aim is to construct a new community from incomers, who may simply choose not to move, or to move elsewhere.

However, by far the most local housing markets are dominated by sales of existing homes. This means that, in business terms, the price for new homes follows, and does not drive, the market. Even where a single housebuilder dominates a local market, in the short or longer term, prices will be set by the wider market in existing homes. Housebuilders therefore need to understand what the local housing market demands at the prevailing price levels.

In Chapter 6 of Part 2 we discuss pricing strategies for housebuilders aiming to achieve the best return for their investment in a site and show the impact of different approaches (see box). Clearly there is scope for some flexibility, and housebuilders must be adept at the calculation which balances prices against speed of build-out and sales.

Pricing strategies: an example

A housebuilder has 3 identical homes for sale and they are viewed on the same day by three potential buyers, each of whom has a different perception of how much they are willing to pay. Buyer 1 is willing to pay £200,000, Buyer 2 is willing to pay £195,000 and Buyer 3 is willing to pay £190,000.

If the housebuilder sets the price at £190,000 he will capture all 3 buyers and earn revenue of £570,000 today. If he sets the price at £200,000 he will sell only one home today. He will only sell the other homes to earn £600,000 when two other buyers at £200,000 have arrived, and this may take some time. However if he sets the price at £200,000 and offers discounts to Buyer 2 and Buyer 3 to match their offer prices then he will earn revenue of £585,000 today.

This invites the question why housebuilders do not offer further discounts in order to achieve faster sales, trading lower returns on the individual sales for greater volume and a faster turnover of investment capital. We address this question in Chapter 4.

Need and demand

Housebuilders are primarily concerned with satisfying housing demand as expressed in the market. Government policy on the other hand aims at meeting housing need. These objectives overlap but they are not the same.

From the evidence submitted to us it is clear that housebuilders and others make use of regional and local housing needs assessments as one of the inputs to their own understanding of local markets. We welcome the recent creation of the National Housing and Planning Advice Unit (NHPAU), following recommendations by Kate Barker in her review, to help provide a more secure analytical foundation for needs assessments.

A key objective of successive Governments' housing policies has been to meet the housing needs of those, especially families, who cannot otherwise afford to do so without external support. These increasingly include not just the homeless and lower income families who have traditionally benefited from social housing, but others who have simply been priced out of the market in recent years. This shift of emphasis is very clear in the recent Housing Green Paper, as well as in our own terms of reference.

One consequence of this shift, however, is that the distinction between need and demand has become blurred. Some local planning authorities have sought to address what are perceived as particular local needs by using planning conditions to stipulate the type of housing to be provided on a site. If this differs from the developer's own view of the local demand, the practical effect is to reduce the development value of the site, at the developer's cost; but it will do little for the underlying problem of affordability, because the new homes will still be sold to those best able to afford them, who may well not be those in the greatest need.

It is of course entirely legitimate for central and local government to seek to steer the industry to meet wider policy needs. For instance, local planning authorities have a strong legitimate interest in the creation of mixed communities, as one aspect of sustainability. This may lead to some stipulations about the size and type of housing, as well as the proportion of development to be set aside for affordable housing.

However, local planning authorities should be very cautious about assuming that they are better able than developers to judge what the local housing market demands. It is true that the developer is concerned with making a return, not with serving the public interest; but the developer's judgement on what will best satisfy market demand is very likely to be better than the planning authority's.

To the extent that the developer's hands are tied, their ability to make a return from the site is reduced. This feeds back, through land prices, into the willingness of landowners to sell and ultimately into the viability of sites. This risk is described in more detail under "What makes a development viable?" in Chapter 5.

CHAPTER 3

BUSINESS MODELS



Housebuilding is a mature industry which has delivered a good level of profits for its investors over the last 15 years. The vast majority of housebuilders follow a "current trader" business model which consists in essence of a cycle of land acquisition, development and outright sale. Profit is the margin between sale price and acquisition and development costs; the developer retains no long term interest in the property. There is a full description of the "current trader" model in Part 2.

A housebuilder following this business model has to manage three distinct areas of risk.

- **Project risk:** the housebuilder must be able to manage progress and control costs across the whole project, not just construction costs, though those are a major part, but design, surveying, legal, marketing and a whole range of other costs. These risks are not unique to housebuilding; but they are complex to manage, not least the local factors, which may prove a significant barrier to competition from new entrants.
- **Market risk:** the housebuilder estimates the best prices which can be earned from development of a given site, and uses these as a starting point to determine the price to be offered for the development land. At this point the housebuilder has no guaranteed customers (hence this is "speculative" housebuilding), and is therefore taking the risk that prices will meet his estimate. Housebuilders look to mitigate this risk, particularly in the case of apartments, by "off-plan" sales (sales before construction starts) which give them the confidence to proceed with what will be an expensive commitment. Similarly, where the economic outlook is weak, pricing strategy will switch towards securing forward sales, albeit at the expense of price. See Part 2, Chapter 8.
- **Planning risk:** this is the risk that future planning restrictions may limit the value which can be obtained from development of a site. Many housebuilders prefer to purchase "short term" land, for which at least an outline planning permission has already been granted, or can confidently be expected. In this case the planning risk is low, but the landowner will demand a higher price. Conversely, "strategic land" with no current planning permission is cheaper, but more risky: the housebuilder takes the risk of being able to secure an appropriate planning permission in time to secure the anticipated value from development of the site. (See "Readiness of land for development" in Chapter 4.)

These preferences for short-term or strategic land are sometimes described as if they were entirely different business models. We see them, rather, as variations within the current trader approach. In practice, most larger housebuilders maintain land holdings (including options) with a mixture of strategic and short-term land.

Housebuilders face a further risk which they share with other businesses, and which they can plan for but not, ultimately, control: namely, **economic risk**. This can exacerbate project and market risks. Past experience of economic risk has had a significant effect in shaping today's industry.

In 1973, many developers had known nothing but rising house prices and they assumed that this would continue. They were wrong. Within a year, following the 1973/74 economic crash, housing starts had halved and land prices fell sharply. With little support from the banking system, many housebuilders failed – large and small alike. As the 1970s progressed, others retrenched or withdrew from the market altogether. By the end of the 1970s, the number of firms building over 1,000 units a year had halved. One result of this was that the larger housebuilders took a significantly larger share of a much-reduced market.

By the early 1990s it appears that at least some lessons had been learned. Apart from trading losses, an estimated £2.5 billion was written off the value of the industry's land holdings in the early 1990s. There was a major shake-out among the smaller housebuilders, many of whom failed. However, of the 30 or so housebuilders with outputs of 1,000 units or more at the end of the 1980s, none went into receivership. Instead, the departures from the industry were managed and, by the end of the 1990s, half of those housing businesses had been sold or run down.¹

Partly reflecting this history, today's investors still regard the housebuilding industry with some suspicion, and expect the industry to deliver a corresponding premium in its returns. As one national newspaper commented recently: "No matter how buoyant the market or how much consolidation goes on, or how often forecasts are met, the sector is still valued at multiples that assume disaster is never far away."²

Investors measure the performance of housebuilders by reference to a range of measures, among which their Return on Capital Employed (ROCE)³ is a key indicator. In very broad terms, ROCE represents earnings per annum divided by investment capital deployed, expressed as a percentage. To be successful, a business must deliver a ROCE that exceeds the weighted cost of its capital. The time element means that the longer it takes to recycle the capital, the larger the profit required to deliver the same ROCE.⁴

Thus a hypothetical development yielding a return of 20% over one year is as good as one yielding 40% over two years, and twice as good as one yielding only 20% over two years.

¹ These two paragraphs were drafted for the Review by Fred Wellings. Further information about the recent history of the housebuilding industry, also prepared by Mr Wellings, is in Annex A. See also *British Housebuilders History and Analysis* Fred Wellings, Blackwell Publishing, Oxford, 2006.

² *The Independent*, 15 September 2007.

³ Or its more complex variant, the Return on Average Capital Employed (ROACE). A sophisticated investor may also have regard to the Weighted Average Cost of Capital which shows the average cost of the mix of equity and debt that the business has used in the past year, adjusted by a factor to reflect the risk inherent in the business.

⁴ There is a fuller discussion of performance indicators for housebuilders in Chapter 2 of Part 2.

In fact we believe that housebuilding will not continue to deliver returns at their current level, nor does the inherent risk justify returns at this level. Profitability of the leading, publicly-quoted housebuilders has been declining for the past few years and we believe that this pressure is likely to continue. (See Part 2, Figure 10.)

However, we do not believe that housebuilding is facing difficulties as severe as in the mid-1970s or the early 1990s. The underlying economy, although perhaps moving into a more uncertain phase, is still strong. The Government is continuing to forecast that growth in the economy will be in the region of 2½ to 3% in the next three years⁵; and the fact that the Government is aiming to secure a substantial increase in the number of new homes will itself help to retain confidence.

Nevertheless, the industry could be in for a bumpy ride. The uncertainties caused by the global credit squeeze and any knock-on effects of the Northern Rock crisis could easily bring further unexpected consequences. Many commentators are forecasting a general easing of house price inflation and some are suggesting that house prices could fall, at least in some parts of the country, by 3% in each of the next two years.⁶

The International Monetary Fund too has suggested that, because UK house prices have risen far higher than incomes over recent years, this country is "vulnerable to a price correction", although it does point out that a lack of supply could continue to hold prices up.⁷ But these forecasts need to be considered in the context of an historical perspective. There is a fuller discussion in Annex B "An overview of house price movements and their drivers", prepared for the Review by Capital Economics.

Alternative business models

The current trader business model has served housebuilders well but, as described above, it is increasingly under pressure: at one end of the production chain, from land prices and land supply; at the other, from a market that is likely to cool and slow over the months ahead. Housebuilders with healthy land banks will be able to mitigate the effects for a while, but over the medium to longer term are unlikely to be able to continue to deliver returns at the current level. This effect is illustrated in the box.

⁵ Forecast in speech by the Chancellor of the Exchequer to the House of Commons, 9 October 2007.

⁶ See for instance *Housing Market Focus*, Capital Economics, 8 October 2007.

⁷ IMF quoted in British media, 18 October 2007.

Housebuilders' profitability through the business cycle (short term land bank)

The following table shows what happens to a company operating only a short land bank as house prices rise, fall and then stabilise. It reflects the inexorable upward pressure on costs including from regulation. In addition, land sellers are unlikely to accept lower prices when the supply of land with planning consent remains in short supply. A housebuilder which needs to replace its land stocks if it is to increase its volume output will have to accept a lower gross margin if it is going to be able to buy any land at all.

In the following example, we assume that:

- (1) build costs do not fall when house prices fall, but that they do not increase either (from Year 5 onwards), and
- (2) in order to buy land the housebuilder has to drop his gross margin from 20% to 18% after Year 5.

Figure 7: Housebuilders' profitability through the land cycle
(Illustrative figures)

Year	1	2	3	4	5	6	7	8	9
Selling Price	100	110	125	130	130	125	120	120	120
Land Cost	-27	-27	-28	-32	-34	-35	-34	-32	-30
Build Cost	-50	-55	-63	-65	-65	-65	-65	-65	-65
Marketing Cost	-3	-3	-4	-4	-4	-4	-4	-4	-4
Overhead	-6	-7	-8	-8	-8	-8	-7	-7	-7
Operating Profit	14	18	22	21	19	13	10	12	14
Operating margin	14.0%	16.4%	17.6%	16.2%	14.6%	10.4%	8.3%	10.0%	11.7%
Land Buying									
Selling Price	100	110	125	130	130	125	120	120	120
Build Cost Inflation	-50	-55	-63	-65	-65	-65	-65	-65	-65
Marketing Cost	-3	-3	-4	-4	-4	-4	-4	-4	-4
Gross Margin Required	-20	-22	-25	-26	-26	-23	-22	-22	-22
Residual Value	27	30	33	35	35	33	29	29	29
Land cost through profit and loss account – average of previous 2 years:									
			28.5	31.5	34	35	34	31	29

In reality, the swings tend to be more dramatic, because companies often relax their land buying targets in a strong “bull” market and tighten them in a weak “bear” market. Housebuilders with a larger land bank are able to stay out of the land market if they believe it is overheated and they are also able to delay the adverse effects of any downturn.

This is why the size and quality of housebuilders’ land banks is a key indicator of their future trading prospects. Small and medium sized builders that cannot afford large land banks and who have limited short-term borrowing arrangements are the most vulnerable in the case of a downturn.

The nature of the housebuilding industry will not change overnight. Many housebuilders will continue to apply the current trader model successfully for the foreseeable future. Nonetheless, an opportunity now exists for other business models and their exponents (some of whom may be the traditional housebuilders, but some will be newcomers) to take a greater share of the market.

We have identified three other business models currently being followed or under consideration.

- **The investor model.** From our discussions with industry stakeholders, and from evidence submitted to the review, it is clear that some developers are interested in an alternative approach in which they retain (or sell to a third party) a long term interest in a developed site. This may consist of housing for rent or the retained portion of shared ownership sales. In addition to development profits, there is the potential to participate in future capital growth of the development, and also to deliver a range of management and other services to households which yield a continuing revenue stream.

In effect, under this model, the developer trades a proportion of the up-front development profit for the opportunity of long-term revenues plus future capital growth. Yields are likely to be relatively smaller than under the current trader model, but more secure. They are also somewhat less vulnerable to the pressures which are now arising on the current trader model. We are aware of a number of cases where housebuilders, previously focused on direct sales, are developing an interest in shared ownership and other investor-type approaches for homes that are already under construction or planned.⁷

The potential for development using this business model may exist anywhere but is probably greatest on brownfield sites, where land values are currently low but have the potential for recovery. As discussed in Chapter 5, we believe these sites represent a major opportunity which is not being fully exploited. Developer-investors are very well placed to help fulfil the potential of these sites.

⁷ There is also a hybrid model in which the developer provides housing, initially for shared ownership, in the expectation that the occupiers will eventually purchase the remaining share in the property. So the developer postpones part of the capital receipt in return for a stream of rent plus a larger receipt later. This approach may be more attractive to housebuilders who have previously concentrated on the current trader model.

The investor model potentially supports all the main objectives of this Review. It delivers a supply of affordable (rented or shared ownership) homes additional to whatever may be secured through central Government grant, and thus helps to bridge the affordability gap as described in the Housing Green Paper. It also has the particular advantage that the developer has a strong business interest in delivering a good quality sustainable product.

However, the long-term involvement of developers in affordable housing provision is largely untested, and raises a number of issues for both developers and Government. Long-term investors need assurance that their business model will not be undermined by shared owners “staircasing” up to full owner-occupation who then withdraw from participating in any long-term management scheme. Public authorities need assurance that developers (or their property managers) will act responsibly in the interests of tenants and that adequate safety nets are in place in case of financial or service failure.

Similar issues were explored in the recent review of social housing regulation by Professor Martin Cave⁸, and in the Government’s response⁹. Professor Cave’s review extended to the for-profit sector, but was specifically concerned with social housing. However, some of his analysis, particularly as regards the protection of tenant interests, may read across to affordable market housing.

We **recommend** that Government should take an early opportunity to discuss with the development and property management industries what are the business and regulatory risks which might otherwise inhibit the free development of long-term private investment in affordable housing provision and management. In doing so they should have regard to relevant learning from the Cave review.

Several contributors to the Review have told us that they believe that the Government should look more closely at the rules surrounding the Real Estate Investment Trust (REIT) legislation in order to encourage take up by companies that are, or might become, involved in residential developments following the investor model.

The 2007 Pre-Budget Report¹⁰ announced that:

The Government has recently reviewed the viability of residential REITs and the REITs listing requirements – but has concluded that there is not at present a compelling case for change. However the REITs regime will continue to be kept under review. (Page 104, paragraph 6.10)

We welcome this commitment.

⁸ *Every Tenant Matters: a review of social housing regulation* Professor Martin Cave, 2007.

⁹ *Delivering Housing and Regeneration: Communities England and the future of social housing regulation* CLG, 2007.

¹⁰ *Meeting the aspirations of the British people – the 2007 Pre-Budget Report and Comprehensive Spending Review*.

- **The self-build model.** “Self-build” encompasses both the individual owner who literally lays bricks and mortar himself (the DIY market), and the owner of an individual plot who produces his or her own house by contracting with architects, builders and other suppliers as needed. The contractor in such a case takes a share (which may be different from case to case) of the project risks as described above, but does not take market or planning risks.

In the UK, self-build has a lower market share of new housing supply than in other northern European countries; but it is growing in popularity. The number of self-build homes is not known with any certainty, but recent estimates put it in the region of 15,000-18,000 homes per year, roughly 10% of total production.¹¹ Of these, as many as 60% may be DIY. Advocates of self-build argue that, with more support from Government and local planning authorities, the volume of self-build could grow significantly. It certainly has too large a share of the market to ignore.

For obvious reasons, self-build developments characteristically achieve higher quality of specification and better cost-in-use. They are more likely to be innovative, not least in sustainability (although self-builders tend to prefer traditional building forms). Self-build exploits small sites particularly well, and is more likely to provide opportunities for smaller local builders – the larger housebuilders tend not to be interested in self-build, which delivers lower (though less risky) profits than their investors expect. On larger sites, the presence of self-builders can help to raise site values overall, although they need access to infrastructure and other services.

However, self-build also has some weaknesses. Almost by definition, it is a disparate sub-sector, spread very thin and not easy to reach. There are a small number of self-help co-operatives and sources of information and advice. But basic skills and guidance specifically aimed at the self-build industry are limited. Reliable statistics on production and performance are hard to come by, and the sector’s voice is relatively weak. Self-build homes may also be insensitive to their location and surroundings, in a way that a speculative or larger scale development would not.

Self-build on its own cannot deliver the increased volumes of housebuilding that are required but it has a contribution to make. Central and local government housing policies tend to neglect self-build, which we think is a wasted opportunity.

We **recommend** that Government and its agencies disposing of land should consider the opportunity for self-build and should aim to offer a proportion of the land in the form of small plots, where possible with ready access to services and other infrastructure (such as telecoms and other utilities), for sale to self-builders. Local planning authorities drawing up their strategic housing land assessments under PPS3 should similarly aim to identify a supply of small plots suitable for self-build and other smaller housebuilders (see Chapter 4). Planning consents for self-build should be subject to our recommendations in Chapter 7 on design quality to ensure that they are appropriate for their location and surroundings.

¹¹For information on the size and growth of the self-build sector, see *Homes to DIY for* by James Barlow, Robert Jackson and Jim Meikle, Joseph Rowntree Foundation, 2001; and *Self Build Housing Market Report – UK 2007* by AMA Research, available online at www.amaresearch.co.uk/self_build_housing_market_07s.html. Evidence submitted by the NHBC to the Review estimates the volume of self-build units as 18,000 a year.

- **The RSL build-for-sale model.** Traditionally, registered social landlords (RSLs) have focused on providing homes for rent, not for sale. However, modern social policy holds that single-tenure communities are undesirable, and seeks to create mixed communities in which the social and market sale homes are indistinguishable.

One way in which this can be achieved is by RSLs developing homes for sale (including, but not only, on shared-ownership terms), and a number of the larger RSLs are now doing so, drawing on their reserves for the up-front capital required.

As RSLs are not required to deliver returns for investors, their business model is somewhat different. Their objectives generally are concerned with the wider public interest and that of the communities which they serve. They are therefore much more likely to focus on quality and sustainability in design and construction, and to welcome innovation. They will retain a long-term interest in developments where they continue to own and manage the social rented housing in the community, and are likely to offer management services to the occupiers of the market sale housing. In this respect their interests and opportunities are similar to the investor model.

In general, even the largest RSLs are unlikely to be able to match the major housebuilders' experience in delivery, and their management strengths have traditionally lain in different areas. But their awareness of community and sustainability issues is valuable and they are particularly well placed to deliver certain types of development.

Although accurate figures are not available, figures for warranty registrations show steady growth to a total of 1,500 new homes built for sale by RSLs in 2006. This will understate the full picture, but is broadly consistent with the National Housing Federation's estimate of 2-3,000 units. As more housing associations are entering into this area, this number will undoubtedly rise. The NHF's Project on Assets, Resources and Capacity is suggesting that an increase to approximately 10,000 new homes for outright sale by RSLs may be achievable over a 10 year period.

We are aware of a number of larger RSLs with ambitions to extend their programmes of building for sale. They certainly have the capital for this, and we do not believe their capacity to do so is unnecessarily constrained by regulatory requirements. However, they are as vulnerable as the rest of the housebuilding sector to market fluctuations, and even if RSLs are under no obligation to deliver a return for investors they must take care to allow an adequate margin for risk. The sector's regulators will wish to ensure that this risk does not flow back to tenants, or indirectly to public funds.

Modern Methods of Construction

Modern Methods of Construction (MMC) is the generic name for new and innovative forms of construction. It potentially offers a new business model for an offsite manufacturer wishing to diversify into housebuilding (or vice versa), thus taking profits from a fully vertically integrated business model which incorporates every element of the process from site development to manufacturing.

However, while there has been a certain amount of rumour and speculation, we are unaware of any manufacturers currently seeking to move into competition with the existing housebuilders. In truth, this should not be a surprise: the “current trader” business model of housebuilding is very different from manufacturing, with quite distinctive opportunities and risks.

MMC may also be adopted by existing housebuilders as an alternative to traditional building techniques. They may buy in the MMC products from suppliers, or set up their own manufacturing divisions and aim for full vertical integration. However, at least two major housebuilders have recently closed their in-house divisions, which reinforces our view that the business models are distinct and not easily merged. It may also be a token that, as the MMC market matures, housebuilders feel more confident about outsourcing production of MMC components from independent manufacturers.

MMC encompasses a range of technologies. Some are relatively familiar (notably, timber frame); others, much less so.

- Structural insulated panels (SIPs) are produced in a factory and assembled on-site. Panels may include lining material, insulation services, windows, doors, internal wall finishes and external claddings.
- Volumetric construction involves the production of modular units in a factory which are installed on site.
- Hybrid techniques combine panels and modular units – the latter (sometimes referred to as pods) for highly serviced areas such as kitchens and bathrooms, with the rest of the dwelling constructed from panels.¹²

Of all the issues raised during our review, MMC is probably the one on which the opinions expressed to us are most sharply divided. Its advocates point out that MMC techniques are already in common use for commercial buildings without any obvious loss of performance or amenity to users. Critics point out that, by comparison with traditional methods, it requires considerable up-front investment in manufacturing plant which offsets the savings from faster construction times, and is likely to leave MMC as an uncompetitive option until demand has greatly increased.

We believe that modern methods offer some significant benefits for housebuilders keen to maintain their current level of returns. MMC potentially offers faster construction, cleaner and safer working environments, fewer housing defects, reductions in construction waste and improvements in energy efficiency of the home in use.

¹²This description of MMC technologies is adapted from the NAO report *Using modern methods of construction to build homes more quickly and efficiently*, published in 2005.

In addition the construction of MMC homes requires distinctive skills and is therefore less of a drain on existing labour pools.

Recognising these benefits, Kate Barker recommended further work to develop the potential of MMC:

The House Builders Federation, in conjunction with NHBC, Construction Skills and other interested parties, should develop a strategy to address barriers to modern methods of construction. This strategy should be developed to fit alongside existing initiatives, working closely with Government to identify further measures that can be taken. A range of approaches should be explored, in particular actions by industry, and changes to NHBC policy and practice, as well as representations to Government on areas such as changes to building regulations.¹³

The HBF subsequently set up a cross-industry group to take forward this recommendation. However it became clear that further work should take a broader view, looking at production efficiency, innovation and productivity, with MMC as an important component of this wider view.

As a result, earlier this year the HBF, in association with the National Centre for Excellence in Housing, established a Production Barriers Group. Members of the group are drawn from the housebuilding industry, the Housing Forum, central government, English Partnerships and the supply industries. It is envisaged that this group will have a life of approximately three years.

There has recently been significant growth in MMC housebuilding in some parts of the market. The Housing Corporation has actively promoted its use: 48% of all grant funded work in the 2004-2006 national affordable housing programme involved one of the prescribed MMC techniques. This partly reflects a continuing Government interest in promoting MMC which has been perceived as a response to slow build-out rates by traditional housebuilders. But it also reflects a difference in business models. RSLs have a constant supply of tenants, and want their new homes ready for occupation as soon as possible.

Figure 8: Current and projected take up of offsite systems, UK

Offsite system	2005 output	Proportion of UK total 2005	Proportion of UK total 2016*
Timber frame – all types	42,000	18.6%	30%
Light steel frame (LSF)	8,800	3.9%	25%
Precast concrete panel (cross-wall)	<4,000	<1.5%	High growth predicted
Structural insulated panel	600	0.3%	4%
Volumetric modular	2,000	0.7%	4%
Hybrid (pod & panel)	300	0.15%	No data

*: Data researched as part of a joint study undertaken by Association of British Insurers and MTech Group
Source: MTech

¹³ *Review of Housing Supply: Delivering Stability: Securing our Future Housing Needs – Final Report*, page 115, recommendation 33. HM Treasury, 2004.

Housebuilders, building new houses for private sale, are more reluctant to adopt modern methods (apart perhaps from timber frame). They value cost and time savings too, but alongside other factors. House buyers have traditionally been resistant to MMC, possibly influenced by memories of post-war prefabs and the system build houses of the 1960s. Housebuilders also need to manage the pace of build-out to maximise profits from a site (see Chapter 4); sheer speed may be relatively less important.

There is less resistance to the use of MMC for flats. In many cases a developer will pre-sell a proportion of the flats in a development before making a start on works, but the flats may not be occupied, or the remaining flats sold, until the block is substantially complete. So speed of construction is more critical than in low rise developments, and the cost and speed advantages of MMC weigh relatively more heavily. The MMC techniques used in commercial building are also most obviously applicable for large apartment blocks.

We do not feel the need to make any recommendation for or against MMC. There is nothing to stop housebuilders from adopting MMC if they feel it is a cost-effective alternative to traditional methods. Enough new homes, particularly for RSLs, are now being built using MMC to offer solid experience of the advantages and limitations, in construction and in use. It is possible that MMC's competitive position may strengthen with the zero carbon agenda: MMC homes are capable of achieving high standards of energy efficiency, and further experience may show this to be a worthwhile competitive advantage.

Summary of recommendations in this Chapter

- Government should take an early opportunity to discuss with the development and property management industries what are the business and regulatory risks which might otherwise inhibit the free development of long-term private investment in affordable housing provision and management.
 - Government and its agencies disposing of land should consider the opportunity for self-build and should aim to offer a proportion of the land in the form of small plots, where possible with ready access to services and other infrastructure, for sale to self-builders. Local planning authorities drawing up their strategic housing land assessments under PPS3 should similarly aim to identify a supply of small plots suitable for self-build and other smaller housebuilders.
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CHAPTER 4

LAND SUPPLY



Building for Life winners. Chapel, Southampton.

New opportunities for alternative business models will create the potential for faster growth of housebuilding. However, none will succeed without an adequate supply of land for development. As stated succinctly by Kate Barker: "The underlying constraint on housing is the supply of land."¹

Contrasting views: housebuilders, deliverers and their critics

What our contributors said to us

"The severe shortage of land with planning permission influences housing availability and hence price. The land shortage increases land costs the shortage of product increases the product cost and removes any incentive for the industry to compete on quality or price." – *The Concrete Centre*

"The principal constraint across the sector is the availability of land with planning permission. This constraint outweighs all of the other constraints" – *Places for People*

"[The industry's] inability to secure an adequate number of sites with planning permission requires it to keep longer land banks (which would arguably be capable of reduction if planning permissions were more readily available)." – *Crest Nicholson*

"We are concerned that the behaviour of the industry in recent years has suggested a growing move to control the supply of land and to 'trickle out' new housing" – *Campaign to Protect Rural England*

"We have some concerns that landbanking for profit (rather than to ensure a smooth supply of land as development opportunities arise) and purchase of options on land, both of which are common practice in the housebuilding industry, have a negative impact on both land supply and land price: restricting supply and reinforcing fluctuations in the housing market." – *Chartered Institute of Housing*

There is much public debate about the supply of land. The development industry and its advocates complain that the planning system releases too little land, and that its release is slow and unpredictable. The industry's critics assert that developers do not take full advantage of the available land, preferring to profit from land value inflation with the minimum of effort given to actually building houses.

¹ *Review of Housing Supply: Delivering Stability: Securing our Future Housing Needs – Interim Report*, page 10. HM Treasury, 2003.

The amount and ownership of land for development is a familiar issue, but a difficult one to address because of lack of data. More data collection and technical analysis is needed in this area. We understand that the Office of Fair Trading's housebuilding review will seek to build knowledge of the pattern of land holdings and we welcome that.

It is undisputed, however, that to achieve the Government's target for new housing supply, more land will be needed than the planning system has been delivering. Accordingly, Planning Policy Statement 3 (PPS3) and the Housing Green Paper set out a new range of measures to release a greater supply of land for housing.

In particular, PPS3 sets out new requirements on local planning authorities:

- to identify sufficient land to meet demand for housing over at least a 15 year period;
- to maintain a rolling five-year supply of deliverable land for housing;
- to use Annual Monitoring Reports to monitor the supply of deliverable sites on an annual basis;
- as part of that process, to prepare and keep up to date a Strategic Housing Land Availability Assessment.

Communities and Local Government (CLG) has published practice guidance² on the preparation of these Assessments, and has produced an advice note³ for Government Offices and the Planning Inspectorate on assessing whether local planning authorities are able to demonstrate a 5-year supply of specific sites which are deliverable. Both documents make clear that sites should only be identified as deliverable if there is a reasonable prospect of housing being delivered on them within 5 years, and that market conditions are relevant to this judgement. In other words, sites do not count if their development will not be financially viable.

In due course it will be possible to compile data from local authorities' Annual Monitoring Reports. This will enable a national and regional database to be compiled which will provide the evidence that is currently lacking for the volume of planning permissions granted, and the extent and rate at which they are built out. We understand that CLG is currently developing a comprehensive approach to monitoring housing permissions and completions, building upon these Reports.

Local authorities are likely to find that they need more reliable information across a broad front in order to compile their strategic housing land availability assessments and their annual monitoring reports. They will need information on land holding, housebuilding production and build out rates, and on changes of use, conversions and demolitions in the existing housing stock. At present information on all these key measures is unreliable or non-existent, and we believe there is a risk that, if authorities' efforts are not co-ordinated, a valuable opportunity to build a comprehensive national database will be missed. CLG's current work should help to address this risk but it needs to cover the full range of information requirements.

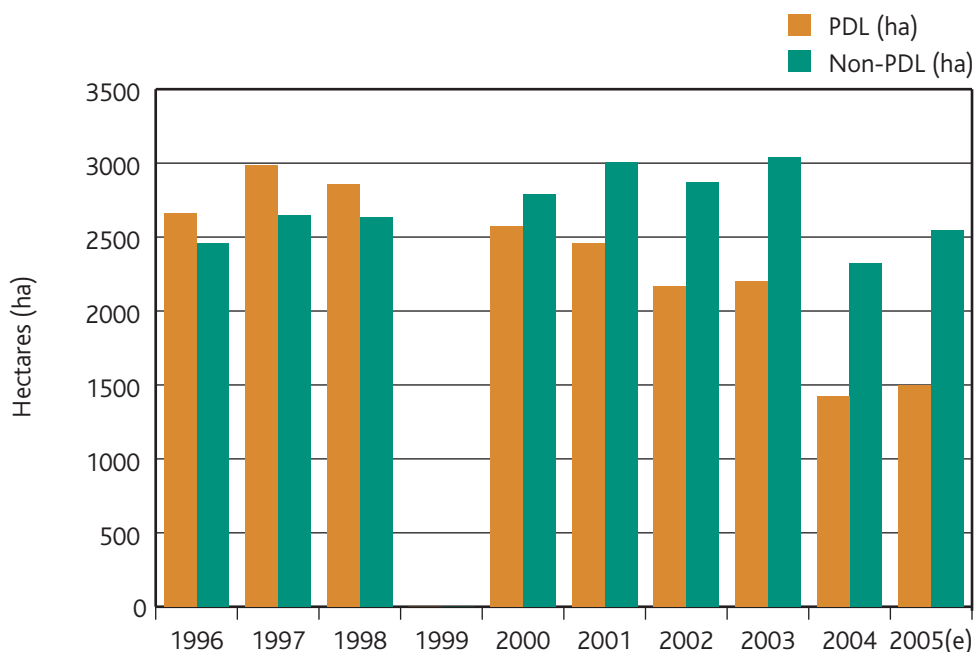
² *Strategic Housing Land Availability Assessments Practice Guidance* CLG, 2007

³ *Demonstrating a 5 Year Supply of Deliverable Sites*

We **recommend** that CLG, working with the National Housing and Planning Advice Unit, representatives of local government and housebuilders, should build on current work to assess current information gathering arrangements and develop standard definitions and methodologies to improve the quality of house building data. This will enable regional planning bodies to compile their annual monitoring reports on a consistent basis, and CLG to build up a national picture.

Figure 9 illustrates the downward trend in the amount of land being developed for residential use. Notwithstanding this trend, the number of new houses being built has remained steady, thanks to greater densities of development. However, the rate of growth that is required to meet the Government's target for 2016 will require the trend shown in Figure 9 to be reversed.

Figure 9: Land developed for residential use, 1994-2006: England



Source: CLG

It is far too soon to assess the impact of the measures set out in PPS3 and the Housing Green Paper, and we have not sought to revisit the fundamental issues they have addressed. We welcome their intention and commitment. But all parts of the new framework need to function effectively together. In particular:

- the housebuilding industry has the capacity to achieve steady growth over the full period up to 2016 to achieve the target, but not to achieve all that growth in, say, the final two or three years. So it is important that regional housing allocations reflect the new target promptly and work their way smoothly down into local authorities' 5-year housing land supplies. If the process for setting new regional allocations, and hence the new requirements for 5-year supplies, are delayed, there is an increasing risk that the target will not be met;

- the new process is certain to be challenged by both developers and local planning authorities who are dissatisfied with different aspects, or simply in order to explore its limits. Where planning decisions are the subject of appeals it is important that they are promptly heard and the PPS3 policies firmly upheld. Developers' confidence in the new system will be strongly shaped by their early experience of appeals and decisions. So the Planning Inspectorate will need adequate resources to ensure that the caseload is managed.

Land as part of the business model

The perception that land for housing development is in short supply is a key element in the housebuilders' business model. It has been constantly emphasised in evidence submitted to us, not just by housebuilders but by a wide cross-section of stakeholders.

Most modern manufacturing industries achieve good results for their investors by relying on "just in time" supply chain management to minimise the amount of capital that is tied up in stocks. If less capital is used, the return on capital which they deliver for their investors will be correspondingly higher.

Housebuilders have much less opportunity to do this. They tie up considerable amounts of working capital in their land stocks and more in work-in-progress. London Development Research recently undertook a study of 509 housing schemes (consisting of 10 or more homes) completed in London during 2006. The average time taken for the various stages, from submission of planning application to completion of the scheme, was as follows:

Figure 10: Planning to completion in months, London, 2006

Cumulative (time per stage in brackets)

	All	10–14 units	15–49 units	50–149 units	150+ units
Planning application submitted ^a	0	0	0	0	0
Planning consent given	5.7 (5.7)	5.3 (5.3)	5.9 (5.9)	5.9 (5.9)	6.0 (6.0)
Consent in legally implementable form ^b	9.0 (3.3)	7.2 (1.9)	9.9 (4.0)	10.3 (4.4)	10.2 (4.2)
Start of construction work	17.2 (8.2)	15.2 (8.0)	18.7 (8.8)	18.1 (7.8)	17.2 (7.0)
Construction complete	34.7 (17.6)	30.0 (14.8)	35.3 (16.6)	39.4 (21.3)	44.6 (27.4)

a: This is not the start of the process. Draft applications may be submitted and subject to discussion and negotiation for some months before one is formally submitted for approval. For the schemes covered by this study, this pre-application process took, on average, 15.4 months. For schemes of 150+ units it took on average 25.1 months.

b: It may take some time before a planning consent may be legally implementable, for instance if a s.106 agreement has yet to be negotiated. The average period from planning consent to legally implementable consent, in cases with a s.106 agreement, was 5.2 months.

Source: London Development Research, unpublished research, 2007 using data from sources including the GLA and Estates Gazette

Thus, depending on the size and other characteristics of a site, a developer may undertake months of preparatory and infrastructure work before the first house is sold.

This means that, other things being equal, housebuilders have a strong incentive to build out as quickly as possible. The basis on which investors measure their success demands that they build out sites promptly so as to release and recycle the capital and deliver a good return on capital.

But of course other things are not equal. To maintain the value of investors' shares in their business, housebuilders must be seen not only to deliver current profits but also to protect their future business. This means they must seek to secure their future supply of developable land, without which their business cannot survive.

If land supply were unconstrained, housebuilders could perhaps rely on "just in time" procurement. But in fact land for housing development is in short supply. Housebuilders seek to acquire "land banks" in order to protect their ability to stay in business and, thus, the value of their shareholders' investment.

Many housebuilders prefer to purchase only "short term" land, for which at least an outline planning permission has already been granted, or can confidently be expected. This is relatively expensive: the planning risk is low, but the landowner will demand a higher price. Some housebuilders also choose to acquire "strategic" land with no current planning permission: in return for a lower initial outlay, the housebuilder takes the risk of being able to secure an appropriate planning permission in time to secure the anticipated value from development of the site.

Readiness of land for development

In increasing order of readiness for development, and therefore of value, land may be:

- Unallocated for development: a very risky investment as its future planning status is uncertain
- Allocated for development but with no planning permission: still a risky investment as many key issues remain unresolved including number of units and infrastructure
- Subject to an outline planning consent: a less risky investment, but reserved matters may still add cost, time and complications
- Subject to a full implementable planning consent: in housebuilders' jargon, "oven-ready" land. Residual planning risk is minimal, but the land is expensive to acquire from the original landowner who bore that risk.

The full planning process contains many more stages and requirements but these are the key steps where planning risk is mitigated and value is enhanced. In particular, land value increases sharply when outline planning consent is given.

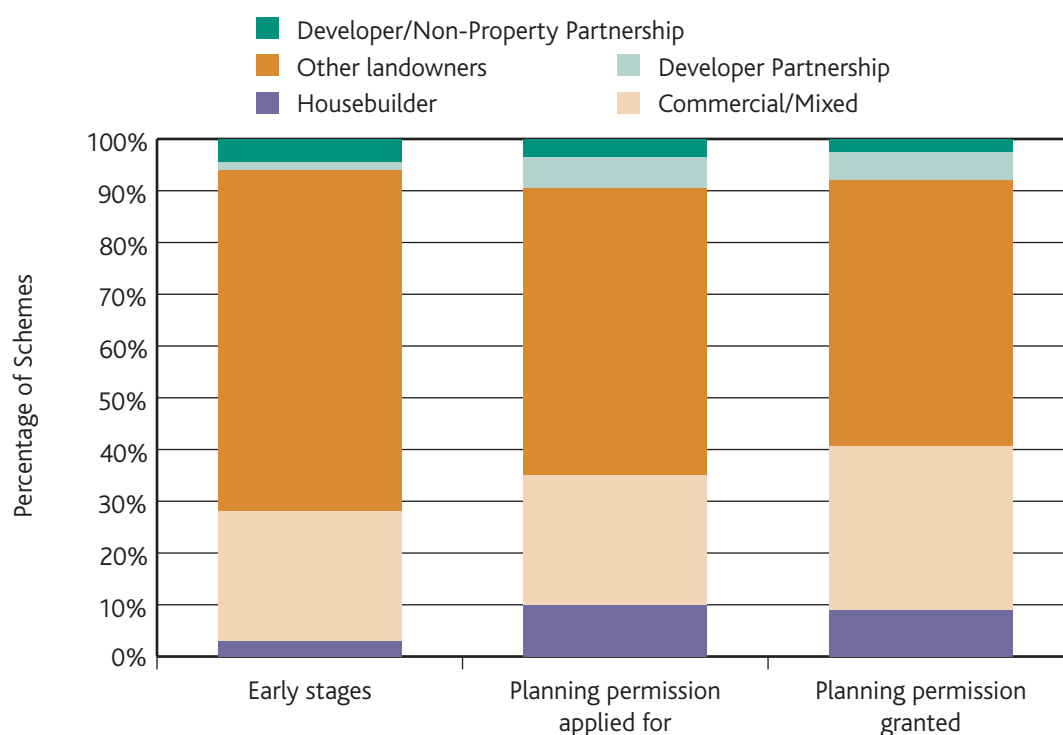
Most housebuilders now expect at least to top up their land banks with strategic land. However, the additional risk attached to such land requires them to increase their overall holdings in order to be confident that an adequate supply will be available for development when it is needed. Recent changes in planning policy, notably PPS3, may reverse this trend, but it is too soon to say.

In order to minimise the cost of early land acquisition, and the depressive effect on their return on capital, housebuilders aim to acquire sites by taking out options, or similar agreements for the future purchase of land for development.

There is a cost to taking out an option, which will affect the eventual profit from the completed development. Landowners observe the escalating prices of new homes, and can and do demand both a premium payment for the option and a full share of development profits. But this is still less costly to the developer than having the site “on balance sheet” at its full acquisition value. Chapter 4 of Part 2 discusses land acquisition options in greater detail.

Housebuilders are by no means the largest holders of development land. As shown in the chart below, Savills’ data suggests that only 8% of land suitable for housing development is owned by housebuilders, whereas 25% is owned by commercial and mixed developers and 61% is owned by non-property companies, including the public sector. Measures aimed at releasing the housebuilders’ land banks may be aimed at the wrong target.

Figure 11: Who owns the land: England and Wales



Source: Savills

In their financial reports, housebuilders generally seek to make a virtue of the size of their land banks. They need to assure their investors that their land banks are sufficient to cover their needs in the short to medium term; otherwise, the investors would see the companies as being “at risk” and tend to depress the share price.

However, these reports do not always distinguish between how much land has an implementable planning consent and how much does not. In practice, as we describe below, the amount of land that can actually be built upon (ie has received the appropriate planning consent) may be significantly lower.

While there is no obligation on housebuilders to produce information in a convenient form for Government or industry observers, we believe that investors deserve a clearer picture. The true status of land holdings is an important indicator of the financial position and prospects of the industry generally and of individual firms.

We **recommend** therefore that the Government should explore with the appropriate parties, which will include the investment community at large and the UK Accounting Standards Board, ways in which the reporting of land holdings in all companies' financial statements can be made more transparent. In the short term this will probably be through best practice guidelines that the housebuilding sector and other companies with related interests should adopt. In the longer term it may be possible to achieve a change to the international accounting standards which govern the reporting procedures of publicly quoted companies.

As part of its evidence to the Review, the Royal Town Planning Institute (RTPI) provided and published statistical details of housebuilders' landbanks, completions and supply. This information forms the basis for Figure 12.

Figure 12: Housebuilders UK Landbanks 2006 (RTPI data)

	House completions in previous 12 months	Plots with implementable planning consent	Years' supply
Barratt	19,808	37,229	1.9
Bellway	7,117	22,600	3.2
Berkeley	3,001	19,860	6.6
Bovis	3,123	12,395	4.0
Crest Nicholson	2,946	16,322	5.5
Galliford Try	3,000	4,115	1.4
Miller Group	3,960	12,500	3.2
Persimmon	16,701	41,711	2.5
Redrow	4,735	16,850	3.6
Taylor Wimpey	22,000	57,063	2.6
Average	8,639	24,065	2.8

Source: RTPI

At our request, the Home Builders Federation undertook a survey of their members earlier this year asking specifically about their level of land stocks, the proportion that had implementable planning permission, how quickly work started on site following such planning consent and, with regard to their strategic land holdings, how many units had been allocated in an adoptable local plan.

The information, which is commercially extremely sensitive, was presented to us in an aggregated form. The collected data came from 21 of the top housebuilding companies with total legal completions of just over 76,000 homes.

This indicated that these companies had about 387,000 units in their land banks at their last year end, but only 46.7% of these had implementable planning permission; this represents just under 2½ years supply, which is consistent with the RTPI figures. Significantly, less than 5,000 units (2.6%) were on sites where no work had commenced within 3 months of receipt of the implementable planning permissions.

However, these figures may not tell the complete story. For example, a housebuilder may undertake some very basic infrastructure work on a site in order to protect his planning consent, but not actually build out the site further. In addition, some sites may not count as “consented,” but if they have been consented subject to the developer undertaking specific actions, then making the sites “consented” could be solely in the hands of that developer.

The London Development Research data, cited above, suggests a slightly longer period of about 8 months between legally implementable permissions being received and the start of work on site, and a slightly longer project duration overall. It is unclear whether this is due to factors within the developers’ control, or to specific London factors. The data by borough suggests wide variation between projects in different London boroughs, which suggests that external factors may be more significant than housebuilders’ readiness.

It is not reasonable to criticise housebuilders for acquiring land banks, sufficient to secure their future business. Indeed, if they did not do so, the risk to their businesses would increase and investors would demand enhanced risk premiums, driving down land prices and at the margin making some development sites unviable. That would not be in the public interest.

There are no doubt some individual cases where housebuilders hold land for longer than they need. But, in our view, the current evidence does not support the suggestion that this practice is at all widespread. Moreover, even if housebuilders’ (and others’) stocks of land were built out quickly, they would provide at best a short-term relief from immediate shortages. There would be no impact on the long-term supply of housing, except to add to the housebuilders’ risk and discourage some marginal developments from taking place.

We accordingly **recommend** that the Government should **not** take general measures to force more rapid build out of land banks with implementable planning consents. In our view the risks far outweigh the short-term benefit which, without further new land supply, would not be sustained.

This is quite distinct from the case where public land is sold for housebuilding subject to a requirement for a minimum build-out rate. In that case the developer will allow for any risk in the price offered for the land, and it will be entirely a matter for the vendor whether the reduced price is justified by the public benefits.

General measures, such as a new statutory obligation to build out quickly may produce worse outcomes than the problems which they seek to remedy. In a market where margins are already under pressure, new statutory requirements run the risk of depressing the rate of production or increasing the rate of business failure. And if new planning measures are successful they will in any event reduce the housebuilders' need to hold land banks.

However, we think it reasonable for Government to take more targeted measures to deter the potential for abuse, by adding to the cost to a developer of lengthy delay on a site with an implementable planning permission.

A planning permission which has not been exercised expires after a specified period. The default expiry period is 3 years. However, under section 56 of the Town and Country Planning Act 1990, the permission is considered to have been exercised once material operations have started, and these are defined as including any work of construction on the building or various infrastructure works. This means that a developer may undertake relatively minor works at minimal cost to preserve the planning permission, but not then continue with the development.

We **recommend** that the Act be amended so that the permission is not considered to have been exercised until a substantial start on site has been made. By requiring the developer to invest significant capital in initial works, this would create a much stronger incentive to complete the development promptly.

Other issues in land supply

If housebuilders' business model is affected by the supply of land, their business practice is no less influenced by the type of land that is available.

Local planning authorities seeking to identify specific, deliverable sites for housing development will naturally focus on larger sites, particularly where one or two large sites are sufficient to meet the full requirement for the next five years. In such cases there is a risk that the authority will not look further, so that smaller companies are effectively excluded from the market.

The smaller companies, on the other hand, are well placed to take advantage of small sites, which do not command the majors' attention. These include, in particular, "windfall" sites, defined in PPS3 as sites which have not been specifically identified as available in the local plan process; they comprise previously-developed sites that have unexpectedly become available. However, there is no guarantee that windfall sites will become available in any area, or that, where they do, they will receive planning consent. The advice note produced by CLG (cited above) makes clear that the planned 5-year housing land supply should not be regarded as a ceiling; where windfall applications come forward, they should be determined by reference to relevant policy and other material considerations. However, this advice does not have great prominence within the overall framework of policy and guidance and it is not clear how much weight it will carry.

It is essential for the health and growth of the housebuilding sector that small and medium housebuilders should continue to have sufficient opportunities to prosper and grow. We therefore **recommend** that the Guidance accompanying PPS3 should be amended to stipulate that at least 10% of the 5-year supply of housing land should consist of small sites (for 10-15 units or smaller), and to give more prominence to the requirement to consider planning applications for windfall sites on their own merits, even where they are additional to the planned 5-year supply.

Windfall sites are important, not just for the health of the smaller firms, but as an opportunity to increase housing supply without consuming previously undeveloped land. Notwithstanding PPS3, there will continue to be public concern about the amount of greenfield land taken for housing. The public has a legitimate interest in the scale and location of development, and the protection of land for other uses; and the planning system will continue, however imperfectly, to give effect to those choices.

Partly in order to reflect this concern, a target was introduced in 2000 that, by 2008, 60% of all new housing should be provided on previously developed land ("brownfield") and through conversion of existing buildings. Whilst this target was reached several years ahead of this date, it was by a significant reduction in the use of greenfield land rather than by bringing more brownfield back into use. Official statistics for housebuilding indicate that the area of land developed annually for housing fell by 26% between 2000 and 2005, with a 10% fall in brownfield land and 43% fall in greenfield (see Figure 9).

This change has significant implications for the rate of new building. It is almost an article of faith, universally held by housebuilders, that there is a limit of 35-50 homes which can be sold from one outlet in a single year; to achieve more rapid build-out requires prices to be reduced. (For reasons discussed in Chapter 3, rates of sale on apartments are higher.) Building out at a faster rate does not yield sufficiently larger early returns to offset the cost of discounts plus other marketing and management costs.

There is no theory behind this, but rather the housebuilders' observation and experience of how to make the best returns over time, balancing volume against price and risk. We believe that it partly reflects the capacity of local housing markets to absorb new supply, and partly the ability of local sales offices to process business. Overall, there is little reason to go for volume over price, particularly when the supply of fresh land is limited.

Reflecting this rule of thumb, primary purchasers of major sites often split them up into smaller parcels for sale (or swap) to other builders. Each builder then opens a local office, with the result that build-out rates across the site as a whole are significantly increased, though not in full proportion to the number of outlets. The primary purchaser will obviously seek to obtain sufficient value now from selling or swapping land to offset future value forgone.

It is unclear why different developers operating on the same site appear to be able to achieve what a single developer cannot do. Different marketing strategies, different design philosophies, a wider range of product type and style, and even quite small differences in location may all play a part. However, given that large sites are likely to

continue to form a significant part of all land for new housing, we think a further understanding of the underlying issues would be desirable.

We accordingly **recommend** that the Government should commission research, possibly in partnership with an industry body such as the Housing Forum, into the marketing and other factors which constrain the optimum build-out rates on large sites.

Many of the largest sites are brownfield land formerly owned by Government Departments and other public agencies, or are sites which have been assembled (and in some cases decontaminated) by English Partnerships. Other large sites may be available through the Government's housing growth programmes as described in the Housing Green Paper.

We **recommend** that, in disposing of large sites for housing development, the Government and its agencies should wherever possible either break up a proportion of each site into smaller parcels for separate disposal or stipulate as a condition of sale that the primary purchaser should do so. This should both underpin faster build-out by creating opportunities for more sales outlets, and enable smaller housebuilders to compete for their share of supply.

We have considered whether it would be desirable for the Government to go further by requiring or encouraging local planning authorities to include minimum build-out rates as a condition of planning consent for larger sites. However, this would take away from the housebuilders' commercial discretion, introducing an element of risk to value and delivery; it would need to be flexible to allow for changing market conditions, and that would in turn require new administrative processes involving cost and delay. We think it is better to work with the grain of the industry's normal business practice and we believe our recommendation achieves this.

Summary of recommendations in this Chapter

- CLG, working with the National Housing and Planning Advice Unit, representatives of local government and housebuilders, should build on current work to assess current information gathering arrangements and develop standard definitions and methodologies to improve the quality of house building data.
- The Government should explore with the appropriate parties, which will include the investment community at large and the UK Accounting Standards Board, ways in which the reporting of land holdings in all companies' financial statements can be made more transparent.
- The Government should **not** take general measures to force more rapid build out of land banks with implementable planning consents. .
- The Town and Country Planning Act 1990 should be amended so that a planning permission is not considered to have been exercised until a substantial start on site has been made.

- The Guidance accompanying PPS3 should be amended to stipulate that at least 10% of the 5-year supply of housing land should consist of small sites (for 10-15 units or smaller), and to give more prominence to the requirement to consider planning applications for windfall sites on their own merits, even where they are additional to the planned 5-year supply.
 - The Government should commission research, possibly in partnership with an industry body such as the Housing Forum, into the marketing and other factors which constrain the optimum build-out rates on large sites.
 - In disposing of large sites for housing development, the Government and its agencies should wherever possible either break up a proportion of the site into smaller parcels for separate disposal or stipulate as a condition of sale that the primary purchaser should do so.
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VIABILITY AND POTENTIAL



As shown in Chapter 4, to deliver the Government's target for new homes will require a substantial increase in the supply of land for housebuilding. There is a good prospect that the measures set out in PPS3 and the Housing Green Paper will deliver this increase, and that, as housebuilders and other developers gain confidence in the new measures, they will be more willing to redirect capital that is currently tied up in financing land stocks into increased production.

At the same time, however, there is a risk that the new measures will threaten continued achievement of the target that 60% of all new housing should be provided on previously developed land. That in turn represents a new risk to business confidence and commitment, if it is found or believed that political opposition to greenfield development obstructs the flow of new planning consents.

The fear of development is a sensitive issue which should not be discounted. For the majority of the population, their home represents their single largest asset. Many householders, when contemplating the prospect of additional nearby development, fear for the value of their investment as well as their quality of life. They are anxious that the sacrifice they have often made to afford a home in a desirable location is not put at risk. Such fears are not lightly put to rest.

Urbanisation and the Green Belt

A number of our contributors argued that, as urban development only accounts for a total of 11.2% of all land in England, there is no threat of "concreting over the countryside."

The threat is exaggerated; but the counter-argument can be challenged. 11.2% may not seem like a large proportion, but in Western Europe only the Netherlands and Belgium are more urbanised than England. Recent analysis¹ by Land Use Consultants for the Campaign to Protect Rural England (CPRE) showed that between the 1960s and the 1990s the area of England suffering from visual and noise intrusion rose from 25% to 40% and by 2007 had reached 50%. The protection of the countryside is a legitimate concern to which public policy should respond.

¹ *Developing an Intrusion Map of England* Land Use Consultants for CPRE, August 2007

Of course, communities will not function with housing that is inadequate, in quantity or quality, and objectors to development will suffer no less than others.

But equally, those communities will not function if they are deprived of green space, or are allowed to sprawl out over surrounding countryside with no regard to its amenity value. They will also not function if urban areas are progressively hollowed out by a cycle of declining prosperity, urban flight and loss of land value. For all these reasons, the brownfield target remains as relevant as ever.

Brownfield development generally offers poorer returns to housebuilders than greenfield. There are three main reasons why this is so:

- Brownfield sites are frequently in multiple ownership, requiring parallel negotiations, with additional cost or delay;
- The quality of land on many brownfield sites is poor as a result of previous uses, and needs to be restored before development can take place;
- Although some brownfield sites are vacant and derelict, many have existing commercial or domestic uses which have to be relocated.

In addition, while there are some brownfield sites in prime locations, many more are in areas of relatively low land value. As discussed below, these offer the greatest potential rewards for successful development; but they are also the most risky, and the most vulnerable to cost pressures which upset the balance between risk and reward.

A prudent local planning authority will want to make as much use as possible of brownfield in planning its five-year supply of housing land, as required by PPS3: ideally, meeting or exceeding the Government's 60% target. However, as described in Chapter 4, sites identified for the five-year supply must be financially viable. There is a risk that any downturn in the market will make the less viable sites altogether unviable, thus increasing the pressure on greenfield land.

In "What makes a development viable?" (see box), we set out a number of factors at work here: the cost of works including remediation of land, the need to make an adequate return on investment, and any regulatory requirements, including planning obligations (see Chapter 6). Some of these costs are unavoidable, but not all of them. Developable brownfield sites must not be rendered unviable as a result of unrealistic demands made by regulators.

It is important that on marginal sites (most likely to be brownfield) the requirements for developer contributions through planning obligations should be mitigated so far as necessary to make them viable. A prudent local planning authority will seek to make such arrangements on its own account, in order to make best use of the brownfield land in its area. We **recommend** that Government review the advice on local planning authorities' flexibility for negotiating lower levels of developer contribution on marginal sites than set out in their plan, and should consider the scope for specifying clawback in the event that the housebuilder, thus freed of obligations, makes additional profits.

A number of toolkits already exist to establish the viability of sites, taking into account the impact of affordable housing and other planning obligations. In order to provide developers with the necessary confidence, we further **recommend** that CLG should work with the Homes and Communities Agency, local government and the development industry, either to develop a new standard methodology, or to adopt an existing methodology, as a basis for determining the level of mitigation.

What makes a development viable?

Chapter 5 of Part 2 describes two alternative methods of determining the price of land: the residual value method and the comparative method. A housebuilder will usually follow the residual value method, as that directly estimates the viability of a site – in other words, whether development of the site will offer an adequate return on investment.

The housebuilder first determines the optimum price to be charged when homes built on the site are sold, having regard to the prospective type and mix of development, the prevailing market, future prospects, and other considerations. From this price, the housebuilder deducts all the inherent costs in developing the site, and makes an allowance for profit. He also deducts all the general and specific regulatory costs, such as environmental standards, planning conditions (eg for design, type or mix of housing), and any planning obligations (eg for affordable housing). What remains is the price which the housebuilder can afford to pay for the site.

In practice, because land sales are usually competitive, developers are forced also to factor in the value of inflation in the land price after purchase, since they risk being outbid if they do not. However, this is risky, since the future course of inflation is not certain, and if they allow too much for inflation they may not recover their costs.

The landowner may choose to sell if, but only if:

- there is no prospect of a better offer now or in the foreseeable future (discounting for the value of cash in hand)
- the price offered exceeds the value received from current or alternative uses
- the price offered is a positive sum (landowners will not generally pay to have their land taken off them).

It follows that if the general and specific regulatory costs are too high then the developer will not be able to offer a high enough price to induce the landowner to sell. This risk becomes greater if land value inflation slows down or if the regulatory costs increase.

This rules-based approach should be relatively simple to operate for individual sites; but it is unlikely to be sufficient on its own. Developers generally have more capacity than the local planning authority to analyse the financial viability of specific sites. There is a serious risk that they will use the appeals system to challenge the inclusion of many brownfield sites in local plans (especially those in areas of need), and force their replacement by more clearly viable and desirable greenfield sites.

We believe there is an alternative; but it will require a change of approach by both local planning authorities and developers. At present the development process is too often characterised by mutual suspicion between the planning authorities who have the powers, and the developers who have the resources.

Many of our contributors noted how these tensions undermine the development process and, by adding cost and delay, benefit neither the public nor the private interest. We agree. The polarisation of roles is unproductive. Local planning authorities and developers need to recognise a series of mutual interests: in making best use of available land, in facilitating the regeneration of communities, and in the prospect of significant growth in land values from successful regeneration. The potential was neatly summed up by one of our contributors:

"I believe the fundamental answer is about combining the private sector's (at its best) imagination, resources and construction skills with the public sector's land, ambitions and financial resources in much more imaginative ways."

(Tom Bloxham, Urban Splash)

PPS3 and the supporting practice guidance already recognise that local planning authorities will be best able to demonstrate the viability of brownfield sites in their areas if they do so with the active support of a developer. Any challenge to the inclusion of specific sites in a 5 year land supply on the grounds of viability is unlikely to succeed if a developer is prepared to commit to those sites' development.

We suggest therefore that any local authority wishing to maximise the use of brownfield land in its 5-year land supply should seek to enter into partnership with a developer (or more than one) for the development of sites in its area. Depending on the benefits offered, which may vary from one local authority to the next, the partner or partners may need to be selected by a formal process.

These benefits have become increasingly familiar to government and the development industry from the efforts of the Housing Market Renewal Pathfinders. A recent report to Ministers from the Pathfinder Chairs has observed:

"Attracting private sector development is central to delivering high quality new homes... Appointment of development partners for neighbourhoods is now common. Long-term relationships are being established, involving developers from masterplanning activity through to physical completion of investment... Developers secure comfort over the scale and timing of activity allowing trust and constructive, partnering relationships to be built with the Pathfinders... All of the Pathfinders have made considerable progress in working with developers to help secure new investment in local housing markets. This includes introducing developers to neighbourhoods and districts they have traditionally avoided."

These benefits are fully transferable to other areas where the housing market may be less depressed.

North Solihull Regeneration

The North Solihull area is part of the West Midlands conurbation, adjacent to the M6 motorway. It suffers from acute physical, economic and social deprivation. Its 40,000 residents tend to have low skills and educational achievement and to suffer from poor health. It is one of the most deprived areas in England.

In May 2005, Solihull Metropolitan Borough Council signed a 15 year Regeneration Agreement with the inpartnership Consortium (comprising inpartnership Ltd, Bellway Homes and Whitefriars Housing Group) in order to bring about a comprehensive regeneration of the area by addressing the disparity of quality of life between the north and south of the borough in terms of housing choice, health, crime, educational opportunity and employment prospects.

An estimated £1.8 billion will be spent over the life of the programme, split roughly half and half between private sector investment and a series of grants from Government Departments and agencies. The benefits will include 8,700 new homes built, 12,500 existing homes refurbished, 10 new primary schools and 5 village centres built, along with new health care facilities and a range of community and economic development initiatives to ensure that physical renewal is integrated with improvements to the social and economic well-being of local communities.

The new housing will be a mixture of homes for sale, shared ownership and rental. The future maintenance of the areas and facilities will be built into the design and future ownerships from the outset and will form part of the neighbourhood management approach to the area. There will be a particular emphasis on community engagement by giving local communities the opportunity to influence the way public services are delivered.

A particular feature of the proposals is the intention to transfer development sites owned by the Council to the Partnership at existing use value and sold at market value once outline planning consent for residential development has been granted. The proceeds of the increase in value will be recycled to fund further projects for the benefit of the community.

We **recommend** that all local authorities should review the scope for forming partnerships with one or more developers, in order to ensure that the viability for development of previously developed land in their areas is fully recognised and exploited, and can then be reflected in their 5-year housing land supplies.

The benefits to the local authority are obvious: a more secure 5-year land supply, best use of brownfield and minimum demand for greenfield, and reduced costs in assessing site viabilities, or in defending those assessments in planning appeals. But, as the Pathfinders' experience has shown, there are also benefits for developers: notably, reduced planning risk and the possibility of significant returns from the enhanced land value of redeveloped sites.

The potential growth in land value is of central importance. Some sites have a low value simply because of the potential cost of bringing the land back into a condition that is fit for development. But very often land value is low because the location is unattractive, and that may reflect a wider range of factors – economic, social or environmental. In simple terms, if the quality of the community is poor, the potential sales value of new homes in that community is also reduced, and this may directly affect site viability.

On such sites, the potential rewards for investors are substantial. Successful regeneration, by realising the true potential of land which is by definition underexploited, offers the prospect of major capital growth. During the course of our review, a number of commercial organisations have privately shared with us enough of their plans to be clear that their interest, and intent, is serious.

However, the risks are also significant, enough so that there is currently no clamour of investors seeking to take their share. In particular:

- the redeveloped area may fail to retain its value, in which case the value of the investment is lost;
- it may be difficult to secure and retain the commitment of the many different public agencies with interests at stake in the area, in which case time and effort are wasted, and potential returns are lost.

The challenge is to mitigate the risks sufficiently to offer an attractive opportunity for investment.

The leading role in this must be played by the local authority. Apart from its specific role as local housing authority, with a duty to identify five years' supply of housing land as required by PPS3, it also has a general duty to promote the well-being of its area. In pursuit of this, any local authority should be seeking to identify and address the causes of low property values: not just a poor quality built environment, but poor or declining local employment and services, and increasing neglect and crime.

Areas for attention will be identified in the first instance by their low or declining property values, as these represent the key opportunity for potential investors. They will include areas of existing deprivation, but also areas at the cusp of economic decline, where early action may avert the need for stronger intervention later. The presence of low land values alongside neighbouring higher value areas will be a strong marker of potential, as it suggests there is no structural weakness in the local economy or community to prevent recovery. Neighbouring more prosperous areas may also act as an "anchor" to retain the value of new investment in the redeveloped area.

Individual examples of this approach already exist: for instance the Ferrier Estate at Kidbrooke in south east London, which will be redeveloped on a joint basis between the public sector and Berkeley Homes in partnership with a Registered Social Landlord. The prosperity of neighbouring Blackheath is both an indicator of potential and a strong anchor for future value.

As these duties on local authorities already exist, we see no need to add to them. We **recommend** that the Government's guidance in relation to PPS3 and Sustainable Community Strategies should be amended so as strongly to encourage local authorities to consider the scope for drawing new private investment for housing and other development into areas where property values are currently low.

However, this may not be enough. Sustainable community strategies and local development frameworks may paint a strong picture of how the local authority and its partners wish their area to develop; but potential investors will want to look at the future commitment of public funds and delivery of public services which will help to sustain the value of an area.

Local authorities may be able to offer potential investors other assurances.

- Authorities and their partners now have the opportunity to shape the priorities for their area through the Local Area Agreements (LAAs) which they agree among themselves and with Government. In their LAAs they commit to deliver specific outcomes as measured against selected national performance benchmarks. LAAs do not specify exactly how the outcomes will be delivered. In practice, however, local authorities should have at least outline delivery plans in order to be confident that the outcomes can be achieved. Potential investors may not be satisfied by the performance commitments in LAAs and may want the further assurance of specific service delivery commitments.
- Authorities also convene (and often chair) Local Strategic Partnerships (LSPs) in which they engage with public, private and third sector partners to determine local priorities. LSPs play a central role in developing Sustainable Community Strategies and in determining the priorities for LAAs. They are the main forum bringing together public service providers (including the police, the health service and tertiary education) in the area and engaging with private employers and investors. We would expect preferred housebuilding partners to be invited to join, or at the very least to engage with, the LSP.

We **recommend** that local planning authorities should be ready to offer specific commitments to service delivery, consistent with their LAAs, to potential investors in housing regeneration schemes; and should seek the agreement of other LSP members for their preferred housebuilding partners to join the LSP.

Identifying opportunities

Attempts have been made to measure the amount of previously developed land available for redevelopment. English Partnerships' "National Brownfield Strategy, Recommendations to Government," which was published in June 2007, offers its most recent estimates of the area of previously developed land (PDL) and the number of sites now lying derelict or vacant, drawing upon the work done by the National Land Use Database. It also estimates the number of housing units potentially able to be built on sites that are currently "in use" but which have planning permission for redevelopment.

It is sometimes suggested that more PDL is not used because it is not available in the places where housing development is required. There is some truth in this, if PDL is considered in the main to comprise previous industrial or public sites (such as airfields or railway yards) which are no longer required. Such sites frequently become derelict, or carry only low value commercial uses which are unsightly and poor neighbours. However, we consider that that represents too narrow a view of potential opportunities.

Many redevelopment opportunities are also to be found in our towns and cities, in areas where the existing housing is of poor quality and uses the land poorly, and where the communities are dysfunctional or in decline. Pockets of poor value can exist even in the most prosperous local authority areas, caused for instance by “bad neighbour” developments, or where poor physical planning or community management has allowed crime to take a hold.

The Sustainable Communities Plan in 2003 started to make connections between housing and regeneration policies, and these have been carried forward in more recent policy development. This connection will be reinforced by the creation of the Homes and Communities Agency, which was first announced in January 2007 and has been the subject of a recent consultation by CLG².

The new agency will support the delivery of the Government’s housing objectives, but it will bring to the task all of English Partnerships’ accumulated experience in regeneration and redevelopment. For more than a decade EP has been in the business of assembling brownfield sites, decontaminating and remediating land, and undertaking or promoting fresh development, including for housing. English Partnerships has built a reputation with housebuilders and other developers, and enjoys their confidence. The Homes and Communities Agency stands to inherit this reputation, but must continue to show that it is deserved.

However, the Agency’s involvement will ultimately be limited, as EP’s has been, by the public funds which it holds for investment, and by its in-house expertise and management capacity. There are also sensitivities about a national agency playing a leading role in the redevelopment of essentially local sites. While it will be reasonable for the Agency to lead in the redevelopment of major strategic sites, it cannot play that role everywhere.

Return on public investment

Financial support for the long-term regeneration of an area by the Homes and Communities Agency, or any other public agency, may take the form of an equity share in the project. Typically such projects require heavy up-front expenditure, and they are sufficiently risky to deter 100% private sector investment, even though the prospective long-term returns are good. In effect, funding by the public agency covers the risk which the private sector will not take.

In due course, if the project is successful, it will become a more attractive proposition for private investors. At that point a balance needs to be struck between the additional long-term value which the public sector will gain from retaining its investment, and the early value of releasing its stake and recycling the funds into new projects.

We **recommend** that, where the Homes and Communities Agency takes an equity stake in a project, it should have full discretion over when it will best serve the Agency’s wider objectives to dispose of that stake. Each case should be weighed on its merits and there should be no presumption in favour of early disposal.

² *Delivering Housing and Regeneration: Communities England and the future of social housing regulation*. CLG, 2007.

Some local authorities, especially the larger, have the expertise to review local property markets and identify redevelopment opportunities which have the potential to draw in private investment. However, this is not true in every case. We **recommend** that the remit of the Homes and Communities Agency should include providing advice and expertise to local authorities as required.

The Housing Green Paper also describes the range of local delivery vehicles (LDVs) which can be drawn upon to provide leadership for a regeneration plan. Leadership is essential: redevelopment projects require an advocate and champion, whose primary role that is, who will not be distracted by competing agendas (political or otherwise), and who can act as a focus for planning, funding and delivery. Some individual local authorities have played this role very effectively, but private investors remain wary of political and (where there is no track record) management risk. Private finance will be much more readily forthcoming where clear leadership is provided by an independent body.

As the Green Paper states:

Different models of LDVs could combine LA land assets, public funding streams, private finance and the new homes agency and private sector expertise, as appropriate. They could offer benefits, in addition to increasing new housing supply, such as:

- establishing a long-term strategic planning development focus for an estate or wider area between LAs, the new homes agency and the private sector;
- providing a long-term spatial framework for investment and prioritisation of phased development;
- reducing procurement time and costs;
- increasing scale and speed of delivery;
- giving LAs the ability to secure any increase in rising land and asset values over the long term, as opposed to a fixed value in the form of up-front capital receipts;
- access to private finance; and
- being off balance sheet, as appropriate.

It is certainly true that different forms of LDV may be appropriate in different places, but there is also a risk that the process of forming an LDV with a variety of partners can itself cause the kind of delay which discourages private investors, who can be impatient of what they see as bureaucratic delay and hesitant decision-making.

For this reason we also **recommend** that the remit of the Homes and Communities Agency should extend to providing expert advice to local authorities and others as required on how to design, set up and run a suitable local development vehicle. We do not consider that the Agency should routinely be a partner in LDVs, but that must remain an option in relation to particularly complex or challenging schemes.

Business models and community management

The growth in property values from successful brownfield redevelopment takes place over time. The potential exists everywhere, but the opportunity, for both investor and community, is perhaps greatest on larger sites. If fully exploited, the benefit from a first stage of redevelopment can be used to finance and anchor a subsequent stage in a neighbouring area, thus achieving a virtuous spiral to reverse past decline.

A managed, balanced process will generate value that will feed on itself. As confidence returns, values will rise. Rising values will fund the necessary infrastructure and amenities, and draw in higher value employment opportunities. Demand for skilled staff will draw people back to and into the area. Economic growth will enter a virtuous cycle as values roll forward.

These benefits will not accrue by themselves. The commitment of public service providers to maintain their support for an area is essential: our earlier recommendations, for providing assurances through LAAs and involving housebuilding partners in LSPs, will help to achieve this.

That will not be enough. Arguably the greatest risks to sustained value growth are careless maintenance of the physical estate and unaddressed problems of crime or anti-social behaviour. Where these occur, the decline in property values can be frighteningly quick. To secure the sustained growth in property values, which is the great prize for successful developers, will require effective community management.

There is no standard model for community management. It may encompass a wide range of functions, from the maintenance of public areas and the creation of new public spaces to the clearance of graffiti and quick response to nuisance neighbours and other anti-social behaviour.

Regeneration projects and rolling forward value thus have two key characteristics which are foreign to the housebuilders' experience and are not supported by their "current trader" business model. The prospect of capital growth requires patience and a long-term view, which is more characteristic of the "investor" model as described in Chapter 3, and is familiar to many commercial developers. Community management services are not typically provided by housebuilders, or generally commercial developers, but they are the stock in trade of many RSLs and a small (but growing) number of private management companies.

For this reason, opportunities for housing development on large regeneration sites may be particularly attractive for joint ventures. On today's mixed development schemes any or all of the following may be involved:

- a primary developer
- a commercial contractor
- a housebuilder
- a property investment company
- a management company

Each may have their own business model, accepting different levels of risk and making a return by a different mixture of trading profit, capital appreciation and continuing income.

Where the residents are tenants, outright or within shared ownership, the landlord will provide management services in return for a service charge. The picture is more complicated where the residents are full owner-occupiers. The investor in a redevelopment will want to ensure that sales to owner-occupiers do not weaken the business model by creating a possibility that owner-occupied properties fall into neglect or become nuisance neighbours, or simply that owner-occupiers opt out of management services for which only the tenants can be required to pay.

Similar issues arise on any new development where some forms of community energy supply (such as CHP) are provided to residents. The business model and economic benefit from such schemes may depend on residents continuing to use and pay for them; and of course the environmental benefits depend on their being used.

The ramifications of property law are beyond the scope of this enquiry. However, we **recommend** that the Government should commission an early review of relevant law and practice, in particular relating to covenants and leasehold, to ensure that it does not unnecessarily impede the delivery of regeneration and sustainability objectives to the community.

There is no reason why community management services should stop at the boundary of the new development. The quality of the wider neighbourhood may well be a factor in maintaining the value of a development, and community management can offer significant benefits to neighbouring residents. We believe that new development can act as a catalyst for the improvement of a wider area and community management will be a key part of that.

However, there are some issues which will need to be addressed. Where the management company provides services such as the maintenance of public spaces which would otherwise fall to the local authority, local residents will be aggrieved if they are required to pay a service charge on top of their council tax; but equally, residents on the new development cannot be expected to pay for the provision of services to a wider area. One option would be for the local authority to contract with the management company for relevant services; but any such contract must be subject to competition under the usual rules.

Similar issues undoubtedly arise in relation to commercial and mixed developments, where the notion of long-term estate management is well established and occupiers expect to be charged for management services. So there is experience available from which to learn.

Further exploration of the issues around community management would go beyond the scope of this Review. However, we are convinced that it is a key to successful large scale regeneration which draws in private investment and contributes to long-term housing supply far beyond what can be achieved by direct public funding.

We **recommend** that the Homes and Communities Agency should commission further work with the housebuilders and commercial developers, property management companies and local authorities, on how community management on new housing developments can act as a stimulus for regeneration of wider areas and communities.

This learning should then be made available to local authorities and local development vehicles as a stimulus for community management to be considered in redevelopment projects.

Summary of recommendations in this Chapter

- Government should review the advice on local planning authorities' flexibility for negotiating lower levels of developer contribution on marginal sites than set out in their plan, and should consider the scope for specifying clawback in the event that the housebuilder, thus freed of obligations, makes additional profits. CLG should work with the Homes and Communities Agency, local government and the development industry, either to develop a new standard methodology, or to adopt an existing methodology, as a basis for determining the level of mitigation.
 - All local planning authorities should review the scope for forming partnerships with one or more developers, in order to ensure that the viability for development of previously developed land in their areas is fully recognised and exploited.
 - The Government's guidance in relation to PPS3 and Sustainable Community Strategies should be amended so as strongly to encourage local authorities to consider the scope for drawing new private investment for housing and other development into areas where property values are currently low.
 - Local planning authorities should be ready to offer specific commitments to service delivery, consistent with their LAAs, to potential investors in housing regeneration schemes; and should seek the agreement of other LSP members for their preferred housebuilding partners to join the LSP.
 - Where the Homes and Communities Agency takes an equity stake in a project, it should have full discretion over when it will best serve the Agency's wider objectives to dispose of that stake. Each case should be weighed on its merits and there should be no presumption in favour of early disposal.
 - The remit of the Homes and Communities Agency should include providing advice and expertise to local authorities, as required, to review local property markets and identify redevelopment opportunities which have the potential to draw in private investment. Its remit should also extend to providing expert advice as required on how to design, set up and run a suitable Local Delivery Vehicle.
 - The Government should commission an early review of relevant law and practice, in particular relating to covenants and leasehold, to ensure that it does not unnecessarily impede the delivery of regeneration and sustainability objectives to the community.
 - The Homes and Communities Agency should commission further work with the housebuilders and commercial developers, property management companies and local authorities, on how community management on new housing developments can act as a stimulus for regeneration of wider areas and communities.
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CHAPTER 6

INFRASTRUCTURE AND PLANNING GAIN



The developer of any site needs to look beyond the site boundary. For a new home to be fit for occupation it must be connected to, or served by, a wide range of local infrastructure.

Figure 13: Infrastructure required for new housing development

Networks	Transport	Roads	Public
		Rail	Mixed
	Utilities	Gas	Private
		Electricity	Private
		Telecoms	Private
		Water	Private
		Drainage	Private
Services	Education	Schools	Public
		Higher & Further	Public
		Nursery	Mixed
	Health	Primary care	Mostly public
		Hospitals	Public
		Ambulance	Public
	Public safety	Police	Public
		Fire	Public
	Transport	Public transport	Mixed
	Waste	Collection & disposal	Public
Facilities	Green	Public spaces	Mostly public
		Recreation	Mixed
	Other services	Flood defence	Public
		Culture	Mixed

On urban infill and other small sites, it is a relatively straightforward matter to make connections with existing networks, and the additional load on social infrastructure (services and facilities) is trivial.

However, on major sites for new housing development, the provision of infrastructure is a more significant challenge, arising on two fronts: planning and funding. Given the growing share of development taking place on large sites, the challenge is increasingly urgent.

Infrastructure is provided by both private and public sectors. Broadly speaking, the private sector provides most fixed infrastructure networks and related services (all the major utilities), plus most public transport services. The public sector is responsible for the highways network and for most services (education, health, policing) plus related fixed infrastructure (schools, hospitals etc).

The differences are significant. Like housebuilders, the private sector companies involved in infrastructure provision work to long financial and planning horizons, and seek to make a return on their investment. They are driven by the profit motive and in most sectors competition is strong. The utilities providers work to their own business cycles, and any development site, however large, will only represent a small part of their future business.

The public sector has a limited investment budget and shorter horizons. It has a duty to provide services, but the quality of those services will depend heavily (though not solely) on the quality of the fixed infrastructure. Central funding for services is distributed through needs assessments which are generally calculated in arrears, so there may also be a lag in the provision of new services.

Thus, while infrastructure provision is essential for a new housing development, that development only represents a small part of the business plan for the infrastructure providers. It may offer a business opportunity, or create a new service obligation; but the providers may still have other priorities. It is the housebuilder's responsibility to engage with the providers, rather than the other way round, and this can be difficult where planning cycles do not match. Unfortunately this is all too likely to be the case, as shown in Figure 14, originally produced in 2006 for the South East of England Regional Assembly.

One contributor to the review made a related point on the mismatch between private and public sector planning horizons:

"Problems are exacerbated by incompatibility of utility company and local authority planning cycles – for example Thames Water plan in seven year cycles but have access to detailed LDF [Local Development Framework] data for the first three years of that cycle only, inhibiting their ability to correctly forecast funding requirements to Ofwat. Moreover there are no straightforward mechanisms for organisations such as the UDC [Urban Development Corporation] to engage with utilities regulators regarding major infrastructure provision." *[London Thames Gateway Development Corporation]*

The Planning White Paper¹ published earlier this year announced various changes designed to expedite the preparation of Local Development Frameworks and we welcome that. The White Paper also acknowledged the importance of a more co-ordinated approach to the provision of infrastructure:

¹ *Planning for a Sustainable Future* CLG and others, 2007.

"We propose to take a forward-looking approach to planning infrastructure provision to ensure the timely delivery of infrastructure. This will provide developers with confidence that the necessary infrastructure will be delivered. There is a need to move away from the specific planning of infrastructure delivery to a more strategic and holistic view, which takes infrastructure decisions on roads alongside those of, for example, schools, hospitals, cultural and community facilities".
(Page 130, paragraph 8.26)

Figure 14: Planning Cycles in the South East

2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	
		Economic Development – SEEDA Corporate Plan												
		Economic Development – SEEDA Regional Economic Strategy												
			Housing – RHB allocates over 2 years											
			Education & Training – LSCs Capital Investment Strategy											
			Education & Training – HEFC Corporate Strategy											
Education & Training – HEFC Business Plan														
Health – NHS funding cycle														
		Arts & Culture												
Sport														
		Ofwat – Business plans based on a five-year investment schedule												
Waste – Regional Waste Strategy on a 20–25 year basis														
	Electricity Price Control Review				Gas Price Control Review	Electricity Price Control Review				Gas Price Control Review	Electricity Price Control Review			
			Gas & Electricity – Ofgem Corporate Plan											
Flood Defences – Coastal and river strategies have a 50 year time horizon														
	Rail – Access Charges Review price setting					Rail – Access Charges Review price setting								
	Roads – Highways Agency Corporate Plan													
			Roads – Highways Agency Business Plan		Roads – Highways Agency Business Plan		Roads – Highways Agency Business Plan		Roads – Highways Agency Business Plan		Roads – Highways Agency Business Plan			

Produced in May 2006 by SQW Consulting for the South East of England Regional Assembly

This also is welcome; but it is important that the private sector infrastructure providers should be engaged too, since their non-involvement can be equally damaging to the prospect of development on a site.

A major new housing development will not only require connections to existing infrastructure, but may add to existing pressures on that infrastructure. This most visibly applies to the impact on roads. A new development will generate new traffic flows on existing roads and may cause congestion on previously free-flowing routes, or may exacerbate congestion that is already occurring.

Although the effects are less immediately visible, there may also be capacity issues with both water and drainage, particularly in the already heavily populated south east of England. When residents move into a new development, the demand for water and drainage in the areas where they used to live will reduce, but possibly not in proportion: newly formed households create additional net demand, and local networks may still feel the strain even if the national aggregate demand is unchanged.

These issues are not new. The Treasury's 2005 Pre-Budget Report launched a policy review to develop a co-ordinated, long-term approach for the delivery of infrastructure to support housing growth. The review's recommendations are summarised in the 2007 Pre-Budget Report², and set out in more detail in the Housing Green Paper and the Planning White Paper.

Among the measures noted in the Pre-Budget Report are:

- £1.7 billion of targeted funding for infrastructure in Growth Areas, the Thames Gateway, New Growth Points and eco-towns, including £300 million to continue the Community Infrastructure Fund
- CLG is to lead a programme of three-month bilateral reviews with other infrastructure departments to test the outcomes of the review in specific locations and for specific types of infrastructure.

We welcome the proposals to set aside funding for infrastructure and to ensure that its importance is recognised in other spending programmes. However, Government would be the first to acknowledge that the public purse cannot stretch to cover all the investment that is required to support public infrastructure networks and services as outlined in Figure 13.

It is now generally accepted, including by the development industry, that the public should benefit from a share of the profit when planning permission is granted for an area of land ("planning gain"). At present, developer contributions are delivered through agreements negotiated under section 106 of the Town and Country Planning Act ("planning obligations"), to which Chapter 5 has already referred.

The use of planning obligations has developed over time, well beyond what appears to have been envisaged by the original legislation, and to such an extent that some agreements now push at the boundaries of what section 106 authorises. They are an effective device but not a very efficient one, since they require a separate agreement for each development: as illustrated by the London Development research cited in Figure 10, and in many other places, this can cause significant delay to development.

In her Review of Housing Supply, therefore, Kate Barker recommended the introduction of a new Planning-gain Supplement (PGS) – a levy on the planning gain that arises from the grant of planning permission. The Government consulted on proposals to introduce a Planning-gain Supplement in December 2006³. Subsequently, in the Housing Green Paper, the Government invited stakeholders to put forward alternative approaches for capturing planning gain.

The Pre-Budget Report 2007 has announced PGS is not now to go ahead. Instead, the Government intends to legislate to empower local planning authorities to apply planning charges to new development, alongside negotiated contributions for site specific matters and for affordable housing. The Minister of Housing made a statement on 9 October outlining the Government's proposals for the new planning charge⁴.

² *Meeting the aspirations of the British people – the 2007 Pre-Budget Report and Comprehensive Spending Review* HM Treasury, 2007.

³ *Changes to Planning Obligations: a Planning-gain Supplement consultation* CLG, 2006

⁴ www.communities.gov.uk/statements/corporate/planningreform

We welcome the decision not to proceed with PGS, which was widely opposed by housebuilders for a variety of practical reasons which they considered would have added risk to their business and thus put production in doubt. However, it remains desirable that the weaknesses of the planning obligations regime should be addressed; and it is essential that the new planning charge should not impede new housebuilding by imposing additional risk or undermining the viability of sites, as discussed in Chapter 5.

Large sites

In addition to the impact on off-site infrastructure, the planning and cost of infrastructure can also be a significant issue on large sites which are not built out immediately, or where more than one developer is active.

It is likely that the local planning authority and the utilities networks will require suitable provision to be made for the whole of a large site even if the developer does not plan to build it out immediately. A developer budgeting for the costs of building out a new site will therefore allow for the cost of adequate on-site infrastructure for the whole site, and will seek to recover contributions to this cost if parts of the site are subsequently sold to other developers.

Similarly, the local planning authority, in granting planning consent, may agree planning obligations with the developer to pay for (or make a contribution to) the costs of additional local infrastructure required by the site, such as a new school or classrooms, a larger primary health clinic, or improved waste collection and distribution facilities. These obligations may not be limited to what is required by the first stage of site development, and their funding will be part of the developer's business plan for the whole site.

The position is more complicated when a large area is identified for housing or mixed development but consists of several sites in different ownership. It is plainly unreasonable for the developer of the first site to be expected to carry the whole burden of providing the infrastructure (whether on-site, for access or to support local services) for the whole area. But without that infrastructure the site may not be viable.

Where the land has been regenerated or assembled by a public agency (eg the local authority, English Partnerships or the Regional Development Agency), that agency can fund the infrastructure and recover its cost as individual sites are sold to developers. This is a feasible model in development or growth areas, and may be particularly suited to large regeneration sites. However, it works better for on-site or access infrastructure than for off-site, and requires up-front public funding (or borrowing) until the sites are sold.

But not all large areas of development land are in public ownership, and public funding is limited. Government guidance set out in Circular 05/05⁵ allows for developer contributions to be pooled across a number of developments where their combined impact creates the need for infrastructure. The guidance also allows for contributions from developments that come forward after a piece of infrastructure has been provided, so long as the need for infrastructure and contributions are set out in advance.

⁵ *Planning Circular 05/05: Planning Obligations* ODPM, 2005

A similar approach, which allows infrastructure to be provided at the start of development but requires no public funding, is the attribution model, described in the box. This is based on a model being used in Australia and other countries, adapted for our planning system.

The attribution model

Under the attribution model, the whole or part of the cost of new infrastructure which is needed for new development across an area is met by proportionate contributions by the developers of sites in that area; and funding for the infrastructure is available even if not all the sites are developed at the same time.

- The local planning authority identifies the area including development sites which will benefit from the new infrastructure as the attribution area.
- A proportionate share of the cost of the new infrastructure is attributed to the development sites on some appropriate basis (eg, most simply, pro rata to square metres).
- A company is established, or an existing company is selected, to construct the infrastructure.
- Where not all sites receive planning permission at the same time, the infrastructure company is then able to borrow against its expectation of future income. If the company is a private company, then this borrowing will not count against the public borrowing requirement.

The attribution model can be used for a wide variety of types of infrastructure, and attribution areas can overlap or be overlaid on one another, so long as the cumulative burden does not render individual sites unviable.

The model has other virtues. It can be used even where the whole attribution area is owned by a single developer. It does not require the whole site to be built out at the same time. It also prevents freeloaders from taking advantage of infrastructure paid for by others. Key to the model is the formal designation of the attribution area, which underpins the ability of the infrastructure company to borrow at favourable commercial rates against its expectation of future income.

The Government's proposed statutory Planning Charge will build on these approaches and should help address the cumulative impacts of development that are more difficult to address through planning obligations. We **recommend** that the Government considers how an attribution model approach could fit within the Planning Charge.

Summary of recommendations in this Chapter

- The Government should consider how an attribution model for contributions from planning gain to infrastructure provision could fit within the Planning Charge.
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CHAPTER 7

QUALITY AND REGULATION



Commitment to quality, Regent's Square, Grapenhall.

Future generations will not thank us if growth in housing supply is achieved only by delivering large numbers of poor quality homes. If the quality of new housing is poor, in design or construction, it will rapidly become a cause of fresh economic and social problems, expensive to resolve and with consequences well beyond the housing itself. As stated in a recent report:

The last time a building programme was attempted on anything like the current scale ... was 40 years ago. The legacy of that project has too often been tracts of poor-quality housing and the social problems that go with it. We are now demolishing much of the stock built during that great expansion. This time we have to do better.¹

Lessons from the past:

Aylesbury Estate, London Borough of Southwark

The Aylesbury Estate is located in South East London, between the Elephant and Castle and Burgess Park. It was built between 1963 and 1977.

The Estate provides 2,759 dwellings for approximately 7,500 residents in a series of low, mid and high rise large panel system blocks, covering an area of 28.5 hectares. Originally totally occupied by local authority tenants, approximately 12% of the dwellings are now in private ownership through 'right to buy'. The Estate included a nursery, a day centre and health centre, but went through a period of decline in the 1980s. It now exhibits many of the physical and social problems identified with "system built" estates constructed during this era.

In 1999 the estate was awarded New Deal for Communities status and given £56m funding from central government over 10 years. It was expected that this money would bring in £400m of housing association funding as part of a stock transfer deal. However, the tenant ballot on transfer was rejected by 73% of the tenants on a 73% turnout.

In 2005 the London Borough of Southwark decided that rather than spend £350m updating the estate to basic living standards, they would order its demolition and replace the dwellings with modern houses controlled by a housing association. The plan involves increasing the density of housing from the current 2,700 units to 4,900. 2,288 units would remain social housing and the remainder would be for sale. The sale of these units is planned to fund the whole scheme.

¹ *What home buyers want: Attitudes and decision making among consumers* CABE, 2005

We have therefore taken as implicit in our terms of reference that the additional housing supply is to be of a suitable quality in design and construction. This does not mean gold-plating. It is no part of our remit to recommend measures whose effect is to make new housing even less affordable than it is today. But building to a low standard, where new housing incurs additional cost because defects in design or construction have to be expensively remedied after occupation, is a false economy. Housing represents a total value of £3,575 billion or 59% of the nation's wealth², and the national interest will not be served if its poor quality becomes a drain on future investment.

A test of quality must not add to the regulatory burden; otherwise it will disincentivise some marginal development. It must also be consistently applied, otherwise it will add to the arbitrariness of the system as perceived by developers. At the same time it must not substitute either for the democratic right of local planning authorities to decide planning applications in their areas, or for the business judgement of the developer in terms of what can be profitably sold.

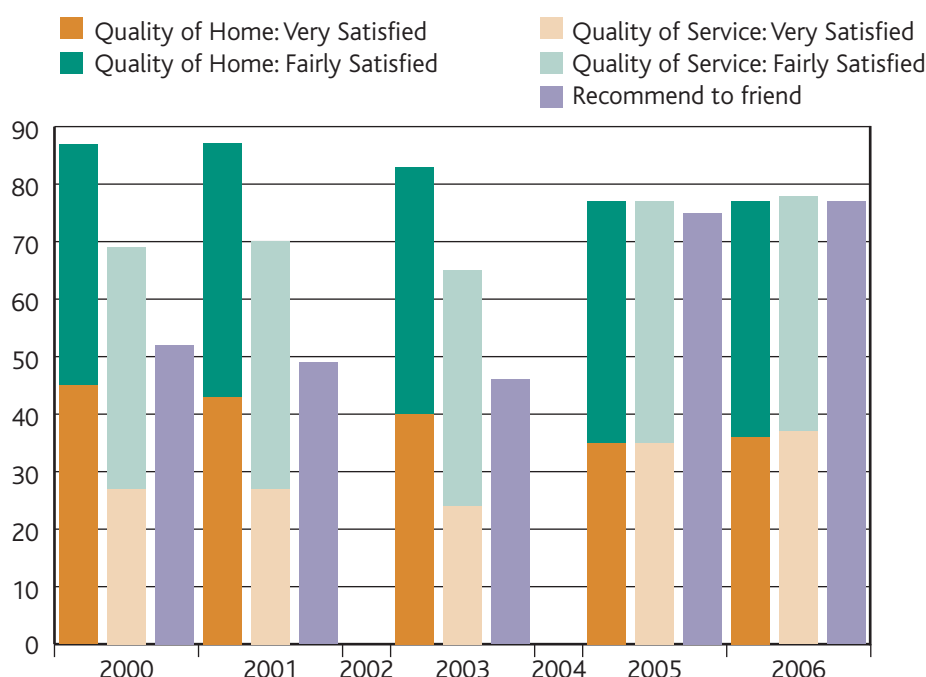
Quality is difficult to measure directly. However, one proxy measure which is available is customer satisfaction. One of the first initiatives by the independent Housing Forum (which was created following a recommendation by the Construction Task Force, chaired by Sir John Egan, in 1998) was to commission an annual survey of customers' satisfaction with both the service and the product delivered by housebuilders.

The survey has asked respondents:

- whether they are very or fairly satisfied with the quality of their new home
- whether they are satisfied with the overall quality of service received
- whether they would recommend their housebuilder to a third party.

The results are subjective; but they suggest that the overall quality of new housing is not all that it might be.

² National Statistics, 2005 figures: <http://www.statistics.gov.uk/cci/nugget.asp?id=479>

Figure 15: Customer satisfaction with housebuilding, 2000-2006

Source: Housing Forum (2000–03); HBF (2005–06)

Note: no survey was conducted in 2002 or 2004

The first three surveys were undertaken by MORI on behalf of the Housing Forum, but a funding shortfall caused a hiatus in 2004, and in 2005 responsibility was taken over by the Home Builders Federation. There is no reason to doubt the validity of the HBF survey results, but it would be more satisfactory for a survey of this kind to be commissioned and undertaken independently.

In the final report of her review of housing supply in 2004, Kate Barker recommended that:

The housebuilding industry must demonstrate increased levels of customer satisfaction:

- The HBF should develop a strategy to increase the proportion of house buyers who would recommend their housebuilder from 46% to at least 75% by 2007. Over the same period, levels of customer satisfaction with service quality should rise from 65% to at least 85%...

If progress is unsatisfactory, or if consumer satisfaction levels do not rise substantially in the next three years, the Office of Fair Trading should conduct a wide-ranging review of whether the market for new housing is working well for consumers.³

³ *Review of Housing Supply: Delivering Stability: Securing our Future Housing Needs -Final Report*, page 113, recommendation 32. HM Treasury, 2004.

We note that the Office of Fair Trading's housebuilding review now under way has a particular focus on the customer interest, as recommended by Kate Barker, and we welcome that.

Unfortunately, within the housebuilding market as it is today, the incentives for quality are weak. With demand exceeding supply, and mortgages at 40% of take home pay⁴, house buyers consider price, size and location; and if satisfied on those fronts, have little opportunity or incentive for further choice.

Housebuilders must build to meet regulatory and warranty standards. But in a market which does not offer a cost-effective return for higher quality, there is little incentive for them to go further; and many do not. Given the state of the market, the larger housebuilders are not strongly susceptible even to reputational risk.

The picture is not wholly uniform. Some parts of the market do still recognise and pay a premium for quality, in particular:

- among smaller firms, operating wholly in local markets, which are more likely to be motivated by reputational risk: their business depends on their good name in the market which they serve;
- in self-build, where by definition the buyer is taking a closer interest in the quality of the product;
- at the upper end of the market, where buyers with more disposable income are more likely to recognise and value long-term quality in design and construction, not least in the inclusion of energy-saving and other environmental features.

Other housebuilders also aim for quality, but do not always feel they are rewarded for it. The hard fact is that, across most of the current market, aiming for high quality is a questionable commercial strategy which often adds little to shareholder value.

Housebuilders are not to be blamed for responding to the market. Their first duty is to their investors, and if the best returns are to be achieved with little regard to quality beyond minimum standards, so be it. But in this situation we consider that Government would be well justified in acting to strengthen the hand of house buyers, especially since to do so will also underpin the housing growth agenda and reduce the longer term risks, such as have been experienced with some of the post-war and 1960s housing developments.

We accordingly **recommend** that Government should use its power in the market by announcing that it will cease dealings (including, in particular, land sales and the payment of housing grants) with any housebuilding firm which fails to achieve a predetermined standard of customer satisfaction. This policy should extend to all public agencies, in particular the Homes and Communities Agency. Two years' notice should be given to allow housebuilders time to rethink and reshape their business practices. Special arrangements would be required (transitional provisions, or exemptions) to ensure that new entrants to housebuilding and small firms, for whom information on customer satisfaction is not available, were not disadvantaged.

⁴ This percentage is for an interest-only mortgage. A new repayment mortgage (principal plus interest) absorbed 49% of take-home average earnings in the second quarter of 2007; by the end of 2007, that figure is likely to exceed 50%. Source: Capital Economics. The Housing Market Analyst, Volume 3/2007.
<http://capitaleconomics.com/clientarea/articles/Housing%20Market%20Analyst%20Vol%203%20Final.pdf>

In support of this we also **recommend** that the annual customer satisfaction survey should be commissioned and funded by Government, and run independently of any industry interest.

Quality in design

Planning conditions may stipulate quality of certain aspects of design in relation to public areas, access and facilities, and to preserve local character. This is not unreasonable: local planning authorities have a legitimate interest in preserving the character of their areas, including in terms of the built environment. But there is often little consistency in how planning conditions are applied, not just between local authority areas but even between schemes in the same area. As noted by housebuilders Croudace in their evidence to the Review:

"The greatest frustration and difficulty for our business is the number of times that a decision by members of a Local Planning Authority goes against the recommendation of their professional officers. My Company is recognised for quality design and we work hard on public consultation, pre-application discussion with officers, and designing a scheme which in all respects complies with the various requirements. On most occasions the schemes receive a positive recommendation by the officers of the Local Planning Authority but on all too many occasions members then refuse them. In most cases the subsequent appeal is successful."

The Royal Institute of British Architects made very similar points in a submission to the Review.

"The biggest problems encountered by developers and architects alike arise out of a chronic lack of skills and resources within local planning authorities. That is why we support efforts by the Government to strengthen local planning departments and the design skills of both planning officials and elected councillors... Developers and architects continue to find themselves at the sharp end of refusals on spurious design grounds while homebuyers also suffer as poorly-designed schemes are nodded through the planning process."

Over-zealous planning requirements are sometimes also allowed to extend into areas which are more properly covered by other regulatory regimes, or left to the market. One consequence has been that standardised approaches to design and construction (including, but not only, MMC solutions) have been disincentivised: the potential cost and time savings to housebuilders are outweighed by the additional planning risk. A local planning authority may legitimately require that the appearance of the elevations (external walls and roof) of new homes should be suitable for the area, but should not make further stipulations about construction methods which are properly covered by building regulations.

The Commission for Architecture and the Built Environment (CABE) has a statutory role in promoting good design: in effect, in separating the ambition for quality from the expression of prejudice. CABE supports a range of schemes to promote higher design quality in new housing schemes, and over the past three years has undertaken a series of regional studies of design quality, appraising schemes against its Building for Life standards. The results are shown in Figure 16. They are controversial and are not accepted by all in the housebuilding industry. The standards do not purport to cover all aspects of design quality. Nonetheless the results suggest that new housebuilding is falling some way short of a desirable design standard.

Building for Life

In 2002, CABE and the Home Builders Federation, in association with others, published the Building for Life standard, which was specifically developed for new housing schemes. Housebuilders may submit their schemes for assessment against the standard, on an entirely voluntary basis, and may receive a Gold or Silver Standard award as a mark of their quality.

The Building for Life standard poses 20 questions against which a scheme can be assessed, covering:

- Character
- Roads, parking and pedestrianisation
- Design and construction
- Environment and community

The questions relate mainly to the scheme as a whole, rather than to individual buildings within it. The nature of some of the questions makes the standard more obviously relevant for medium and large schemes than for single units or small developments.

Schemes that meet 14 of the 20 questions are eligible to apply for a Silver standard, and schemes that meet 16 or more will be considered for a Gold standard. To date, 24 Silver standards and 25 Gold standards have been awarded.

CABE operates a design review service for significant development schemes (including, but not only, housebuilding schemes), and has published guidance⁵ on how the design review panel assesses schemes. In November 2006 CLG issued a letter⁶ to local planning authorities drawing their attention to this service and inviting them to take advantage of it.

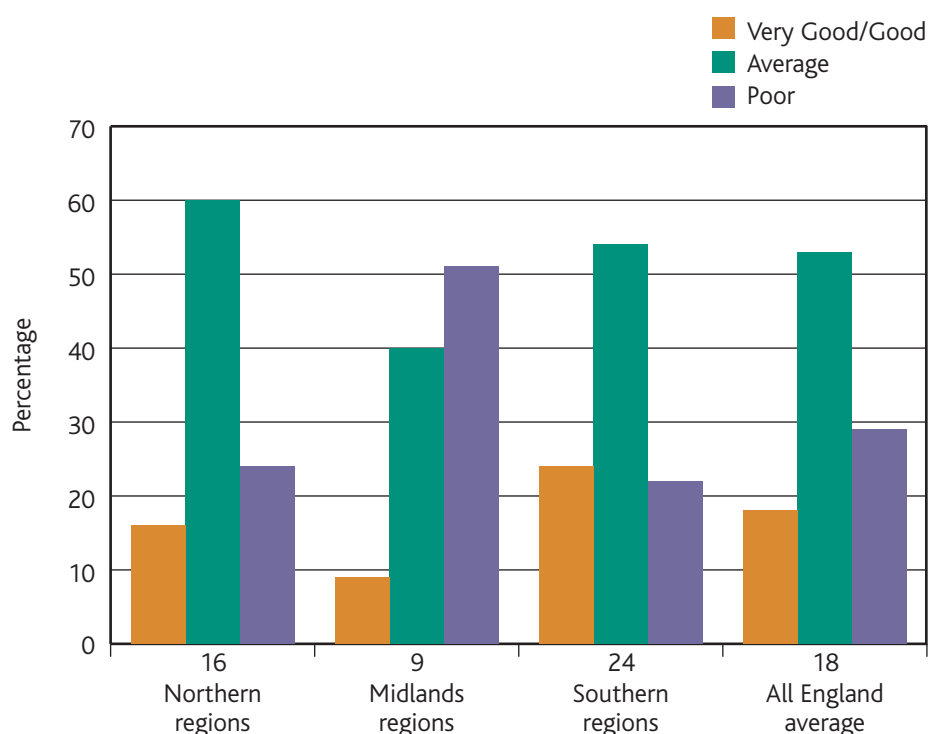
There are now also six regional design panels which offer a similar service. CABE has published advice⁷ on how to set up and run a design review panel, and a number of individual local authorities have their own design panels.

⁵ Design review: *How CABE evaluates quality in architecture and urban design* CABE, 2006.

⁶ *Planning Applications: Arrangements for consulting Commission for Architecture and the Built Environment as a non-statutory consultee* CLG, 2006

⁷ *How to do design review: Creating and running a successful panel* CABE, 2006.

Figure 16: How far the Building for Life standards are being met



Source: CABE

All of these are opportunities to highlight excellence in design and provide assistance both to developers and to planning authorities. However, they are voluntary; schemes do not have to be submitted for assessment. The direct commercial rewards for schemes assessed as high quality (and the penalties for low quality) are limited. Moreover, the existence of numerous different panels creates a risk, perceived if not real, that different standards may be applied by different panels or in different places. Overall, a housebuilder mindful to secure good value for investors may not see any great commercial benefit from design review.

We believe that design review is a valuable process, but it needs to offer more tangible rewards to housebuilders, and to be more transparently consistent. We therefore **recommend** that there should be a single design review process for housebuilding, arranged and available nationwide. The assessment might take Building for Life as a starting point, but be expanded to make it equally apt for small developments, and to cover quality of the individual building as well as of the whole scheme. English Partnerships' published Quality and Price Standards provide a good illustration of how design yardsticks can be developed which incorporate Building for Life but go into all aspects of design.

We expect that demand for the review service would be high and some phasing-in arrangement might be needed. But we envisage that in the long term it should be available for all developments, though its benefits are likely always to be greatest on large sites.

We also **recommend** that this process should allow for type approval of standardised designs, including those using MMC techniques. Type approval would not substitute for the local planning authority's right to require developments whose appearance is suitable for their neighbourhood.

We understand that the Government is planning to undertake a "light touch" review of CABE. We **recommend** that this review should consider CABE's possible role in relation to the housebuilding design review process: in relation both to the new assessment standard and the design review process itself.

We then **recommend** that there should be a presumption that any development proposal which passed the assessment process, for instance by receiving a minimum score against published criteria, would not be subject to any further objections or conditions in relation to quality imposed by the planning authority. Applications might of course still be refused on other grounds.

The planning authority might still refuse consent, and the developer appeal against that refusal. However, the design review would be a relevant consideration for the inspector considering the appeal. If the inspector upheld scheme proposals which had passed the assessment process, or rejected proposals which had failed, the losing party would then become liable for the full costs of the appeal process, including the costs of the other side. In practice this would work as a strong incentive for developers to submit plans whose quality passed the design review test (and not to persist with plans which failed the test), and a disincentive to local planning authorities to impose additional or different conditions.

There would be no obligation on either the planning authority or the developer to refer an application for design review; but neither would they be able to prevent a reference being made. The option to refer would be available for any new housebuilding application, large or small. However, we imagine that its advantages over the current system would be greatest, for both the developer and the planning authority, in relation to major new developments, and least worthwhile in relation to the smallest sites.

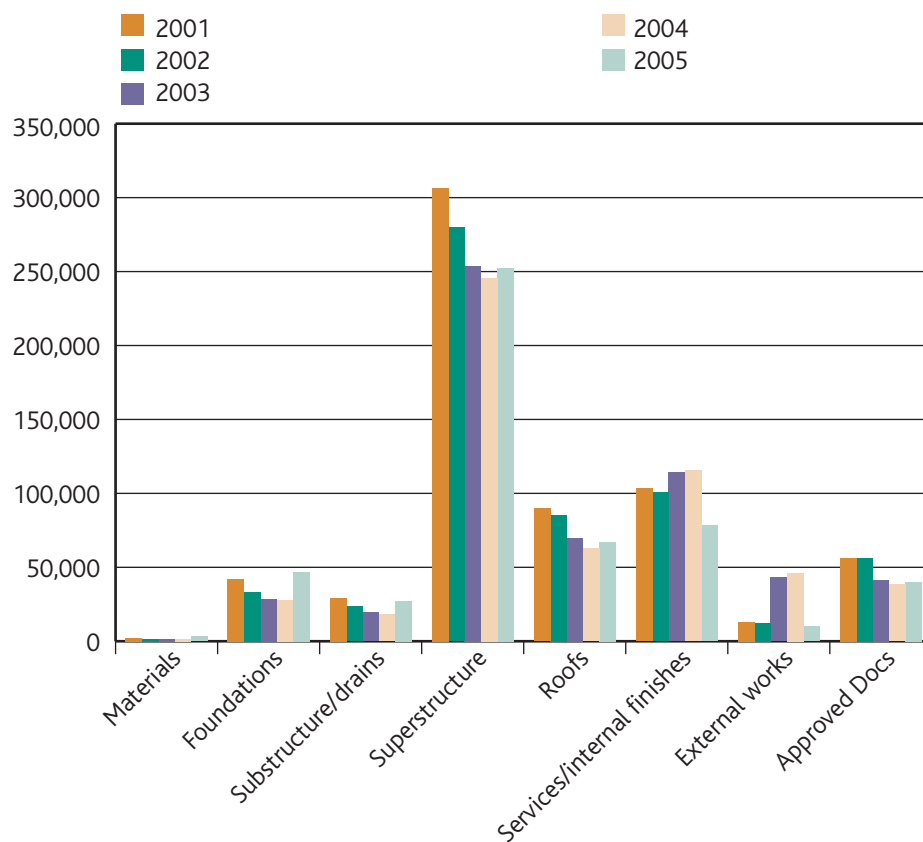
The cost of design review would be met from fees payable in the first instance by developers, though there is a case for a contribution from the local planning authority where they call for the review. Special provision or preferential rates might be desirable for small developments.

At first sight this proposal may appear to be an additional expense and administrative hurdle for developers. In practice however it would be a substitute for the current process whereby proposals are the subject of extended negotiations with planning officers before they are formally submitted, causing substantial delay and uncertainty which inhibit development, add to developers' costs, and are a factor in excluding new entrants to the housebuilding market. It would assist local planning authorities, particularly the smaller ones, by ensuring that expert help was available to secure good quality developments in their areas. It would assist developers by reducing unpredictability in both timing and specifications. And it should also reduce the number of applications going to appeal.

We believe that, once implemented, this proposal has the potential to deliver significant improvements in the quality of new housing developments, since its effect would be to deliver smoother and faster planning consent for good quality schemes while exposing and disincentivising poor quality. The first occasion that a poor quality scheme failed at planning appeal stage on the basis that it had failed the design review assessment would send a shockwave through the housebuilding community and lead to the minimum-quality business model being substantially rethought.

Quality in construction

Figure 17: Defects recorded in new homes, by NHBC standards code



Source: NHBC

While good quality in design is an essential first step, neither the interests of house buyers nor the wider public interest will be served unless it is followed up in delivery. Housebuilding standards are currently maintained through a regulatory framework with two main (entirely separate) components. Unfortunately, neither component is as effective as it might be.

- Building Regulations set out basic requirements for the health, safety and welfare of building users and the environmental performance of buildings. However these are essentially minimum standards: compliance with Building Regulations is necessary, but not sufficient, to ensure good quality. Moreover, as is candidly acknowledged in the Communities and Local Government's recent discussion paper "The Future of Building Control,"⁸ a range of stakeholders now believe that levels of compliance with and enforcement of the Regulations are patchy, and enforcement is weak.
- Industry warranties provide cover for the purchasers of new (and refurbished) homes against defects and structural failure for a limited period of time. There are currently three companies which provide cover for new homes: NHBC, Zurich and Premier. Defects warranty is *de facto* obligatory for new homes as lenders will not provide finance without it. However, some concern has been expressed that in practice the caveats included in warranties do not offer adequate protection for consumers.⁹

Some of these issues are recognised in "The Future of Building Control." Contributors to CLG's review have stated that

"There is a degree of confusion around the interface between building control and other relevant regulatory regimes and a sense that they often duplicate and conflict... Compliance with some parts of the regulations is low... Enforcement could be improved and sanctions are weak."

Although it was not a main focus of our terms of reference or our call for evidence, a number of our own contributors have repeated these messages. A recent report¹⁰ by the Building Control Alliance comments that:

"The current enforcement process (for Building Regulations) is cumbersome, time consuming and limited in options. It fails to differentiate on the scale of non-compliance or associated risk. It is ineffective as a deterrent to persistent offenders."

The building control system is not broken; but it is clearly creaking.

It is unclear how far concerns about building control relate specifically to housebuilding. However, many new homes are built by smaller firms who may have less ready access to up-to-date technical information, or the capability to act on it; and house buyers are typically less able than commercial buyers to identify, let alone challenge, inadequate work. We understand that in the light of responses to "The Future of Building Control" CLG will be bringing forward a formal consultation paper shortly, which we welcome. We hope that it will give due recognition to the Government's wider priorities for housebuilding.

⁸ *The Future of Building Control* CLG, 2007

⁹ See for instance the Inspector Home website: www.inspectorhome.co.uk

¹⁰ *A building control system for the 21st century* Building Control Alliance, 2007

As part of its warranty service, the NHBC sets out detailed building standards to which its members subscribe and which it enforces through a series of checks and inspections. It then issues an NHBC warranty certificate covering structural failures and other specified areas of cover. The availability of these certificates is a valuable assurance for house buyers and has real commercial value for housebuilders: an NHBC certificate has real weight in the market, and NHBC has an international reputation as a centre of excellence and authority. NHBC has pointed out to us that its business model depends on inspectors working with housebuilders to improve standards and thus to minimise the number of warranty claims, and we agree that this process makes a constructive contribution to the quality of work on site.

We are, however, concerned about the ambiguous position of warranty providers where they provide cover for the home buyer but have commercial relationships with the builders. Buyers sometimes feel that the weight of the industry is arrayed against them and this is not a good sign of standards being maintained, let alone of customer care. We understand that the Office of Fair Trading's current review of housebuilding is specifically considering whether consumer protection for house buyers is adequate and we look forward with interest to its findings.

Housebuilders are also dissatisfied with the regulatory regime as it is. They find it hard to understand the respective scope of planning and building regulations, particularly as environmental requirements are increasingly stipulated under both systems. They are also concerned by the increasing complexity of standards: if the average builder on site does not understand what he is being required to do, non-compliance is a constant risk.

We do not think that either house buyers or the wider public are well served by the current regulatory framework. The building control regime provides house buyers with a good assurance that new homes will not fall down, make them ill, or expose them to risk of fire. But data, expert opinion and anecdote alike suggest they cannot be so confident that their new home will be free of other significant faults. As the rate of housebuilding increases, to achieve the target for 2016, the regulatory regime will be further stretched, and quality of construction will be at increasing risk. The absence of market incentives for quality will increase the pressure on standards.

That will not be an acceptable outcome. We do not want to create a new generation of sub-standard homes.

We think therefore that the existing regulatory regime needs to be both toughened and simplified. These are not contradictory. Toughening will be achieved by more effective enforcement; simplification by a more transparent, uniform regime which delivers predictable outcomes and a level playing field.

We accordingly **recommend** that a new strong regime be created to provide assurance of high standards in the construction of new homes, incorporating compliance with planning conditions, building regulations and warranty in a single scheme. The new regime would need to be carefully designed, as it would incorporate both statutory and non-statutory elements. It would need to be overseen jointly by CLG, representatives of building control and warranty providers.

At the heart of the scheme we envisage that for each new home there should be a single record, in the form of a “log book”, which would certify progress against building control and warranty requirements and any relevant planning conditions. The log book would be compiled during construction and the housebuilder would be responsible for ensuring its completion. Entries would be signed off either by an inspector or by self-certification (including by a Competent Person, as under the existing Building Regulations scheme). There would be a single programme of planned site visits at key stages, including completion, plus random spot checks on certificates.

On sale of the new home, the log book would be handed over to the owner as a reference document and guide for construction standards and maintenance.

The log book would not be a continuing record of ownership (as with vehicle log books), nor would it be refreshed on sale to second and subsequent purchasers (as with Home Information Packs). But it would provide a permanent record that a new home had been constructed to meet regulatory and warranty standards. So it would offer in simple form an assurance to purchasers against sub-standard construction.

The new regime would be funded by fees set on a standard scale. Where site visits revealed failures on the ground in relation to any of the log book requirements, the site or the housebuilder would be liable to more frequent inspections and would pay higher fees accordingly. So there would also be an incentive to housebuilders to ensure that failures did not occur, since they would have business consequences going well beyond the individual home.

Most of the elements are already in place. The same local authorities undertake both planning and building control (and the best already integrate these services). NHBC already provides Approved Inspectors for building control. The review of building control is looking at ideas for simplifying regulatory guidance, especially for smaller firms: relevant contents of a log book could readily be derived from that work.

It would not be necessary, or desirable, to integrate building control and warranty inspectors into a single cadre. Inspectors already specialise in different areas of technical content and that will no doubt continue. However, some greater flexibility would be desirable in the role of building control officers, allowing them to work alongside NHBC inspectors within this scheme. To that end, we **recommend** that Government take an early opportunity to loosen the statute restricting the role of local authority building control officers, to allow them to check all aspects of the quality of new homes.

We further **recommend** that the scheme should be overseen by a national body responsible for consistency of inspection standards and approach, including sanctions. This role might be filled by an existing or new body. One possibility which we believe has merit is for the role to be defined jointly by the regulators and then offered to the market; we believe there are several existing organisations which would tender for the work.

The new body would not be responsible for setting standards, which would remain the responsibility of existing regulators. It would need to liaise closely with the regulators to ensure that their requirements were met. However, we believe it is essential for credibility and effective enforcement that the national body be clearly independent and not compromised in any way by other roles it may fulfil, for instance as a warranty provider or insurer.

We are aware that compliance with building regulations is a much broader issue than for new housebuilding alone, and that traditionally it has been thought desirable to maintain a single regime for all types of building work – houses and flats, homes and non-domestic, existing and new. Our proposals would take a step away from that principle. However, it is clear from “The Future of Building Control” and from recent changes in practice on the ground that the principle of a single regime is already weakening. We believe that our proposals would provide stronger incentives for quality in new housebuilding, and we are confident that they can be integrated into whatever wider scheme of building control emerges from the current review.

Summary of recommendations in this Chapter

- Government should announce that after two years it will cease dealings with any housebuilding firm which fails to achieve a predetermined standard of customer satisfaction. This policy should extend to all public agencies, in particular the Homes and Communities Agency. Special arrangements should be made to ensure that new entrants to housebuilding and small firms are not disadvantaged.
 - The annual customer satisfaction survey of house buyers should be commissioned and funded by Government and run independently of any industry interest.
 - There should be a single design review process for housebuilding, arranged and available nationwide. This process should allow for type approval of standardised designs, including those using MMC techniques. There should be a presumption that any development proposal which passed the assessment process would not be subject to any further objections or conditions in relation to quality imposed by the planning authority.
 - The Government’s planned “light-touch” review should consider CABE’s possible role in relation to the housebuilding design review process.
 - A new strong regime should be created to provide assurance of high standards in the construction of new homes, incorporating compliance with planning conditions, building regulations and warranty in a single scheme. The scheme should be overseen by a national body responsible for consistency of inspection standards and approach, including sanctions.
 - The Government should take an early opportunity to loosen the statute restricting the role of local authority building control officers, to allow them to check all aspects of the quality of new homes.
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CHAPTER 8

SKILLS



Chapter 11 of the Housing Green Paper states the challenge ahead:

“To deliver the Government’s ambitions for housing growth, higher environmental standards and better places to live, we need enough skilled workers. However, recruitment and retention difficulties in key areas, as well as skills gaps, present significant obstacles.”

Housebuilding requires a wide variety of skills, from the planners, valuers and surveyors who identify suitable sites, to the architects and designers who plan the new homes, to the labourers, craftsmen and site managers who build them, to the marketing professionals and lawyers who complete the sale, to the finance experts who model the viability of the developments. There is a fuller discussion of skills requirements in Chapter 9 of Part 2.

Very few, if any, of these skills are required only by housebuilders. Many are shared with the wider construction industry and used everywhere from the largest civil engineering projects to minor repair and improvement of individual homes. Indeed, many, particularly among the professional skills, are shared with other business and public activities well beyond construction.

Housebuilding depends heavily on sub-contracting for on-site skills. This gives housebuilders much greater flexibility: with fewer directly employed staff, they rely less on a constant steady stream of work, and can be more adaptable in undertaking projects of different sizes, over different timescales, at different locations.

The larger housebuilders tend to employ their own staff to carry out the professional tasks associated with the business, except when additional capacity is needed, or where specialised expertise is required on large and more challenging schemes. On the other hand, as discussed in Chapter 15 of Part 2, smaller companies may not be able to justify the expense of such resources in-house and prefer therefore to “buy the skills in” as and when required.

Most of the available information on employment, training and skills covers the construction industry as a whole, not specifically housebuilding. Much of the information is also collected for the UK or Great Britain rather than for England alone. Many of those engaged in construction, from the professionals through to on-site labour, work on different types of projects at different times, and for different periods of time. From their point of view, the differences in location and construction sector are largely immaterial.¹

¹ A recent study of the mobility of the construction workforce – ‘The labour needs of extra housing output: can the housebuilding industry cope?’ Professor Michael Ball, found that:

- 75% had worked in more than one sector, 60% in housebuilding
- Of those who worked in more than one sector, more had worked in housebuilding than in any other sector

Some information is now available following the creation of the Construction Skills Network (CSN) under the auspices of ConstructionSkills, which is the main Sector Skills Council for the construction industry in the UK. The Network's first outputs were launched in June 2006 and provide, for the first time ever, the most comprehensive data on which to assess current employment and plan recruitment, skills development and training resources for the construction industry. The tables below, which were prepared specifically for our review, make the same data available for the housebuilding industry.

These forecasts of annual recruitment required for all construction sectors and for housing in England are the results of data analysis backed up by consultations with government, a range of experts and industry practitioners through Regional Observatory Groups, set up by CSN. These groups review and test a series of assumptions and forecasts in the model, by analysing demand from planned projects alongside current training supply across the sector.

Figure 18 demonstrates the requirement for the same spread of trade and professional skills across housing as for general construction, showing a requirement for 89% trades and 11% professionals in both, and the total skills for new housebuilding as 15% of the total skills required for all construction in both 2007 and 2011. It should be noted however that the forecasts are based on standard growth assumptions related to growth in the economy. They reflect the Government's earlier target of 200,000 homes a year from 2016 but are not further adjusted to reflect the increased target of 240,000 homes a year set in the Housing Green Paper.

Figure 18 also shows the growth in overall skills requirement between 2007 and 2011 to be 9.4% for both housing and for general construction. This translates into the annual recruitment requirements of 72,730 for all construction in England and 10,760 for housing for each year between 2007 and 2011, set out by each skill category in Figures 19 and 20.

Figure 18: Total employment in housebuilding and construction, by occupational groups: England, 2007 and 2011

Total Employment by Occupation	Forecast – England, All Construction		Forecast – England, Housing New Build only	
	2007	2011	2007	2011
Senior & Executive Managers	7,170	7,770	1,050	1,140
Business Process Managers	55,180	60,280	8,160	8,920
Construction Managers	169,980	185,990	25,160	27,520
Office-based Staff (excl. Managers)	163,800	176,350	24,240	26,100
Other Professionals/Technical Staff & IT	30,900	34,250	4,580	5,070
Wood Trades & Interior Fit-out	224,980	250,030	33,300	37,000
Bricklayers	84,130	96,140	12,450	14,230
Building Envelope Specialists	91,150	104,140	13,490	15,410
Painters & Decorators	120,680	136,760	17,870	20,240
Plasterers & Dry Liners	35,950	38,890	5,310	5,750
Roofers	34,550	38,110	5,120	5,640
Floorers	37,140	40,830	5,500	6,040
Glaziers	39,620	42,470	5,870	6,290
Specialist Building Operatives nec	48,880	53,820	7,230	7,950
Scaffolders	17,270	19,510	2,550	2,890
Plant Operatives	32,170	35,240	4,760	5,220
Plant Mechanics/Fitters	20,090	21,280	2,960	3,150
Steel Erectors/Structural	20,540	21,940	3,040	3,240
Labourers nec	94,670	100,540	14,010	14,880
Electrical Trades & Installation	168,670	184,080	24,970	27,240
Plumbing & HVAC Trades	148,350	163,370	21,940	24,180
Logistics	28,990	32,030	4,300	4,740
Civil Engineering Operatives nec	50,380	55,630	7,460	8,240
Non-construction Operatives	217,010	226,470	32,120	33,520
Construction Professionals & Technical Staff	241,150	263,090	35,690	38,950
Total (SIC 45)	1,942,250	2,125,920	287,440	314,600
Total (SIC 45 & 74.2)	2,183,400	2,389,010	323,130	353,550

Source: CSN, Experian, 2006

(Footnote: SIC 45 and 74.2 – Standard Industrial Classification of Economic Activity (SIC).

SIC 45 refers to Site preparation, Building – complete or part construction, Building Installations, Building completion, Renting of construction or demolition equipment with an operator. (Manual trades side of construction activity)

SIC 74.2 refers to Architectural and engineering activities and related technical consultancy. (Professional services)

nec = not elsewhere classified.

Figure 19: Annual recruitment requirements by occupation, 2007 and 2011: Construction

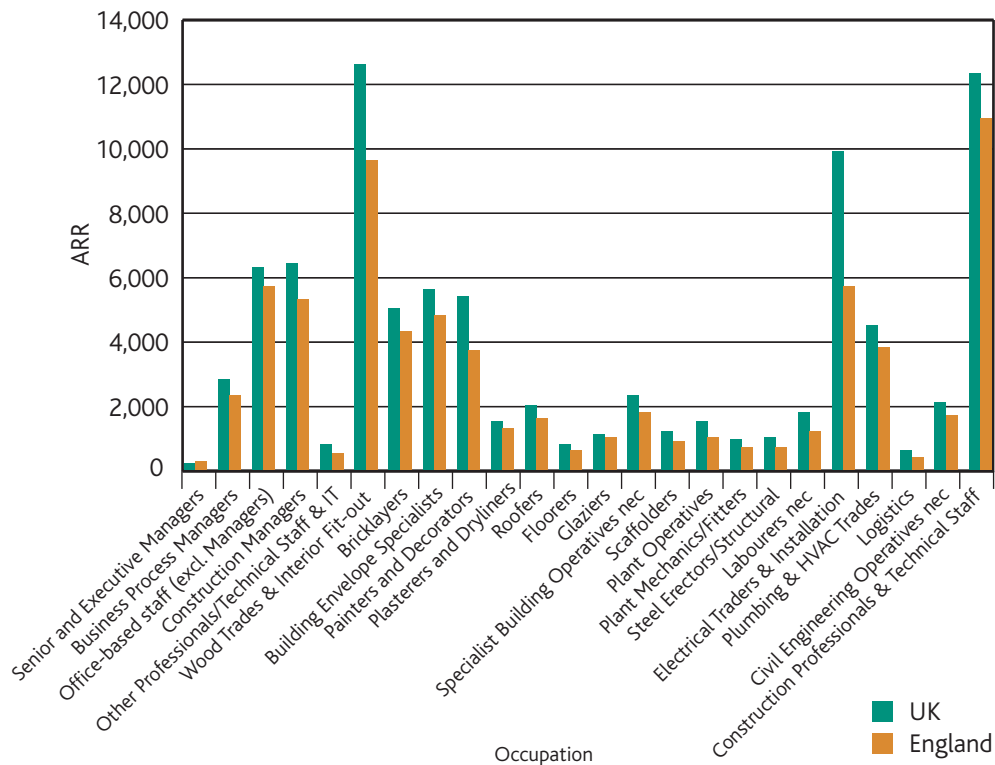
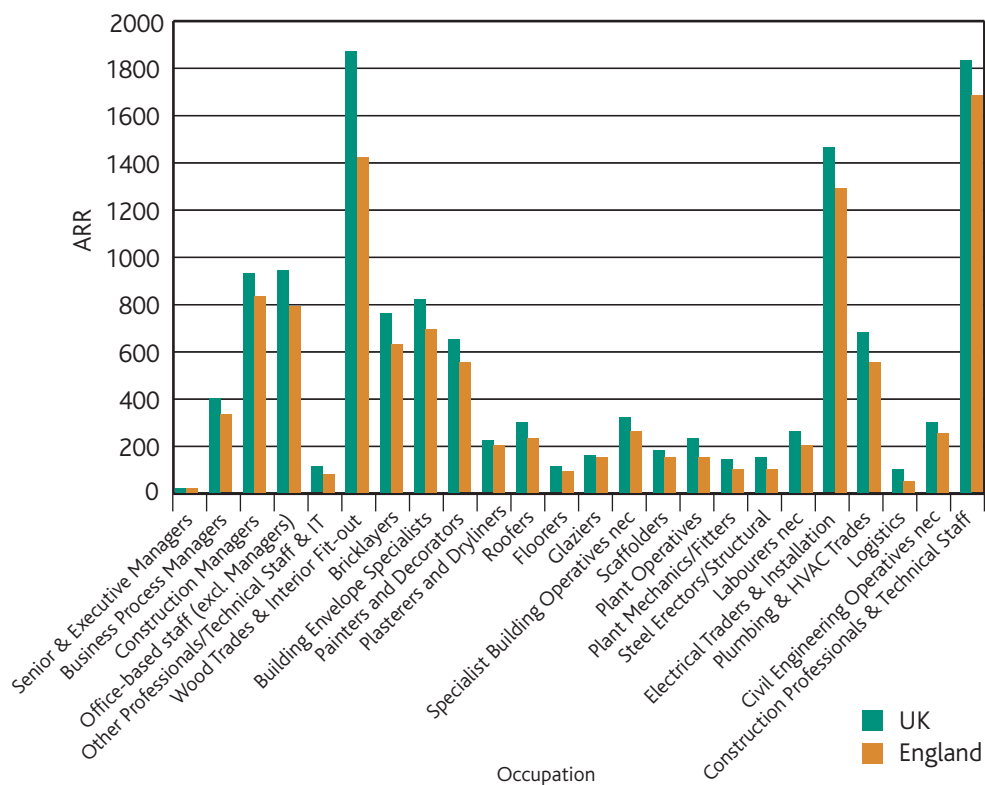


Figure 20: Annual recruitment requirements by occupation, 2007 and 2011: New Housing



Is there a problem?

Our terms of reference ask us to examine how the supply of new homes is influenced by the availability of skills, and to consider how this may influence the delivery of new homes to achieve the Government's target. In our call for evidence we asked contributors specifically to comment on this issue.

Skills for housebuilding

In our call for evidence we asked: "To what extent is the volume and responsiveness of housebuilding constrained by limits in the supply of skills? Is this likely to change as a result of sustainability or other constraints? What steps might be taken to mitigate any effects?"

A range of views were expressed, from confident to seriously concerned. However, three points emerged on which there was some consensus.

- There is an immediate shortage in some professional groups who are important to housebuilding delivery although not employed by housebuilders: for instance, planners employed by local planning authorities.
- In London and the South East particularly, major construction projects such as the Olympics and Crossrail will draw off many skilled workers from the pool, leaving housebuilding exposed.
- The shortages in some craft skills experienced during the 1990s have been alleviated by an influx of skilled workers from eastern Europe; but, as their home economies improve, this source of supply may dry up, exposing an underlying shortage.

In our view, each of these reflects a potentially significant threat to the Government's target.

The perception that skills shortages may represent a threat to the delivery of new homes is not new. It was one of the key issues agreed by the Housing Forum for examination in 2000, which resulted in a series of publications, and a subsequent joint initiative with ConstructionSkills.

It was also examined in some detail in Kate Barker's Review of Housing Supply, 2004, in which she recommended that:

CITB-Construction Skills and the Home Builders Federation should work together to develop a strategy for substantially increasing the take-up of apprenticeships from the current level of three apprentices per 100 workers, to bring the UK to levels of leading international comparators, such as the Netherlands and Germany.²

² Review of Housing Supply: Delivering Stability, Securing our Future Housing Needs. Final Report, Recommendations, March 2004, Recommendation 34

A number of recent publications and studies offer a variety of conclusions in support of the view that there are employment hotspots in certain areas, rather than overall skills shortages.

- The **ConstructionSkills Business Plan 2006-10** reports "a situation in which some parts of the industry are operating under conditions approaching full employment at the professional, managerial and craft levels. This comes with some of the associated imperfections and difficulties that employers find in matching demand with appropriately skilled labour. However, if skills shortages were major and endemic to the whole industry then it would be ... reported in major industry surveys as a constraint on trade. Wage and tender price inflation would also be much more apparent than they are at present. The industry has experienced a tight labour market for some time and evidence indicates pockets of skills shortages. However, these tend to be relatively specific and geographical or occupational in nature."
- The Office of Government Commerce (OGC), in its 2005-2015 Construction Capacity Study, 2006 concluded that while general skills shortages have recently been alleviated since the expansion of the EU, the UK would not face significant capacity constraints up to 2015. However, it did identify that skills gaps and shortages remain in key areas, such as leadership, project management and design awareness.
- ConstructionSkills commissioned a **Survey of Built Environment Professional Services Skills 2003/04**. At this time, 61% of respondents were optimistic with respect to increasing workloads; 80% of firms were experiencing skills problems – albeit only a minority with severe problems; and 65% of firms had experienced significant difficulties in recruiting staff with appropriate sets of skills in the previous 12 months. This survey is currently being updated and its results are due to be published on 4th December 2007. Key findings will include:
 - Numbers of students on Built Environment courses have dropped 29% since 2003/04;
 - Around 20% of current professionals could retire in the next 10 years;
 - 74% of construction professional services firms reported that job applicants are likely to be lacking technical skills.
- The Academy for Sustainable Communities' report **Mind the Skills Gap, 2007** concludes that England faces a significant shortage of qualified professionals with the necessary skills to deliver sustainable communities between now and 2012.

In recent research (cited above) for the Home Builders Federation, Professor Michael Ball concludes that whilst training is important in expanding the industry, skills shortages are unlikely to represent a barrier to expansion. He notes that there is sufficient resource movement into and out of housebuilding at the margin to affect availability, quality, cost and market competition. However, like Barker, he concludes that there is a need to take a long-term view of potential labour and training requirements.

He offers a calculation of labour requirements of increased housing production, offset by estimates of potential productivity gains, rather than a proportionate scaling up of the numbers involved.

Figure 21: Estimated impact of productivity gains on housebuilding labour requirement: UK

Housing output	250,000	300,000
Baseline additional labour at 1.5 per dwelling	90,000	165,000
LESS Productivity benefits	87,000	117,000
Additional labour required	3,000	48,000

Source: Professor Michael Ball

The figures in this table are for the UK: the right hand column (assuming annual UK production of 300,000 new homes) roughly corresponds to the Government's 240,000 target for England alone.

Professor Ball assumes that productivity will be improved in a number of ways:

- through economies of scale from higher production
- through innovation, including take-up of modern methods of construction (MMC)
- as a benefit from a smoother, more predictable planning process
- as a result of larger builders taking a greater share of the market.

We agree that there is potential for the housebuilding industry to improve its productivity, including through the use of innovation. The business pressures outlined in Chapter 3 are very likely to drive housebuilders to look for ways of improving productivity and controlling costs. However, we are inclined to take a slightly less rosy view than Professor Ball, for two main reasons. His estimate is of a net requirement for labour and skills, but in fact more may be required to offset the competing demands of other major construction projects and the risk that skilled workers from Eastern Europe may be less available in future. We are also unsure whether his assumptions of greater productivity are likely to be realised, at least in full.

In her Review of Land Use Planning³, Kate Barker noted the 2006 Audit Commission report *The Planning System: Matching expectations and capacity* which highlighted that planners were in short supply and the difficulties faced by Councils in recruiting and retaining qualified staff. Barker recommended that the skills of decision-makers and others involved with the planning system should be enhanced and more effectively utilised.

This is corroborated by the evidence which we have received on the paucity and unreliability of skills in local government planning departments. The Planning White Paper set out how Government has made a significant investment to build capacity in local authorities and the planning sector, and to address the shortfall in the number of new entrants to the profession.

³ Review of Land Use Planning Kate Barker HMSO, 2006.

However, the evidence to this Review also focused on the lack of a consistent strategic planning framework and of experienced planning staff who are able to understand the business and issues of the private sector.

We therefore **recommend** that local authorities should invest in multi-disciplinary strategic teams in their planning departments, who are able to enter into a productive dialogue with developers prior to the submission of schemes for formal planning approval. These teams should be supplemented by temporary secondments to and from the private sector, as part of a structured training programme. This recommendation is consistent with, and should be considered alongside, our recommendation in Chapter 5 for partnering between local government and developers.

Securing skills for the future

Although reports continue concerning the inability of apprentices to find work placements in the construction industry, the Home Builders Federation has reported that 3,800 apprentices are now placed in companies. These include a number placed by the companies with their main contractors, broadly represented by HBF.

The HBF Major Home Builders Group has adopted the commitment of a fully qualified workforce by 2010, to be measured on the basis of the take up of Construction Skills Certification Scheme (CSCS) cards. This scheme was set up in 1995 with the objective of helping the construction industry to get quality up, accidents down and cowboy builders out. The scheme operates through a system of 9 types of cards awarded to trainees up to Senior Supervisors on the basis of their certified relevant qualifications. In May 2007 the millionth card was awarded, which means that more than one million people have now formally proved their competency and awareness of health and safety. A site audit of the major home builders sites (40-50% of the industry) carried out in May 2007 showed that 64% of the workforce is now 'carded'.

However, the long-standing business practice of the housebuilding industry militates against rapid growth of the skilled workforce. Housebuilders' reliance on sub-contractors enables them to respond quickly to opportunities, but gives them relatively little incentive to train, and leaves them highly dependent on their sub-contractors providing the skills they need. Where skills are not available, they expect to pay more, or to find work-arounds.

ConstructionSkills Business Plan 2006-10 states that self employment represents over a third – 38% – of the available industry labour. A survey conducted in 2002⁴ found that the overwhelming majority of firms in the sample, 83.5%, reported utilising some form of contingent labour (subcontract, agency or self-employed labour). The greater part of the sample (60%) made use of more than one form of contingent labour. It further noted that the use of such labour contributes to skills shortages in the industry, with the scope of training offered to workers on these contract forms being limited in nature. In

⁴ *Getting the mix right? The use of labour contract alternatives in UK construction* Chris Forde and Robert MacKenzie, Leeds University Business School, as published in *Personnel Review*, Vol.36 No.4, 2007 pp 549-563, Emerald Group Publishing Ltd.

London and the South East, for example, self-employment averages 70% of the workforce, making it difficult to place apprentices so that they get the work-based experience they need.

As noted elsewhere, the current business model has delivered good profits to the housebuilding industry over a number of years. Its reliance on sub-contracting to provide flexible capacity is one of the ways in which the industry insures itself against a future downturn: the cost and risk of training are laid off on to sub-contractors. Housebuilders will need to be given a very good reason to invest in training when their business appears to be doing well without it.

In an ideal world, the model would work quite differently. Investors in housebuilding companies would demand that they invest in appropriate training to secure their future business. To some extent this may be prompted by our recommendations for embedding quality into the regulatory regime. If it appears that quality is the key to future business success, then housebuilders are less likely to rely on the market delivering the skills required for quality, and more likely to invest directly in training.

In the same way that the Housing Corporation has been able to stipulate compliance with various measures as a means of kick starting improvement in the industry, it should be possible for other government agencies and local authorities disposing of land for house building to stipulate investment in training by housebuilders as a condition of public land acquisition.

We **recommend** that when central and local government and their agencies, in particular the Homes and Communities Agency, dispose of land for housebuilding, the terms of sale should include stipulations on training by main and sub-contractors. Compliance should be monitored and should be an explicit consideration in future disposals.

Government has also taken a hand with various initiatives, itself and through its agencies, to improve the supply of skills to housebuilding and construction generally. In its response⁵ to the Leitch Review, Government set three strategic objectives for the Sector Skills Councils (SSCs), including ConstructionSkills:

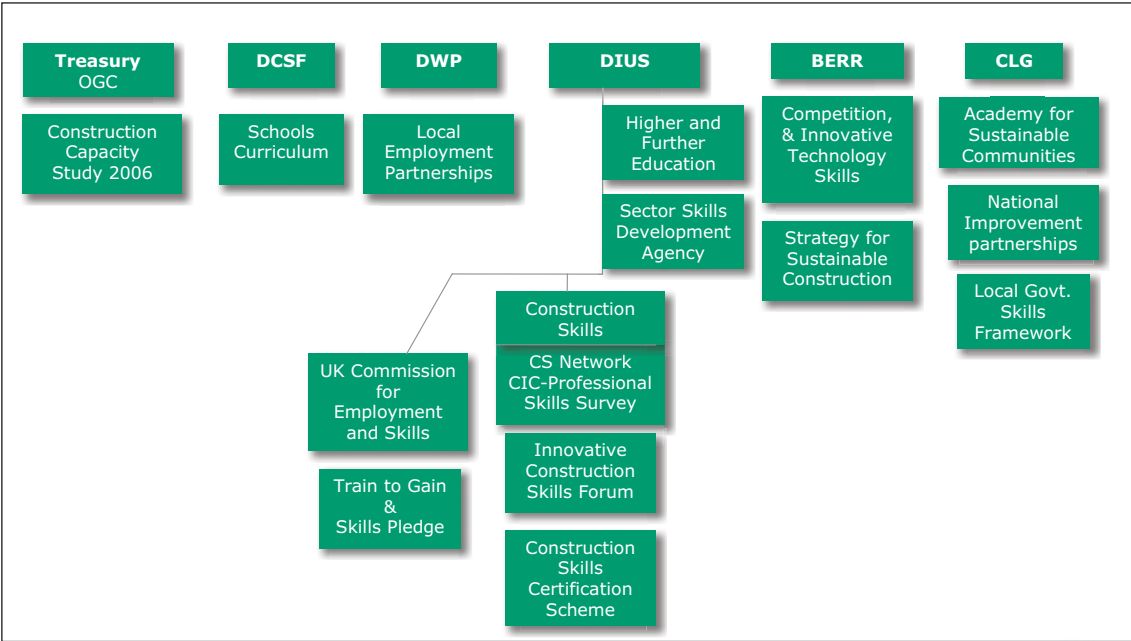
- Ensuring that the supply of skills and vocational qualifications is driven by employers;
- Raising employer ambition and investment in skills and considering whether there is support within their sectors for the introduction of levy schemes;
- Being the authoritative voice about the skill needs of their sector and articulating these. The Government envisages SSAs (Sector Skills Agreements) and SQSs (Sector Qualification Strategies) being central to the delivery of this new SSC remit, and will consider how SSCs might adopt targets for increasing employer involvement in training.

⁵ *World Class Skills – Implementing the Leitch Review of Skills in England*, 2007 DIUS, 2007.

The National Skills Academy for Construction was launched in September 2006. The core concept of the National Academy is that training, practice and assessment is delivered on-site, where the highly-fragmented construction supply chain comes together, rather than being located in a physical “academy.” This project-based delivery is supported by regional training hubs, which provide training for the major projects in that area.

Several different Government departments, along with the various agencies which they sponsor and regional and local government, share in the relevant responsibilities. These are set out in Figures 22 and 23.

Figure 22: National Government and Skills Initiatives



Some recent changes in this network of roles and responsibilities at national level have yet to bed in; others are still in the process of being made. Some earlier changes have potential which has yet to be fully realised, as in the emphasis on awareness raising across different professional disciplines to be delivered by the Academy for Sustainable Communities.

The national initiatives in turn are linked with a range of regional and local initiatives, tertiary education and the private sector:

Figure 23: Regional, Local and Private Sector Initiatives

The number of initiatives and organisations involved is not necessarily a problem, so long as this does not lead to unnecessary duplication, confusion or inefficiency. It is striking, however, how many of these bodies are concerned with planning or monitoring, rather than delivery of training or skills. Accordingly, we endorse the proposal in Chapter 11 of the Housing Green Paper that the new Homes and Communities Agency take on the responsibility for the Academy for Sustainable Communities.

The Housing Green Paper announces the Government's intention to bring together the relevant departments with the key partners, including local authorities and the Trades Unions, in a major drive to ensure that the skills are available to meet future demand. It states a commitment to increase the number of apprentices, and proposes exploring whether an employment and skills "Compact" approach to meet the needs of the individual and the employer could be adopted by the construction industry.

We welcome these clear commitments to the skills agenda. But it is important that they should not simply add more "initiatives" to what many of our contributors have told us is already a confusing picture.

Following the Leitch report, the Government has announced plans to set up a new Commission for Employment and Skills, which is expected to start in April 2008. Central to its role will be to advise the Government on whether the public skills and employment 'system' is working effectively.

We **recommend** that the drive by Government, announced in the Housing Green Paper, to ensure that the skills are available to meet future demand should also aim to simplify the current patchwork of initiatives so as to focus effort and ensure that the Government's target of 240,000 new homes a year is reflected in them. This should also result in clear and comprehensive signposting of all organisations and initiatives so that they are easily accessible to industry.

ConstructionSkills is not the only Sector Skills Council whose remit extends to housebuilding. SummitSkills and AssetSkills, which have responsibilities for building services engineering and estate management, respectively, also have roles. The new Commission for Employment and Skills will in due course advise the Government on the re-licensing of Sector Skills Councils, and we hope that it will give particular consideration to the needs of the housebuilding industry.

Given the mobility of labour within the construction sector, it is not realistic to imagine a separate training programme for housebuilding alone. However, it is important that the needs of housebuilding are fully reflected in whatever wider training programmes or initiatives are devised for the sector as a whole.

We are concerned that there is no single body which carries clear responsibility for setting targets specific to housebuilding and monitoring progress against them. Given the ambition of the Government's target, we believe that a single agency needs to be given lead responsibility for planning and promoting the skills agenda and for co-ordinating the efforts of others.

We accordingly **recommend** that ConstructionSkills, working with the other relevant SSCs, should be asked to build on their existing work with the industry to prepare a specific sub sector skills agreement for housebuilding, in consultation with CLG, the Homes and Communities Agency, DIUS and BERR. The agreement should include appropriate analysis, forecasts, targets and performance monitoring, to be reviewed and published on an annual basis, consistent with the national data for the whole of the construction industry.

ConstructionSkills' Business Plan notes that "research has indicated that the contracting sector's perception of a skills shortage is different from that conveyed by several national skills surveys, where a skills shortage vacancy is one in which there are a low number of applicants with the required skills or where applicants lack work experience and qualifications, as opposed to quite specific short-run recruitment difficulties including not being able to get a particular trade on-site for a period on a self-employed basis, rather than not being able to recruit to an actual vacancy".

We **recommend** that ConstructionSkills, with relevant Government departments and the industry, should promote common definitions for skills and shortages on which all future research can be based, so as to increase its value to the industry and minimise apparently conflicting results.

Summary of recommendations in this Chapter

- Local authorities should invest in multi-disciplinary strategic teams in their planning departments, who are able to enter into a productive dialogue with developers prior to the submission of schemes for formal planning approval. These teams should be supplemented by temporary secondments to and from the private sector, as part of a structured training programme.
 - When central and local government and their agencies, in particular the Homes and Communities Agency, dispose of land for housebuilding, the terms of sale should include stipulations on training by main and sub-contractors. Compliance should be monitored and should be an explicit consideration in future disposals.
 - The drive by Government, announced in the Housing Green Paper, to ensure that the skills are available to meet future demand should also aim to simplify the current patchwork of initiatives, so as to focus effort and ensure that the Government's target of 240,000 new homes a year is reflected in them. This should also result in clear and comprehensive signposting of all organisations and initiatives so that they are easily accessible to industry.
 - ConstructionSkills, working with the other relevant SSCs, should be asked to build on their existing work with the industry to prepare a specific sub sector skills agreement for housebuilding, to be reviewed and published on an annual basis, consistent with the national data for the whole of the construction industry.
 - ConstructionSkills, with relevant Government departments and the industry, should promote common definitions for skills and shortages on which all future research can be based, so as to increase its value to the industry and minimise apparently conflicting results.
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ZERO CARBON



Our terms of reference require us to consider how the housebuilding industry will deliver the Government's targets while also "achieving high standards of energy efficiency and sustainability as set out in the Code for Sustainable Homes¹, and progressing to a zero carbon standard." We have focused mainly on the zero carbon standard in view of the scale and importance of the challenge, and we have also given some consideration to water efficiency and other aspects of sustainability which are discussed in Chapter 10.

Achieving zero carbon by 2016 will be an outstanding achievement, leapfrogging Britain from among the European also-rans to world leadership in the field. It presents a major business opportunity, as well as a significant contribution to mitigating climate change. Advancing from the small handful of zero carbon homes currently being built to 240,000 homes a year within nine years will challenge everyone connected with the industry, including housebuilders themselves, product manufacturers, energy suppliers, designers, surveyors, planners, insurers, regulators and house buyers themselves. There are major risks which the market, on its own, will not resolve.

In a perfect world, well informed home buyers, in full awareness of the threat of climate change, would create a strong demand for highly energy efficient homes. Housebuilders would need to build to those standards in order to compete; and this would place an equally strong imperative on the supply chain, thus promoting innovation, development and continuous improvement. The most reluctant suppliers would be driven to participate by the need to deliver for their investors.

In the real world, some home buyers are aware of the value of energy efficiency (and other environmental features or products), but this translates only weakly into buying preferences: it ranks well behind the key requirements for price, size and location, as described in Chapter 7. This is insufficient to motivate housebuilders or, through them, the rest of the market. Over time things will change, as awareness of the threat increases and energy prices rise, but far too slowly to achieve the 2016 target or even come close to it.

Government intervention can substitute for direct demand from home buyers, and if effective it will cause similar effects to work their way through the market, including the construction products and energy supply industries, but effectiveness is not guaranteed.

¹ Code for Sustainable Homes CLG, 2006

To be effective, Government intervention must be credible, clear and sustained and where regulation is involved, it must be enforced.

Housebuilders, construction products manufacturers and energy suppliers are all well aware of the Government's zero carbon agenda. They recognise a potential competitive advantage if they can be first to deliver solutions for customers, and a risk of losing their place in a market shake-up as the new agenda takes hold. These are powerful drivers.

The scale and pace of the change are also great. The target to achieve zero carbon by 2016 far exceeds anything that has been achieved, or even attempted, in Europe or (so far as we are aware) anywhere in the world. By comparison, Germany has been working to develop and deliver its Passive House standard² for approximately 15 years and to date about 8,000 dwellings³ have been built to that standard. The current expectation is that it will take a further fifteen years for all new house building in Germany to achieve the Passive House standard – well short of zero carbon.

In order to achieve the target, products suppliers will need to invest millions of pounds in product development, manufacturing capacity and supporting services. They need strong assurances of a return on this investment. If there is any uncertainty about the Government's commitment, either to the target or to the timetable, the flow of investment will rapidly dry up.

We **recommend** that the Government should continue to give a strong and sustained message that it is committed to regulate to achieve its target for zero carbon homes by 2016, and must not show any sign of wavering. This message will be delivered in part by what Ministers say, but even more by what they do, in particular whether they take the early actions that are required for 2016 to remain a credible target.

We recognise that this will not be easy. All Governments naturally prefer to keep their options open. Ministers will be lobbied by a range of interests to retreat to a more conservative approach, and the debate is quite likely to become public. Any suggestion of second thoughts will shake investors' confidence, and rapidly become self-fulfilling. It is essential that this does not happen.

Defining the requirement

To achieve zero carbon we will need both to improve the energy efficiency of buildings and to secure a renewable zero carbon energy supply. Code level 6, including discretionary⁴ energy uses, is not achievable by energy efficiency alone. On the other hand, it is possible to imagine homes using only renewable energy which are not particularly energy efficient. The routes to energy efficiency and to renewable energy are different, and the housebuilding and construction products industries will respond to them in different ways.

² The Passive House standard is reckoned to be equivalent to "level 4½" of the energy efficiency standards in the Code for Sustainable Homes – that is, exceeding Code level 4 but well short of Code level 5.

³ Proceedings of the 11th International Conference on Passive Houses, 2007.

⁴ Code level 5 represents zero carbon emissions in relation to heating/cooling, hot water, ventilation and lighting. All other uses such as entertainment systems and kitchen appliances are regarded as "discretionary" (in current jargon, "non-regulated"). Code level 6 represents zero carbon emissions from all uses, including discretionary.

Energy efficiency may be achieved in large part by specific features in the design and construction of the home which, once installed, require no special maintenance. This is not true for all approaches: mechanical ventilation systems with heat recovery require maintenance, and any insulation benefits can be quickly lost if the home owner prefers to keep their windows open. High levels of air tightness in a dwelling can bring their own problems: one housebuilder⁵ has reported cases of mould growth in houses built to existing standards where householders were not using the ventilation systems correctly.

Nonetheless, the passive quality of many energy efficiency systems is a significant virtue. Their benefit potentially lasts for the full lifetime of the house. So long as they are correctly installed, and do not require active choices or attention by the householder, the carbon savings are correspondingly robust.

In continental Europe, housebuilders have gained significant experience of building to the Passive House standard, using both traditional and modern construction techniques. This learning is transferable, in principle, to the UK.⁶ The range of technologies requiring development extends from ventilation systems to phase change materials, as well as more familiar solutions like triple glazing and low energy clothes drying. Construction product manufacturers and MMC system suppliers are already engaged in a highly competitive development process, so a range of solutions across all construction methods are likely to be marketed.

Not all will be equally successful. Some will prove less effective in practice than theory, or difficult to install (or too vulnerable to indifferent workmanship), or will simply not work well together. For the most cost-effective outcome, housebuilders will need proven standard solutions – ideally they need a “pattern book” similar to the Robust Details approach already used for certain aspects of Building Regulations compliance. That will require an extensive process of prototyping and pre-production testing, as discussed below.

There is a similarly wide range of options for sourcing renewable energy, from photovoltaics to offshore wind farms. We have not concerned ourselves with the technical choices: the benefits of different options will emerge through technological development and practical experience. However, different types of options have different consequences which go beyond the technology, and these need to be considered at an early stage. In particular, it makes a big difference whether the renewable supply is sourced from within the individual home, locally or remotely.

Broadly speaking:

- The range of choices for renewable energy being generated **within the individual home** is quite small. Not all solutions will be available everywhere – some may be ruled out by local environment, lack of available space, and other factors.

⁵ HBF member, in private discussion with Review team

⁶ However, the Passive House standard cannot simply be transplanted into the UK. For instance, the Passive House dwellings being built in Germany and Scandinavia are primarily designed for energy efficiency in a cold environment, not for one which may at different times be either cold or hot.

They minimise losses through energy transmission, and they may be more likely to motivate energy saving. However, they demand a significant up-front cost, and require varying degrees of maintenance which many householders may not be sufficiently motivated or well informed to carry out. It is also unrealistic to imagine individual homes being entirely self-sufficient for energy without back-up, whether local or remotely sourced; and if connections are provided, householders may be constantly tempted to revert to off-site energy, whether renewable or not.

- There is a much wider range of options for renewable energy generation **on a larger site** with, say, 50+ new houses. We do not wish to speculate on which of these options are likely to prove the most cost-effective, but they share a range of issues which need to be resolved if this option is to be relied upon, notably:
 - what obligations will be imposed, or incentives offered, for householders to use the locally sourced energy rather than energy from the grid;
 - who will have continuing responsibility for maintaining the local generation plant.

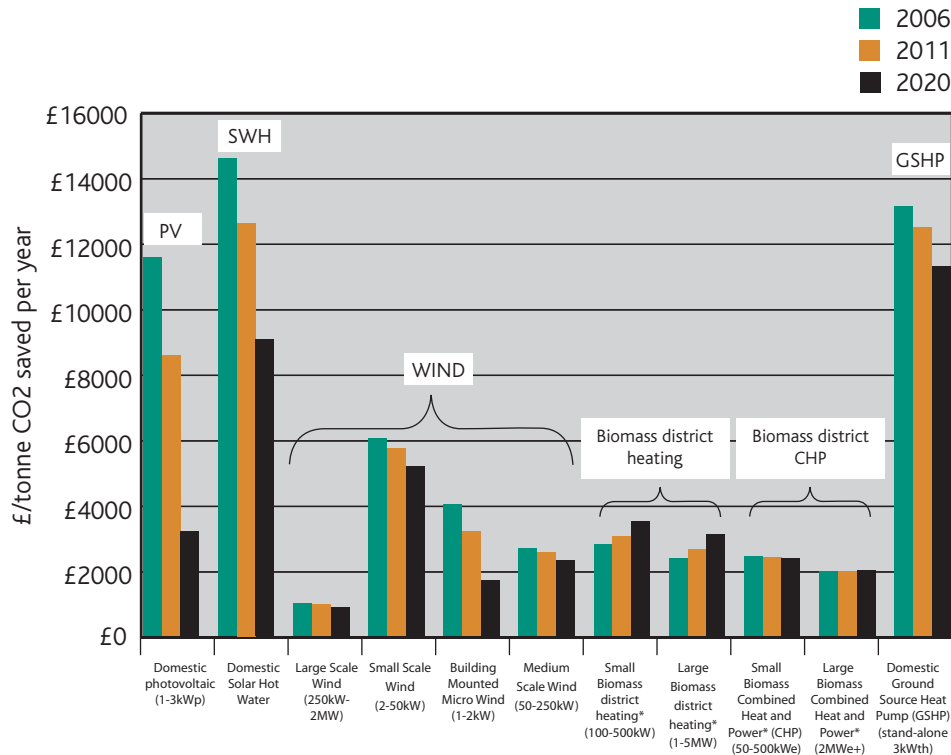
These issues may be more easily addressed on sites where there is an active community management function which can then be extended to include energy supply. However if such developments are also to include owner-occupied homes, then the issues of property law and obligations discussed in Chapter 5 become relevant, as provision will be needed to ensure that the viability and environmental benefits of local energy generation are not undermined by opt-outs.

Although local energy generation ("distributed energy") is a promising option, policy cannot be wholly built around it, since it is not appropriate for developments on small sites (such as urban infill, windfall sites, or small rural developments) which will continue to account for a major part of new housing supply.

- Renewables provided by **remote generation** may have the lowest cost to housebuilders; even with some kind of tariff or offsetting arrangement they may well be preferred, as they require no special on-site works to be undertaken, and costs fall directly to the householder. Recent work by Faber Maunsell looking at zero carbon development in the South West indicates that for the foreseeable future remote generation options appear the most cost-effective source of renewable energy (see Figure 24).

However, it is difficult to demonstrate that remote provision for new homes is additional to what would have been provided anyway. The range of available sites and options for remote generation of renewable energy is not unlimited, and new schemes take considerable time to implement. Moreover, at least in the current market where renewable energy is at a premium, other energy users may outbid housebuilders for the limited supply available.

Figure 24: Cost over time per tonne of carbon dioxide savings from different renewable energy generation options



Source: Faber Maunsell⁷

From this analysis it is clear that many of the outstanding issues in relation to renewable energy require decisions by policy makers and regulators before housebuilders can know which options to pursue. For instance:

- What arrangements will be made for contingency grid connection on sites served by distributed energy, and how will they be paid for?
- Will distributed energy generators be able to sell surplus energy back to the grid, and on what basis?
- How can distributed energy customers be obliged, or incentivised, not to switch to other energy suppliers?
- What value is to be placed on the security advantages of distributed generation (less dependent on insecure sources of supply, and less vulnerable to major terrorist attack) and how is that to be weighed?
- For remote generation of renewable energy, how can we be sure that new provision is genuinely additional?

⁷ Quoted from *Supporting and Delivering Zero Carbon Development in the South West*. Report by Faber Maunsell and Peter Capener to the South West Regional Assembly, South West Regional Development Agency and Government Office for the South West, January 2007

It is important that the Government department responsible for overseeing the energy supply industry (BERR), the industry regulator (Ofgem) and the industry itself engage actively with these issues. The market on its own will not resolve them. As Sir Nicholas Stern has observed: "Climate change presents a unique challenge for economics: it is the greatest and widest-ranging market failure ever seen."⁸ Action to shape the energy supply market to incentivise low carbon solutions, including zero carbon homes, is fully justified.

However, while housebuilders can provide renewable generation capacity, or make it easy for others to install, it is ultimately up to individual householders whether to make use of that capacity. Consequently, the carbon savings from renewable sources must be regarded as inherently less robust than those secured by energy efficiency measures in the home.

Given the wide range of possibilities, housebuilders and product manufacturers will be reluctant to invest until they have a clear understanding of what the regulatory framework for zero carbon will accept, or demand. Other things being equal, housebuilders are likely to prefer whichever approach requires least up-front cost for them; but use of renewables is more vulnerable to consumer choices and to wider policy considerations.

Our view is that the best approach is to require the highest practicable standards of energy efficiency as a first, not a final, recourse. Ideally, remote generation should be taken into account only for discretionary energy uses or on sites where distributed energy generation is, for local or environmental reasons, not feasible.

We therefore **recommend** that the Government should set out, as soon as possible and no later than the end of 2008, exactly how zero carbon performance is to be defined, and how far the use of renewable energy is to be taken into account into the assessment of performance. The assessment rules should differentiate between local and remote renewable generation, and should allow for the different circumstances of different sites.

Although housebuilders, products manufacturers and designers need to know what the rules for assessment will be, they also need to know exactly how performance is to be tested. The existing SAP⁹ methodology was last updated in 2005, but is not suitable for the assessment of very low energy/high performance homes. It needs further updating to incorporate, for instance:

- a new section for discretionary energy use
- integration of offsite generation as discussed above
- summer overheating
- updating of microgeneration modules
- updating of assumptions about the future climate, and about grid intensity

⁸ www.hm-treasury.gov.uk/media/4/3/ExecutiveSummary.pdf

⁹ Standard Assessment Procedure. A methodology and software programme for simulating the energy performance of homes, using measurements taken from the homes.

- correlation of SAP predictions with real life
- modified core assumptions appropriate for very low energy buildings.

The current version of SAP cannot be taken as a reliable indicator of what the next version will imply. It is quite possible that changes in the weightings used within the SAP model could, for instance, make triple glazing less, or more cost-effective than a new standard for cold bridging or mechanical ventilation with heat recovery. Individual companies will be reluctant to invest in development, let alone production capacity, until the regulatory requirement is clear and stable.

We therefore **recommend** that the Government should update SAP to reflect the definition of zero carbon, and to incorporate the other factors mentioned above, with a prototype version available by the end of 2008 and a full commercial version by the end of 2009. Scope needs to be allowed for future technological development, but the core elements of SAP should not then be subject to further revision for at least 10 years.

To deliver new homes to the zero carbon standard will be technically challenging for any housebuilder, and will incur cost. The difference between compliance and non-compliance for many of the critical details and key components may be obscured during the construction process, subtle, or only measurable in a laboratory. As with other aspects of quality, therefore, there is an incentive for less scrupulous builders at least to cut corners, if not for outright evasion, in order to gain business advantage.

In Chapter 7 we set out recommendations for a strengthened regulatory regime which would increase both the chance of detection and the penalties for infraction. This regime would apply as much for zero carbon requirements as for other regulatory standards. It is essential, whether by our recommendations or by other means, that zero carbon regulations are enforced.

We **recommend** that CLG, with the housebuilding industry, construction products industry and representatives of building control, undertake work to ensure that regulatory requirements for zero carbon are verifiable in the course of building control inspections. The technical aspects of verification will need to be considered in parallel with the development of SAP.

Planning the way ahead

Left to itself, the market will eventually deliver answers to the question how best to achieve the zero carbon standard, however it is defined and measured, but neither we, nor any of the contributors to our Review, believe it will do so by 2016 or any time close to it.

Left to itself, the market will explore a wide range of different avenues. Some will be useful; many will prove to be dead ends. Because houses take time to design and build, the lead times for determining winners and losers will be long. Practical lessons in how different features combine or fail will be slow to emerge. In a fragmented, competitive market, learning will not be readily shared, and some lessons will have to be re-learned many times over.

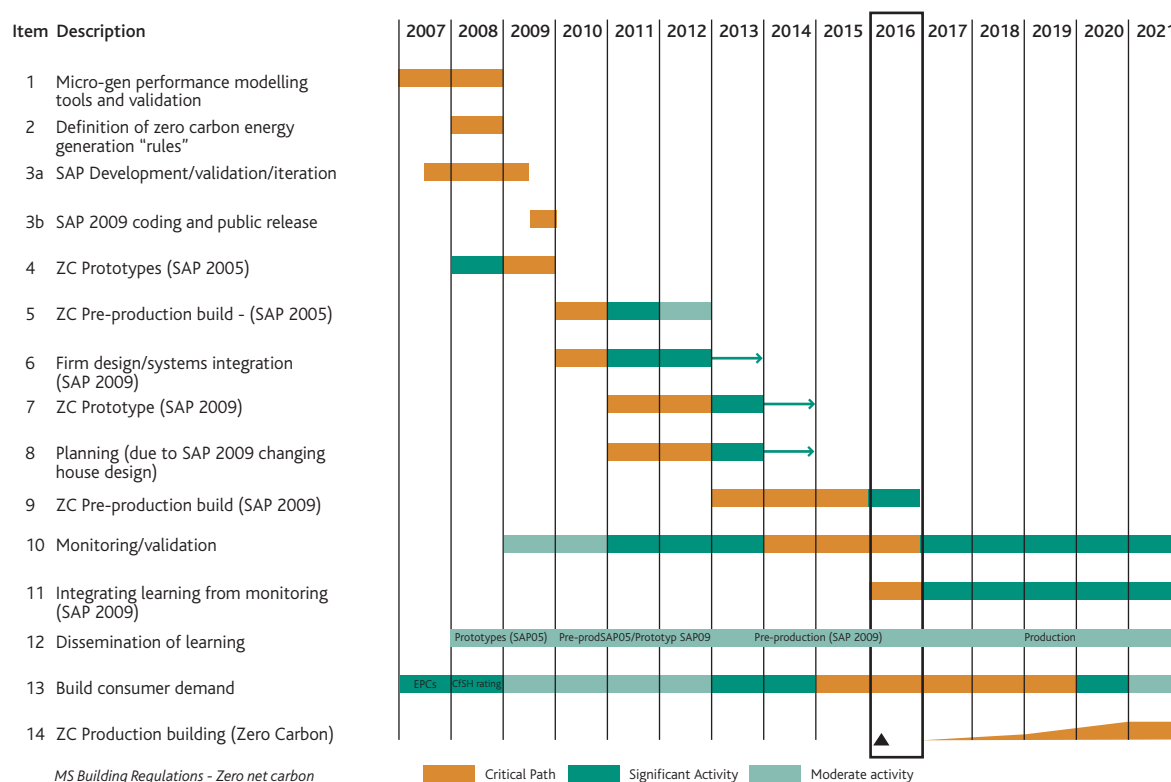
The practical consequence of a *laissez-faire* approach to development in the market will be that the housebuilding and construction products industries and renewable energy providers are not ready to deliver zero carbon by 2016. This will become apparent well before that date is reached, and Government will have to choose whether to prefer high-cost zero carbon and a shortfall against housebuilding targets, or a difficult retreat from 2016.

It does not have to be like that.

We have worked with representatives from the housebuilding, construction products and energy supply industries to develop an outline programme of action from today to 2016. Our work has confirmed that a critical path exists from today to 2016 which is achievable so long as all the key stages on the path fall into place. The critical path we have drawn up, based on these discussions, is set out in Figure 25.

Eight and a half years to 2016 may seem like a considerable time. In reality, given the scale of the challenge, it is very short. Only limited progress can be made until the definition and assessment methodology are clearly set out, enabling judgements to be made on design and investment. That will enable prototypes to be designed and built and lessons learned from them.

Figure 25: Critical path to delivery of zero carbon homes



It is unrealistic, however, to imagine moving directly from prototyping to full production in a single step – that is, from a few hundred or even a few thousand prototypes a year to all new homes commenced in 2016 achieving Code level 6. The level of risk involved in such a single step is far beyond the industry's capacity, or its investors' willingness to accept. As illustrated by recent experience in British Columbia (see box), the risks from inadequate trialling extend to Government and the wider public. Time is needed for lessons from the prototypes to be learned and built into a "pre-production" stage, when the viability of a broad range of repeatable standard solutions can be tested.

Why testing is needed – The British Columbia "Condo Crisis"

In 1998, British Columbia experienced widespread, systemic building envelope failure in post-1990 apartment buildings (condominiums). Water ingress from poorly designed details and condensation within the external walls resulted in some structural failure and extremely high levels of moisture and mould. The crisis not only threatened serious harm to the health, safety and welfare of some 50,000 families but also had a dramatic impact on the housebuilding industry and the provincial economy.

The Province's main home warranty programme, provided by New Home Warranty of British Columbia Inc (NHW), a private company owned by the Canadian Home Builders Association of British Columbia (the HBF equivalent), collapsed under the avalanche of claims.

The direct repair costs of the disaster were estimated at C\$1 billion, with indirect costs raising the total to C\$2 billion. With the collapse of NHW, the massive repair bill fell on the owners of the condominiums. Many could not pay so the Provincial Government had to create a rescue fund to provide loans. (It has so far loaned over C\$710 million.) The eventual cost of this fund will be met largely by builders, who now have to pay a levy on every new home they build.

Of particular note is that the technology and design detailing had an established pattern of good performance in the United States. It had not been recognised that a risk was being taken when the technology and design detailing was moved up into the wetter, windier climatic conditions of British Columbia.

This is a first attempt only at a programme and critical path, and we believe it demonstrates that the zero carbon target can only be achieved if progress towards it is actively managed. Otherwise, the critical path is not credible.

We **recommend** that Government and the housebuilding, construction products and energy supply industries should jointly sponsor a delivery unit to monitor, co-ordinate and guide the zero carbon programme. We suggest that the work of the delivery unit might be overseen by the existing 2016 Task Force which is chaired jointly by the Minister for Housing and the Chief Executive of the Home Building Federation.

The 2016 Task Force

The 2016 Task Force was established following the publication in December 2006 of the Government's policy statement Building a Greener Future. Its terms of reference are:

- Identify the barriers to implementation of the zero carbon 2016 target, and put in place measures to address them.
- Develop a commitment publication alongside the final Building a Greener Future policy statement, which will set out the respective roles of Central and Local Government and business as we move towards the zero carbon 2016 target.
- Develop a timeline for steps that need to be taken over the next ten years to support the implementation of the zero carbon 2016 target.

The members of the Task Force are:

Yvette Cooper MP – Minister for Housing and Planning, Communities and Local Government

Stewart Baseley – Executive Chairman, Home Builders Federation

John Slaughter – Director of External Affairs, Home Builders Federation

John Callcutt – Chair, Callcutt Review of Housebuilding Delivery

Paul King – Chief Executive, UK Green Building Council

Michael Ankers – Chief Executive, Construction Products Association

David Green – Chief Executive, UK Business Council for Sustainable Energy

Martin Wheatley – Programme Director, Local Government Association

Simon McWhirter – Senior Campaigns Officer, WWF

Imtiaz Farookhi – Chief Executive, National House-Building Council

The delivery unit need not be part of Government and in fact we can see some advantages in it being separate: its independence and credibility with industry partners will be greater if it is not under the sole direction of Ministers. There is a range of functions which it might undertake. It would need to monitor progress, keep the programme up to date and recommend action where necessary. Key workstreams might include:

- Overseeing cross-cutting technical development ("whole house" test regimes, pattern books etc)
- Developing and monitoring an exemplars programme which co-opts and steers the efforts of others
- Modelling potential costs, having regard to the latest technological developments and practical experience
- Dissemination of learning and training, not least to smaller firms and self-builders who may otherwise have only limited access
- Public engagement and promotion, particularly in the period leading up to 2016.

There are various possible models for such a unit, all the way through to an independent agency with a budget of its own, along the lines of the Energy Savings Trust. The scale of the task is likely to grow over the period to 2016, and some flexibility in organisation is therefore desirable. The most important requirement is that the work needs to be started now. For this reason we favour commissioning an existing body to undertake the first stages, as this would consume the least effort in start-up administration; but we also consider that at some point it may be desirable to separate out the function to a separate body with a single focus and a clear, limited lifespan.

The zero carbon standard is not cost-free. There will be a continuing impact on land prices and thus, at the margin, on the availability of land for the delivery of new homes, as described in Chapter 5. We suggest that part of the remit for the new delivery unit should be to model and monitor this impact.

We believe in particular that the delivery unit should play a key role in developing a broad programme of exemplars, drawing on the engagement of many companies in "hands on" design and construction of real homes to raise awareness of potential solutions. It is essential that this programme should extend to all types of homes, locations, small and large builders – houses and flats, large and small sites, green and brownfield, urban and rural locations, and so on. Monitoring actual performance and "liveability" will provide vital information well in advance of scale up. Exemplars will also help to raise public awareness and provide a source of early demand for new construction products.

However, to achieve these benefits significant numbers of exemplar homes are needed, in the thousands per year. Real-life understanding is particularly vital for Code level 6 dwellings, as there is relatively little experience of the practicalities/risks of such low energy buildings, on a mass scale and with a view to the changing climate.

We **recommend** that the existing English Partnerships Carbon Challenge, the Government's Eco Towns programme and other initiatives focused on Code level 3, 4 and 6 homes should be brought into the exemplar homes programme, and where appropriate reshaped, so as to make the most effective contribution to the learning that is needed.

Over the last few years local authorities have taken the lead in setting standards to reduce carbon emissions from new homes – for instance through the Merton rule¹⁰ and Nottingham declaration¹¹. These initiatives have provided an opportunity for early learning, and in particular have provided a much needed stimulus and opportunity for microgeneration schemes. But in order to achieve the demanding timetable outlined above it is increasingly important that there should now be stronger co-ordination of efforts to achieve a shared goal.

¹⁰The 'Merton Rule' is the planning policy, pioneered by the London Borough of Merton, which requires a percentage of the energy in new developments to come from on-site renewables.

¹¹The Nottingham declaration is a pledge to which local authorities can subscribe actively to tackle climate change in their area and work with others to reduce emissions country-wide.

We **recommend** that local authorities should be encouraged to participate in a national exemplars programme, for instance by identifying suitable sites and so far as possible ensuring smooth passage through the planning process. An early opportunity should be taken, either in the forthcoming Planning Policy Statement on Climate Change or separately, to stipulate that any planning conditions in relation to the energy efficiency of new homes or the provision of renewable energy as part of a development should support delivery of the national zero carbon target; and that the local planning authority should have strong regard to advice from the zero carbon delivery unit on how this can best be achieved.

It is widely recognised that delivering zero carbon homes will require a range of new skills, plus existing skills raised to new levels. But the lead times for disseminating new skills are significant and need to be built into the 2016 delivery timetable. At present, knowledge of what will be required is still at an early stage. It will be gained through theoretical modelling, real life validation and the emergence of viable solutions as well as via exemplars (design, construction, householder use, performance data and so on). A key function of the delivery unit will be to facilitate the dissemination of this knowledge to the training providers, housebuilders, construction product manufacturers and energy providers.

Summary of recommendations in this Chapter

- The Government should continue to give a strong and sustained message that it is committed to regulate to achieve its target for zero carbon homes by 2016, and must not show any sign of wavering.
- The Government should set out, as soon as possible and no later than the end of 2008, exactly how zero carbon performance is to be defined, and how far the use of renewable energy is to be taken into account into the assessment of performance. The assessment rules should differentiate between local and remote renewable generation, and should allow for the different circumstances of different sites.
- The Government should update SAP to reflect the definition of zero carbon, and to incorporate other factors, with a prototype version available by the end of 2008 and a full commercial version by the end of 2009. Scope needs to be allowed for future technological development, but the core elements of SAP should not then be subject to further revision for at least 10 years.
- CLG, with the housebuilding industry, construction products industry and representatives of building control, should undertake work to ensure that regulatory requirements for zero carbon are verifiable in the course of building control inspections.
- Government and the housebuilding, construction products and energy supply industries should jointly sponsor a delivery unit to monitor, co-ordinate and guide the zero carbon programme.

- The existing English Partnerships Carbon Challenge, the Government's Eco Towns programme and other initiatives focused on Code level 3, 4 and 6 homes should be brought into an exemplar homes programme, and where appropriate reshaped, so as to make the most effective contribution to the learning that is needed.
 - Local authorities should be encouraged to participate in a national exemplars programme. An early opportunity should be taken, either in the forthcoming Planning Policy Statement on Climate Change or separately, to stipulate that any planning conditions in relation to the energy efficiency of new homes or the provision of renewable energy as part of a development should support delivery of the national zero carbon target; and that the local planning authority should have strong regard to advice from the zero carbon delivery body on how this can best be achieved.
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WATER AND SUSTAINABILITY



Climate change and the Government's zero carbon target tend to get more of the headlines than other aspects of sustainability within the built environment. But the availability of adequate water supplies may also prove to be a significant constraint on new housebuilding.

These impacts are, of course, related. Among the predicted effects of climate change are higher average temperatures and changing patterns of rainfall, which will exacerbate any shortage of water supply. Water purification and distribution have a significant energy cost and, as discussed below, some potential water saving measures also consume energy.

Average household demand for water has increased by half over the past 25 years and continues to increase year on year. This effect is being compounded by demographic change: not only is the population increasing, but the average size of households is decreasing. Small households use water less efficiently than larger ones, probably because a range of domestic uses (eg washing machines, dishwashers, outdoors uses) are shared in larger households.

The increase in domestic demand for water has also been linked to the use of a larger and more sophisticated range of household appliances – for instance, large volume washing machines and power showers. This is only partially offset by increasing awareness among some manufacturers of water efficiency as a selling point.

There are numerous parallels with energy efficiency, though also some significant differences. Options range from improving the efficiency with which water is used, to reinforcing supply through recycling. How households actually behave is at least as significant as for energy efficiency, perhaps more so.

Passive solutions are the most effective, where no action or behaviour change by the occupiers of a home is required for the savings to accrue. In effect this means the installation of water-efficient fittings, for instance low-flush or dual-flush lavatories. The attachment of water fittings to the water supply is governed by the Water Supply (Water Fittings) Regulations 1999 and associated guidance.

However, householders may actively resent some water-efficient fittings and seek to replace them: for instance low volume baths, low pressure showers or taps. It would be unproductive in terms of water savings, as well as wasteful of money and materials, to require housebuilders to install fittings in the full knowledge that the new home owner will quickly replace them.

The most promising water recycling measures are rainwater collection and grey-water recycling. They have potential to deliver significant water savings, and are much more easily fitted in new buildings than retro-fitted in existing ones. But they need active maintenance, and households' health is at risk if recycling systems are not properly maintained. These systems may be more effectively provided for a whole community, or block of flats, than for the individual household; and storage of recycled water is more cost-effective on a larger scale. The maintenance of these systems then becomes an aspect of community management, as for some systems of distributed energy generation, which mitigates, though it does not remove, the issue of long-term maintenance. However, collective provision is not possible on small infill or rural sites.

Some measures may be more effective in some types of development than others: for instance rainwater collection will not suffice for a block of flats, which have a relatively small collection area.

In December 2006, CLG and Defra published a consultation paper¹ which invited views on a standard for water efficiency in new buildings and outlined some of the issues which arise. This was followed in July 2007 by a joint policy statement² setting out a twin-track approach comprising:

- amendments to Building Regulations to set a whole building performance standard for the water efficiency of new homes;
- amendments to the Water Supply (Water Fittings) Regulations to set new performance standards for fittings.

The intention is to go as far as is possible with the best of today's readily available fittings, but not to rely on the development of new technology in order to achieve the standard. The policy statement notes concern that tighter standards will be needed in future, in order to combat increasing water shortages particularly in water stressed areas. However:

"The Government agrees that there may be an argument for allowing more challenging requirements in some areas but, unlike energy, it is not yet convinced that the argument has been made for requiring this in all areas. We also think it is prudent to give the proposed changes highlighted above time to bed down before we make a commitment to a progressive tightening of standards."³

We agree that, before any attempt is made to impose more stringent water efficiency standards, there needs to be a better understanding of how households will respond to them.

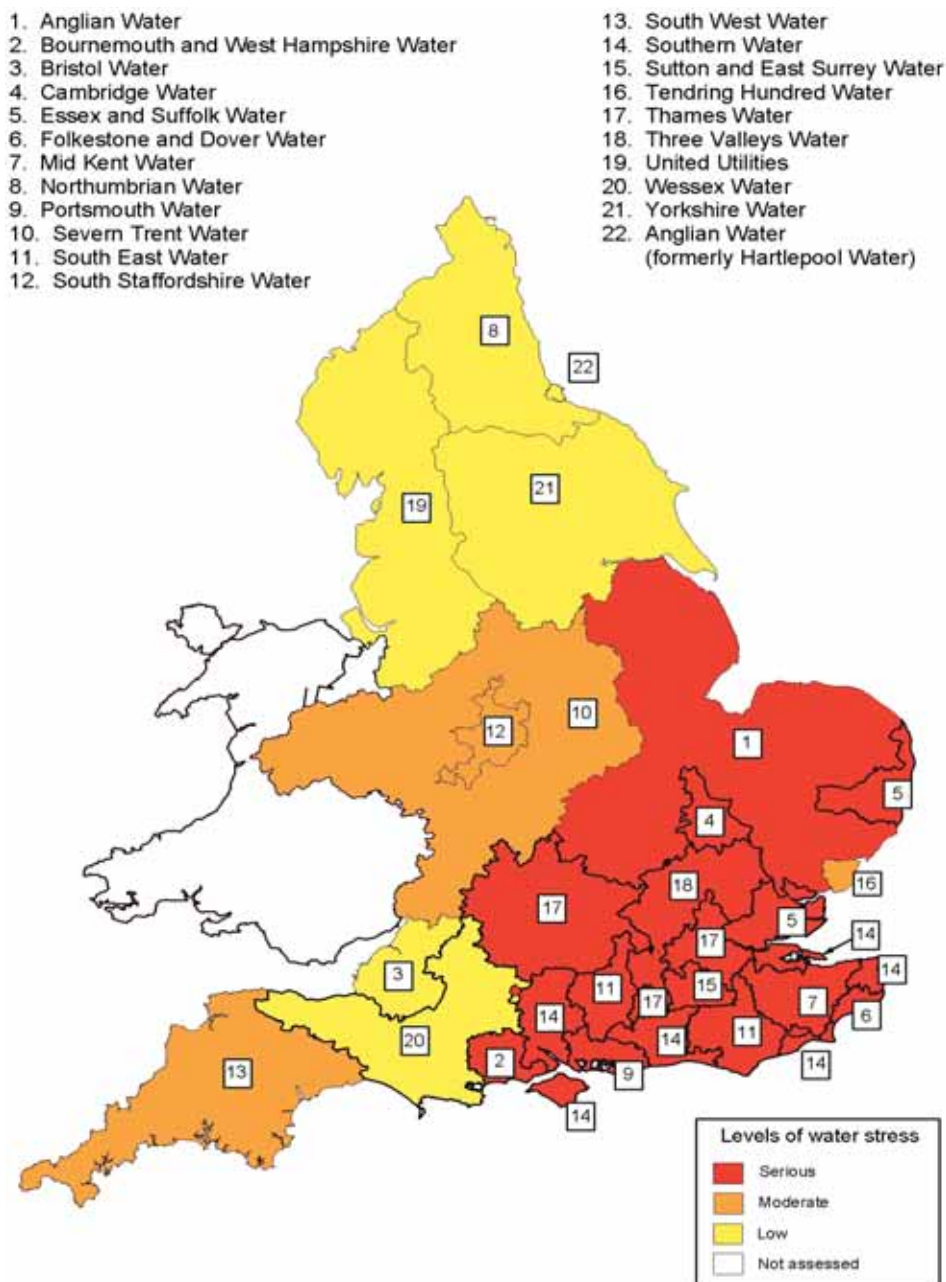
¹ *Water Efficiency in New Buildings – a consultation paper* Defra & CLG, 2006.

² *Water efficiency in new buildings – A joint Defra and Communities and Local Government Policy Statement* Defra & CLG, 2007.

³ Page 10.

However, assessment by the Environment Agency undertaken for the purposes of increasing domestic metering⁴ shows clearly that the areas of greatest housing demand in London and the south east are also the areas where water stress is already serious. This pressure will not slacken between now and 2016, and may well increase and our work on the zero carbon programme demonstrates how much time is needed when changes are proposed in whole building performance (as opposed to individual building components).

Figure 26: Areas of relative water stress



Source: Environment Agency

⁴ *Identifying areas of water stress – consultation document* Environment Agency, 2007. See also *Response to consultation on areas of water stress* Environment Agency, 2007.

It seems likely that further improvement in water efficiency will require investment in rainwater harvesting and grey water recycling systems, which have significant implications for how houses of the future are designed and built, and may well require different solutions in different locations. We must not leave housebuilders with the choice, either of installing systems which may not work or, worse, may put households' health at risk; or else of reducing production in areas of water stress and thus undermining the housebuilding target.

We believe that a plan needs to be developed, similar to the timeline for zero carbon, to deliver improved water efficiency in new homes. The plan must allow adequate time for prototyping and large scale trialling of water recycling measures, and for design solutions repeatable on a large scale to be developed, if future tightening of water efficiency regulations is not to constrain the number of houses being built. It must also provide for widespread dissemination of learning and solutions to ensure that they are available throughout the housebuilding industry.

We therefore **recommend** that Defra and CLG, working with the housebuilding, water supply and construction products industries, should develop a programme of small and larger scale field testing of water recycling technologies and building designs. This programme should draw on existing projects and on international experience where applicable. We do not believe there is any need for a separate delivery body, but before any tightening of standards beyond current proposals it will be necessary to address the issues we have identified, including dissemination across the industry and household behaviour, and adequate time must be allowed for this to happen.

Other aspects of the Code for Sustainable Homes

Our terms of reference require us to consider sustainability "as set out in the Code for Sustainable Homes."

The Code was published by CLG in December 2006. It uses a points system for rating new homes against the Code standards. Points are converted into star ratings, from one to six stars. The Code covers nine design categories, for some of which it requires a minimum standard, as set out below.

Code for Sustainable Homes

<ul style="list-style-type: none"> ● Energy/CO₂ ● Water 	Minimum standards at each level of the Code
<ul style="list-style-type: none"> ● Materials ● Surface water run-off ● Waste 	Minimum standard at Code entry level
<ul style="list-style-type: none"> ● Pollution ● Health and well-being ● Management ● Ecology 	No minimum standards

The Government has recently consulted⁵ on proposals to make it mandatory for all new homes to have a Code rating. Those where no assessment is carried out would have an automatic rating of zero. The clear policy intention is for home buyers to be better informed about the sustainability of their potential homes, in the same way that sustainability ratings are now attached to consumer products like refrigerators and washing machines.

The Government has not yet published the responses to this consultation, or announced whether the proposals will go ahead. As noted elsewhere in this report, however, home buyers primarily consider price, size and location, and there is little evidence that sustainability enters into their thinking, even in relation to features with a measurable payback such as energy efficiency. If there is no market benefit from achieving higher Code ratings, or even from having new homes assessed against Code standards, it is unlikely that housebuilders will seek to do so.

We have not considered the coverage of the Code in any detail. Its flexibility is welcome and the points system allows housebuilders to make choices about different approaches to sustainability, which allows for different sites and different markets, and avoids creating a design straitjacket. However, for reasons discussed earlier (see “What makes a development viable?” in Chapter 5), we would be cautious about any proposal to make achievement of specific Code levels mandatory. Local authorities considering whether to do so must now assess the impact on the viability of sites, and similarly we suggest that Government should have regard to the impact on the delivery of the housebuilding target.

Summary of recommendations in this Chapter

- Defra and CLG, working with the housebuilding, water supply and construction products industries, should develop a programme of small and larger scale field testing of water recycling technologies and building designs.
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⁵ *The future of the Code for Sustainable Homes – Making a rating mandatory* CLG, 2007.

AN OVERVIEW OF THE HOUSEBUILDING INDUSTRY



Miller Homes Development, Allerton Bywater, Millennium Community, near Leeds.

CHAPTER 1 The housebuilding industry

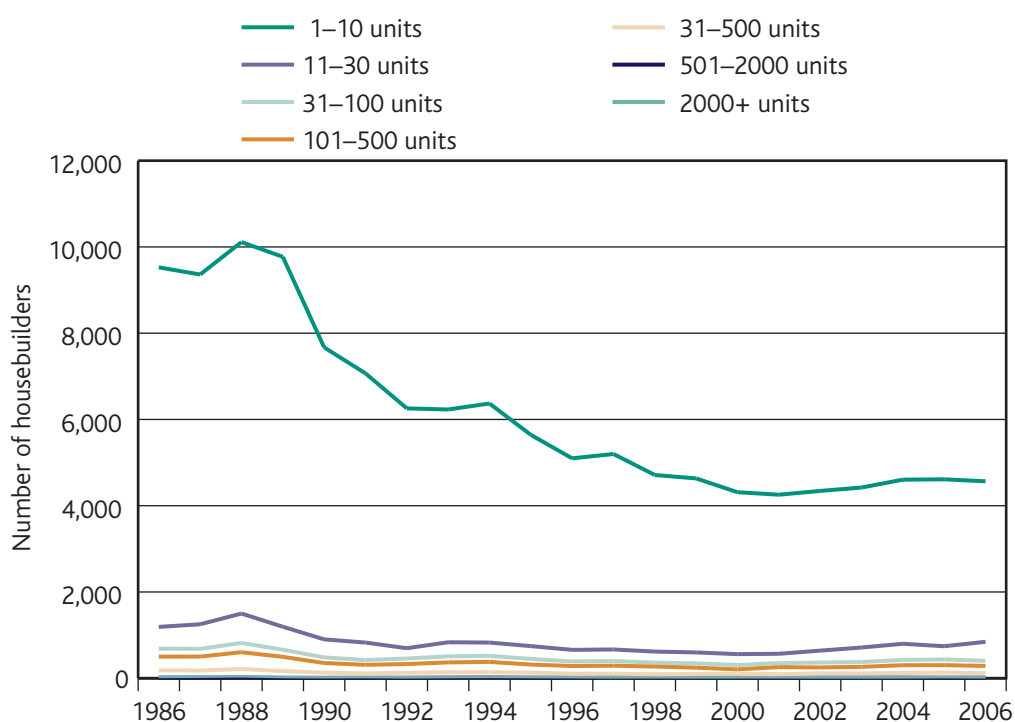
Introduction

There are several common perceptions about new housing. It is often said, for example, that it is a collection of “little boxes” scattered across the countryside or that it is provided by an industry dominated by big players who are interested only in “lining their own pockets”. All generalisations contain an element of truth, but truth is inevitably much more complicated.

The chief characteristic of the housebuilding industry is its diversity. New housing actually comes in many different shapes and sizes: detached, semi-detached or terraced houses, flats and bungalows; from large family-sized dwellings in the country down to studio apartments in city centres. It is also provided – as it has always been – by a large number of different companies and organisations.

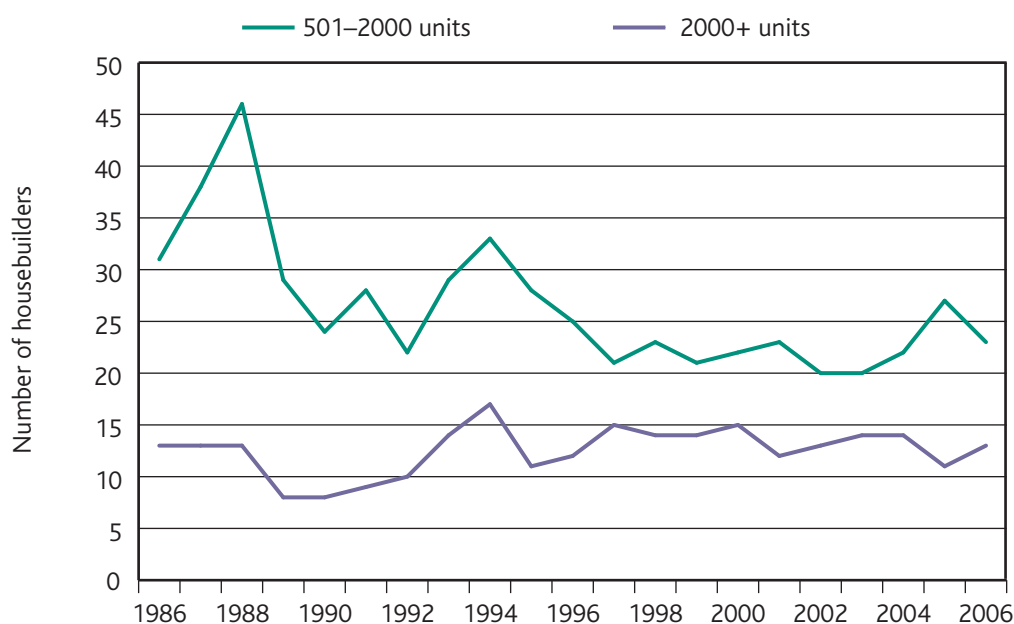
Traditional housebuilders are the largest single source of supply. They are not, however, a small homogeneous group, but a very large and diverse collection of companies. The National House-Building Council (NHBC) which is the UK’s leading warranty and insurance provider for new homes, covering approximately four-fifths of new homes built, currently maintains a register of more than 20,000 builders, although many of these do not build complete homes every year.

The sheer number of organizations involved in housebuilding can be witnessed at first hand by anyone driving around the country and observing the names on the hoardings at any residential development site. But whilst there is a long “tail” of small companies, the vast majority of which build fewer than 10 housing units a year, there is a much smaller number of companies, which produce several thousand new homes every year. This divergence between the small and the large companies is illustrated in Figure 1:

Figure 1: Number of housebuilders in Great Britain, by size category, 1986–2006

Source: NHBC

Particularly noticeable from this graph, and the following one, is the sharp drop in the number of small housebuilders after the late 1980s and the fact that the number of the very large housebuilders has remained relatively constant.

Figure 2: Number of housebuilders in Great Britain producing more than 500 units, 1986–2006

Source: NHBC

The reasons for this “shakeout” in the housebuilding industry can be explained by examining the two major crises which it has endured in the past 35 years and which helps to explain why housebuilding has traditionally been regarded as a relatively risky investment. Chapter 3 of Part 1 looks at this aspect of history.

Other players – private sector

Apart from the traditional housebuilders, other players in the private sector include:

- Commercial property developers: although usually associated with the construction of shopping and office developments, they are becoming more interested in new housing, particularly as the social pressures to create mixed-use developments, including an element of housing, are growing. In the main the developers join forces with a traditional housebuilder to build the houses or, more likely, flats. The Review has, however, heard from several sources that they are increasingly looking to undertake the entire process themselves. This would enable them to avoid having to rely on other parties for the successful completion of a development and, more importantly, obviate the need to share profits with others;
- The self-build market: this comprises both DIYers and those who buy a plot of land and then contract with a builder to construct a house to their specification. Estimates of the size of this segment in the market range quite considerably and no research appears ever to have been done to quantify it exactly. Figures given to the Review range from 10,000 to 25,000 per annum, but 15,000 is probably nearer the mark. This would represent some 7% of the total new build market in Great Britain.

Other players – affordable and social sector

Affordable and social housing is provided both by housebuilders as part of their planning consent obligations and by Housing Associations, or Registered Social Landlords (RSLs), who commission contractors to build to their specifications. Since taking over from local authorities as the principal source of affordable housing in Britain, RSLs have expanded their market from simply building new properties for renting out to the poorest sections of the community, to becoming providers of mixed tenure affordable housing under a number of different initiatives, but usually all involving an equity/rental share with the owner/tenant, as well as, more recently, building houses for direct sale to private individuals.

It is likely that in future the importance of commercial developers and contractors in the private sector market and of local authority/local authority-sponsored housing development companies in the affordable and social sector will both increase. Nevertheless the majority of new houses will continue to be built by companies that are generally regarded as being “housebuilders”.

Diversity of housebuilders

The diversity of these companies is both strength and a weakness:

- A strength in that there are many different organisations and thus many different people dedicated to providing new housing, all in competition with each other. The competitive nature of this market is the key element because they all have different perceptions of how they can meet a market need and make a profit from their endeavours. If they fail, the Darwinian concept of “survival of the fittest” applies and even in this instance if several companies “get it wrong” and go out of business as a consequence, the overall impact is probably minimal. The large number of producers also means that, despite the financial pressures on individual companies to reduce their costs through standardising their product – as described in Chapter 11 – a wider range and variety of houses will actually get built. It is, however, absolutely vital that they can all operate on a “level playing field” in terms of Government standards and regulation;
- A weakness, because all these companies “do their own thing, in their own way”. They are responsible to their investors, be they family members or large investment funds, and to their bankers or others from whom they borrow money; however, as long as they lodge their audited accounts in accordance with Companies Act requirements and meet other laws of the land, especially in terms of town and country planning, they are not obliged to provide additional information for the benefit of outsiders; nor do they have to do anything to meet Government policies.

One consequence of this is that it is very difficult to produce a neat and accurate picture of precisely what the housebuilding industry is at any one time, who is building what, where and in what numbers, or how much land it actually has available for future housebuilding. For a variety of reasons, data is not directly comparable across organisations:

- Some companies are engaged in nothing but housebuilding, whilst others also undertake other activities. This is often in related sectors, such as construction, but equally may be completely unrelated to housebuilding. Housebuilding may be just one, relatively small, line of business;
- Many companies only operate in single parts of England, others across Great Britain, yet others have their home base in Scotland or Northern Ireland and some have extensive interests in Europe or North America. Smaller companies tend to focus their operations in very local areas which they know well;
- Companies have different year-end reporting dates, so that the figures will reflect differing periods and thus trading conditions;
- Some housebuilders focus on niche markets, such as sheltered housing for the elderly, regeneration development or up-market homes;

- For reasons explained in Chapter 2, in order to impress their investors, and the City generally that will be the largest, publicly quoted housebuilding companies need to give the greatest amount of confidence about the immediate prospects for their businesses. Whilst this means that they make considerably more information available about themselves than do the privately-owned companies, they are also prone to put the best possible gloss on their figures. This is particularly noticeable in the case of future land supply – land banks – where companies will seek to emphasise the amount of land they control, but may not always be precise about its planning status: in other words, whether the land is actually capable of having houses built upon it.

It is not surprising, therefore, that the Review has heard many times that trying to tabulate the industry accurately is a nightmare and a minefield! Nevertheless, many people do their best to do just this and the Review is particularly grateful to them;¹ but even they have focused on housebuilders and have not been able to include the residential outputs of commercial developers.

The current position of the housebuilding industry

We have already indicated that there is a “long tail” of housebuilders, with a much smaller number occupying the top of the league, but precisely what is the position?

According to the statistics published by CLG and the devolved administrations, the total number of new homes completed in England, Wales and Scotland in 2006 was 194,060, of which 160,761 (83%) were in England. The overwhelming majority of these new homes are provided by the private sector, with the balance being affordable/social housing completed by Registered Social Landlords and Local Authorities. The precise distribution between the three countries and the type of build is shown in Figure 3.

Figure 3: Housing completions in 2006

	England	Wales	Scotland	Great Britain
Private Sector	139,732	8,361	20,371	168,464
RSLs	20,752	357	4,204	25,313
Local Authorities	277	0	6	283
TOTAL	160,761	8,718	24,581	194,060

Source: CLG

Once an allowance is made for the self-build sector, the number of houses built by housebuilders throughout Great Britain is about 140,000. The relative importance of the middle and smaller-sized housebuilders is seen most clearly in the fact – as shown in Figure 4 below – that, in the most recent annual trading periods, only just over 30 companies produced more than 500 homes in a year. Whilst these leading companies were responsible for over 116,000 new homes, it means too that nearly 25,000 homes were built by the many thousands of small builders.

¹ For example: “Housing Market Intelligence Reports” and “Fred Wellings’ Private Homebuilding Annual 2006”.

Figure 4: Leading housebuilding companies in Great Britain

Company Name	Year ending ⁽¹⁾	Units Built/Sold (number)		
		Latest year	Previous year	Earlier year
1 Barratt Developments ⁽²⁾	30 June 2007	17,168	14,601	14,351
2 Persimmon	31 December 2006	16,701	12,636	12,360
3 George Wimpey ⁽³⁾	31 December 2006	13,616	12,100	12,232
4 Taylor Woodrow ⁽³⁾	31 December 2006	8,294	8,178	9,053
5 Bellway	31 July 2007	7,638	7,117	7,001
6 Wilson Bowden ⁽²⁾	31 December 2006	5,628	5,207	5,588
Wilson Bowden ⁽²⁾	1 Jan – 26 April 2007	984		
7 Redrow	30 June 2007	4,823	4,735	4,372
8 Westbury ⁽⁴⁾	31 December 2005	⁽⁴⁾	4,361	4,400
9 Miller	31 December 2006	3,960	2,801	2,505
10 Gladedale	31 December 2006	3,854	2,801	1,874
11 Bovis Homes	31 December 2006	3,123	2,702	2,700
12 Crest Nicholson	31 October 2006	2,946	2,417	2,524
13 Berkeley Group	30 April 2007	2,852	3,001	2,292
14 McCarthy & Stone	31 August 2006	2,119	1,983	2,055
15 Bloor	30 June 2006	1,921	1,804	1,916
16 Lovell Partnerships	31 December 2006	1,902	1,565	2,051
17 Kier Residential	30 June 2007	1,767	1,522	1,215
18 Cala	30 June 2006	1,558	1,340	1,505
19 Galliford Try ⁽⁵⁾	31 March 2007	1,526	1,054	853
20 Fairview	31 December 2006	1,477	1,791	1,990
21 Countryside Properties	30 September 2006	1,444	1,117	1,315
22 Inspace ⁽⁶⁾	31 December 2006	1,416	988	984
23 Linden Holdings ⁽⁵⁾	31 December 2006	1,198	1,100	1,018
24 Haslam Homes	31 March 2007	1,077	1,028	790
25 Morris Homes	31 March 2007	1,150	1,040	965
26 Stewart Milne	30 June 2006	1,000	900	860
27 McInerney	31 December 2006	980	658	500
28 Crosby Homes ⁽⁷⁾	30 June 2006	866	929	⁽⁷⁾
29 David McLean	30 June 2006	760	646	449
30 Ben Bailey	31 December 2006	712	686	527
31 Gleeson Homes	30 June 2007	639	487	726
32 Telford Homes	31 March 2007	564	762	373
33 Croudace	31 December 2006	531	515	330
TOTAL		116,194	104,572	101,674

Sources:

Housing Market Intelligence Reports 2006 and 2007

Fred Wellings' Private Housebuilding Annual 2006

Company reports and accounts

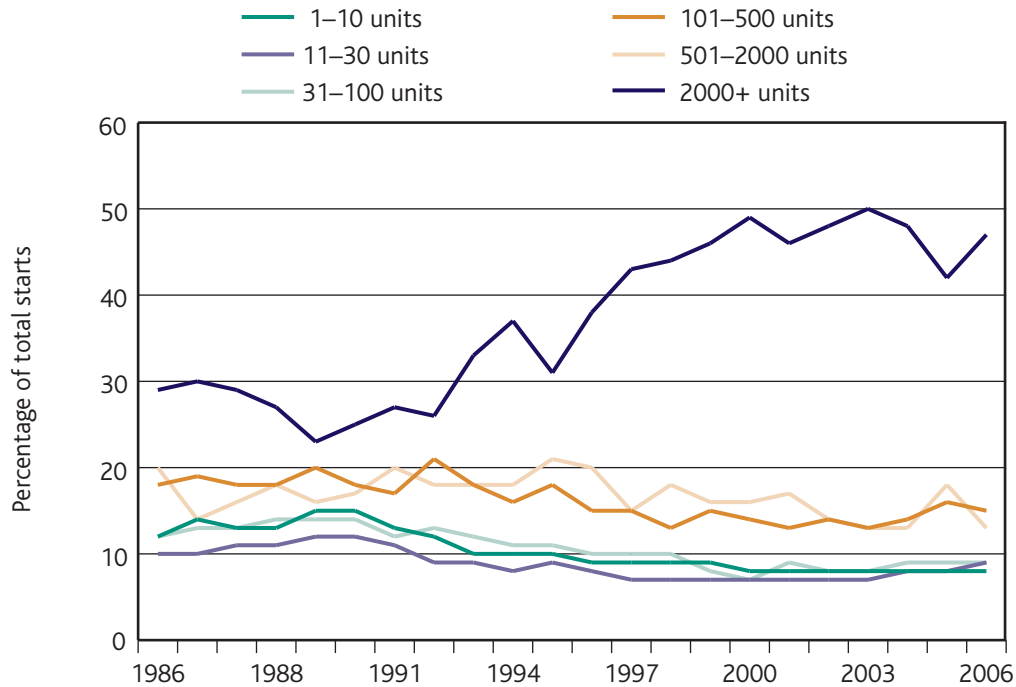
Notes:

- (1) The table includes those housebuilders which, in their most recent trading year, completed 500 or more housing units. Because of differing year-end dates the figures do not all reflect the results of the same trading conditions and can be distorted also because of mergers and acquisitions. Half yearly and interim results have not been taken into account. Some companies are operationally active in Wales and Scotland, as well as in England. These figures include their total output in Great Britain.
- (2) Barratt Developments acquired Wilson Bowden in April 2007. Barratt's June 2007 figures include 1,651 Wilson Bowden completions since the acquisition. The second set of figures quoted for Wilson Bowden covers the period between December 2006 and April 2007, when the acquisition was completed.
- (3) Taylor Woodrow and G Wimpey merged in July 2007 to form a single company, Taylor Wimpey plc.
- (4) Westbury was acquired by Persimmon in early 2006. The "previous year" data relates to the year ending December 2005.
- (5) Galliford Try acquired Linden Holdings on 6 March 2007.
- (6) Inspace plc focuses on the provision of social and affordable housing, rather than housing for sale.
- (7) Crosby Homes was acquired by the Lend Lease Corporation from Berkeley in 2005. The figure of 929 units covers a 14 month period ending June 2005.

Whilst there is diversity, there is also concentration at the top – a phenomenon that has always existed, but has been increasing since 2005. 2007 has seen several mergers and acquisitions, both amongst the high profile top companies as well as further down the list. The most prominent are the merger of George Wimpey and Taylor Woodrow, the acquisition of Wilson Bowden by Barratt Developments and that of Linden Holdings by Galliford Try. In addition, Gladedale has acquired Ben Bailey plc.

The upshot of this is that just three companies (Taylor Wimpey, Barratt Developments and Persimmon) now dominate the league table of housing completions. Between them they account for about 55,000 of all new homes built in Britain. But this is nothing new. Figure 5 shows that, despite some hiccups, the dominance of the largest housebuilders (those building over 2,000 units per annum) has shown a substantial rise over the past 15 years.

Figure 5: Percentage of total starts in Great Britain by companies in different size categories, 1986–2006



Source: NHBC

Who owns the housebuilding companies?

All the companies listed above are multi-million pound businesses. Some are freestanding, independent organisations; others are part of much larger conglomerates, for which housebuilding is but one activity. Some are quoted on the London Stock Exchange (LSE) or the smaller Alternative Investment Market (AIM); others are owned and/or controlled by private equity investors, their existing management, members of the founding families or by charitable trusts.

The ownership of the current top companies (based on the names set out in Figure 4, but taking into account the various mergers and acquisitions) is as follows:

Figure 6

Company Name		Ownership
1	Taylor Wimpey	Quoted on the London Stock Exchange
2	Barratt Developments	Quoted on the London Stock Exchange
3	Persimmon	Quoted on the London Stock Exchange
4	Bellway	Quoted on the London Stock Exchange
5	Redrow	Quoted on the London Stock Exchange
6	Miller	Privately owned
7	Gladedale	Privately owned
8	Bovis Homes	Quoted on the London Stock Exchange
9	Crest Nicholson	Privately owned
10	Berkeley Group	Quoted on the London Stock Exchange
11	McCarthy & Stone	Privately owned
12	Bloor	Privately owned
13	Lovell Partnerships	Part of Morgan Sindall plc – Quoted on the London Stock Exchange
14	Cala	Privately owned
15	Galliford Try	Quoted on the London Stock Exchange
16	Kier Residential	Part of Kier plc – Quoted on the London Stock Exchange
17	Fairview	Privately owned
18	Countryside Properties	Privately owned
19	Inspace	Quoted on the Alternative Investment Market
20	Haslam Homes	Privately owned
21	Morris Group	Privately owned
22	Stewart Milne	Privately owned
23	McInerney	Part of the Irish international property development company, McInerney Holdings plc, quoted on both the Dublin and London Stock Exchanges
24	Crosby Homes	Part of the Australian international company, Lend Lease Corporation
25	David McLean	Privately owned
26	Gleeson Homes	Part of MJ Gleeson plc – Quoted on the London Stock Exchange
27	Telford Homes	Quoted on the Alternative Investment Market
28	Croudace	Privately owned

Housebuilding companies quoted on the London Stock Exchange

The number of housebuilding companies quoted on the LSE or the AIM has reduced over the past two years, not only as a result of the mergers and acquisitions described above, but also by companies being taken private following their acquisition by private equity investors (eg Crest Nicholson and McCarthy & Stone) or as a result management buyouts (eg Countryside Properties).

For over a decade no housebuilding company was large enough to qualify for the FTSE 100; it was only after Persimmon plc's acquisition of Westbury in 2006 that the position changed. In 2007, it was joined by Barratt Developments plc following the latter's acquisition of Wilson Bowden. The newly created Taylor Wimpey plc joined the FTSE 100 in September 2007.

Generally, about 80% of all shares quoted on the London Stock Exchange are owned by institutional investors; these range from professional fund managers, such as large pension funds and insurance companies, down to private individuals. Because of this wide spread, no single body tends to dominate the ownership of companies. In the case of the housebuilding industry, however, HBoS plc has developed a relatively significant role because of its involvement in helping to finance many housebuilding companies, both in terms of equity and debt.

CHAPTER 2

Housebuilders and the Investment Community

The focus in Part 2 is – perhaps inevitably – on the largest, quoted housebuilding companies. But whether they fall into this category, or are privately owned, there are two aspects they all have in common:

- 1) The need for the shareholders'/owners' investment to be safeguarded by being managed in a fully professional manner.
- 2) Shareholders and owners of companies require a return on their investment and whilst competitive strategies may vary between companies, the substantial majority of UK housing production is driven by rational financial criteria.

The description of the financial system and the approach to business management that follows is, therefore, applicable by and large to all companies, both housebuilders and non-housebuilders, and whether quoted or not on the Stock Exchange.

(Greater attention is paid to "quoted" companies, both because of their size, the range of ownership and the requirements of the Stock Exchange and other regulatory bodies. This means too that considerably more data is publicly available about them. Other companies, if they so choose, are able to limit the amount of information they make available publicly to whatever is required by the Companies Acts and other legislation.)

To achieve returns for their owners, management teams are under pressure to create shareholder value. This is not necessarily the same thing, however, as merely increasing the volume of production of new houses or accelerating the rate of sales.

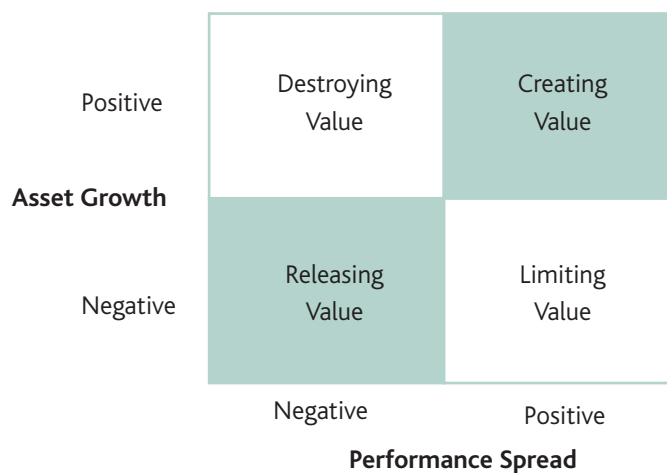
Creating Shareholder Value

Shareholders measure value created as the growth in a company's share price over a period plus any dividends received from it. Management will deliver share price growth if they invest on the right basis, but it needs to ensure that when capital is invested, it provides a return above the cost of that capital.

The cost of capital can be calculated in a number of ways. The basic principle recognises that in today's markets equity capital is much more expensive than debt. A company's weighted average cost of capital reflects the **mix** of its financing between equity and debt.

Whilst there are a inherent problems in using these valuation techniques, particularly in calculating a company's cost of equity, which has to rely on a broad range of assumptions, the principle is correct.

Creating Business Value: Managing the Drivers



If the prospective returns on an investment are lower than the company's cost of that capital, the performance spread is negative. If a company invests capital on this basis it is actually destroying value. What companies should do when they are in the 'destroying value' quadrant is to shrink their asset base in real terms and release value from their portfolio. Released capital can either be used elsewhere in the group, where returns are higher, or cash should be returned to the shareholders.

At the other end of the spectrum, the *greatest* value is created by companies that exploit opportunities to grow their asset base at rates of return higher than their cost of capital. This puts them in the 'creating value' quadrant.

Analysts employed by investment banks and stockbroking firms look closely at companies to find out which quadrant they are in.

Paying attention to shareholder value has become something of a treadmill for directors and senior management. As stock markets have matured shareholders increasingly demand from each business investment the most that the management can deliver in terms of value.

Although there may be some small, family-owned, builders that are restricted in their ability or even desire to grow, the majority of housebuilding companies appreciate that to increase shareholder value and defend themselves against predators will require properly executed policies of both increasing production efficiency and growing business volume.

Housebuilding companies, like all publicly quoted companies in other industrial sectors, are subject to the demanding and discriminating scrutiny of the City investment community.

There are three distinct constituencies amongst this community which form the key stakeholders to whom the housebuilder must pay particular attention:

1. The financial institutions which provide the bulk of the companies' equity base. Financial institutions can include pension fund managers, asset management companies, insurance companies, banks and similar businesses.

An institution will make investment decisions by taking account of worldwide economic prospects to decide what proportion of the fund will be allocated to each country, type of investment and sector. Bearing in mind the fund's particular requirements for capital growth and/or dividend income, the fund manager can then consider the selection of individual stocks. The aim of fund managers is to create a portfolio that will outperform the stock market and competitor funds.

Competition in the sale of investment products is intense; all investors expect their investments to increase in value. Funds that outperform the market attract new investment and grow; those that underperform shrink. Performance is analysed regularly in the press and through performance tables. Successful fund managers are amongst the highest paid individuals in the City.

2. The stockbrokers and their analysts whose principal aim it is to understand the performance and prospects for industrial sectors and individual companies within them, in order to promote share transactions by the financial institutions from which the stockbrokers will earn commissions.
3. The banks and other lenders of debt to the companies.

All three groups have vested interests in understanding the housebuilding business, the individual companies' competitive position in the market, the prospect for the companies in the short and medium term, and the quality of the management.

In order to provide the necessary information, the Chief Executive, Finance Director and other senior members of the management team meet regularly with their stakeholders. The meetings usually take place at the time of the announcement of the companies' half-year and full-year results, as well as at other times of particular significance when a company wishes to communicate news, good or bad, to its stakeholders.

In some cases, representatives of the financial community are invited on site visits in order to try and give them more understanding about the company's prospects.

In their presentations, housebuilding companies will focus on their trading figures, past performance and future prospects, profits and operating margins, earnings and dividends and, in particular, on cashflow, so that they can provide a reasonably accurate picture of how well a company is performing.

Assuming that the business is indeed performing well, both in absolute terms and in comparison with other companies in the sector:

- The financial institutions will maintain or even increase the level of their shareholding in the company;
- The analysts, whose experience and detailed knowledge of the industry generally and the company specifically provides them with a high degree of credibility amongst investors, will recommend that investors buy additional shares in the company or, at the least, continue to maintain their existing holdings. The influence that the more respected analysts can wield cannot be under-estimated;
- Banks and other lending institutions will be satisfied that their loans will be serviced and repaid in full and on time.

On the other hand, should a company not be performing well compared to its peers and/or its management is unable to provide clear and comprehensive information about the reasons for this and the action it proposes to take to remedy the position, the financial community will adopt a much more critical approach. The consequences include:

- Demands being made for changes to the management team. In extremis, the institutions would be able to muster sufficient votes at an extraordinary general meeting of the company to force through the compulsory dismissal of one or more members of the Board of Directors;
- Analysts would issue recommendations to sell the company's shares, advice which many of the financial institutions would probably follow;
- The price of the company's shares on the Stock Exchange would fall and only stabilise at a point which reflected a fair value under the difficult circumstances. Such a move would probably also hit the Directors personally in their pockets, since most companies have performance targets for their senior managers which are linked to the profitability of the company and the price of its shares. Individuals would stand to lose not only substantial bonuses, but also see the value of their personal investments fall;
- A reduced share price could also lead the company to becoming a target for a hostile takeover bid;
- Where housebuilding is just one activity amongst many for a company, the external scrutiny will look at all aspects of that company's businesses. Should housebuilding not prove to be as profitable, or potentially successful a line of trading as the others, the company might decide to close down that particular activity.

It should be stressed that whilst much of the foregoing relates to companies that are quoted on the Stock Exchange, similar criteria apply to all housebuilding companies with professional managements, irrespective of size. The smaller ones will also be subject to regular scrutiny, particularly from their bankers and shareholders, to ensure continuing profitability.

Their responses to this scenario are entirely rational to the circumstances. Other than in the case of a few of the ethical funds, investors are looking for financial performance that increases the value of the shares. In practice investors place little weight on any corporate achievement that does not ultimately lead to increased shareholder value. Conversely, unless they impact on future value, they are not concerned by failures in design quality or social responsibility.

More significantly, perhaps, little heed will probably be paid to a new Government policy initiative unless there is a direct financial consequence of ignoring it, for example following the introduction of a new mandatory regulation.

Key indicators used by investors

To facilitate measurement and to enable comparisons to be made between companies, a number of performance indicators are used.

Overall financial performance and status is generally measured in terms of:

- Annual growth in turnover, gross profit, operating profit and pre-tax profit, together with the absolute level of the gross and operating margins;
- Earnings per Share (EPS);
- Price/Earnings ratio (P/E);
- Dividend per Share;
- Return on Equity (ROE);
- Return on Capital Employed (ROCE)/Return on Average Capital Employed (ROACE) – measures of how efficiently a business has deployed its capital;
- Weighted Average Cost of Capital (WACC) – shows the average cost of the mix of equity and debt that the business has used in the past year, adjusted by a factor that weights the actual cost by the risk inherent in that type of business;
- Gearing – total debt divided by shareholders' funds;
- Cost of Debt, Interest Cover and the mix of debt in terms of the fixed and floating element;
- The net asset value per share (NAV), and the discount or premium of NAV when compared to the share price.

Analysts and investors want more information than companies themselves statutorily have to disclose in their report and accounts, particularly as regards landbanks. However there is no consistency as to how this additional information is disclosed by the housing industry. The type of information requested includes:

- Average debt during the period and forecasted average debt;
- The number of plots in the short term landbank, split between those owned or controlled by the company and how many plots have implementable planning consent;
- The extent of the company's long term, or strategic, landbank. This is measured in acres or potential plots;
- The number of plots bought during the period and the cost paid per plot;
- The cost of each plot used during the period;
- The number of plots moved to short term from the strategic land bank;
- The plot/cost ratio at the end of the period, which measures the average cost of each plot to the anticipated average selling price;
- The number of sites operational during the period and how many they expect to be operational during the next period;
- The number of housing unit completions in the period, broken down between private and social, by region and by product type;
- The average selling price, split on the same basis;
- The selling price per square foot;
- The average size of units;
- Reservation rate per site;
- Cancellation rates;
- Incentives required;
- Visitor levels;
- The size (in both unit and revenue terms) of the forward order book, including the margin in the order book.

Important factors that affect the industry valuation as a whole include the outlook for the global and national economy and particularly those that which affect the housebuilding business, in terms of interest rates, wages and employment, supply chain costs, the planning regime, and land and house prices. Other factors will be more business specific, reflecting the specific business strategy of each housebuilder and its perceived ability to grow shareholder value.

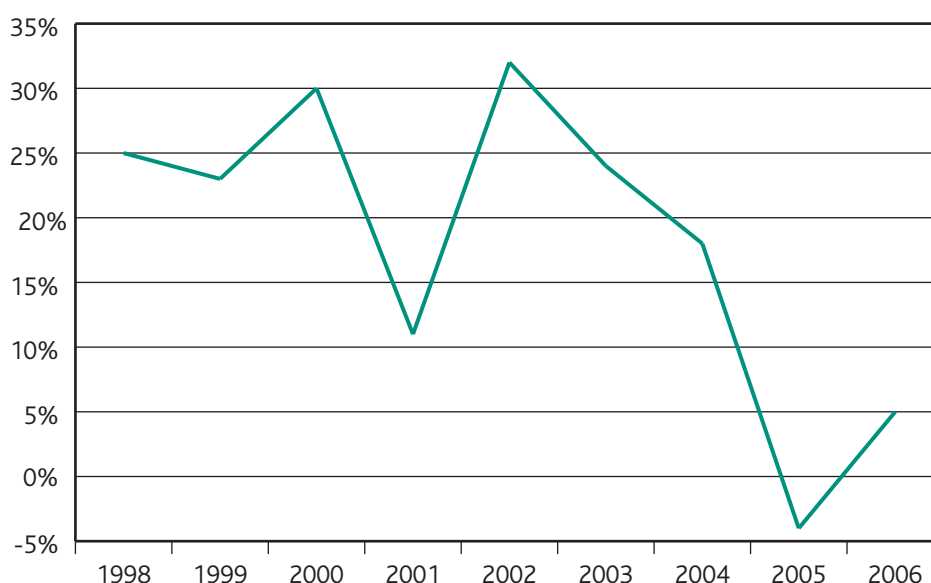
Some of these indicators need to be examined in greater detail.

Earnings Per Share (EPS)

EPS is calculated as post-tax profit for the year divided by the number of shares in issue. Its growth is a key measure for shareholders.

As the graph below shows, the average growth in EPS for the major quoted housebuilders between 1998 and 2004 lay between 20%-30%, falling sharply in 2005 to a point of little or even negative growth in earnings. (The 2001 figure is distorted by poor performances on the part of Taylor Woodrow and Wimpey; the other companies' performance remained in line with the surrounding years.) This reflects the strong growth in house prices until 2004, after which price growth began to subside, and in some areas flatten. 2005 saw pressure on profit margins, although a bigger issue was the lower volume production due to planning difficulties. The situation was alleviated slightly in 2006 with some recovery in volume and the effects of some acquisitions (for example, Persimmon's acquisition of Westbury).² Nevertheless, housebuilders' operating margins remain under pressure, with lower levels of house price inflation, because the costs of the higher priced land bought in the past few years starts to reflect in their accounts.

Figure 7: Earnings per share – year on year change, %



Source: Ernst & Young

Note: This graph and the ones below show the average performance over the period in question by nine of the leading quoted housebuilding companies (Barratt, Bellway, Berkeley, Bovis, Persimmon, Redrow, Taylor Woodrow, Wilson Bowden and G Wimpey), although their numbers have fallen to seven in 2007. The average performance is used as a measure so as to illustrate the trend and avoid too much focus on the performance of individual companies.

² See also Chapter 15

Price to Earnings (P/E) Ratio

The P/E ratio is calculated by dividing the current share price by a company's last reported EPS. It expresses the number of years it would take the company to earn its market valuation at current levels of profit.

It is the most widespread measure used by investors in share selection. It is certainly an over-simplified and over-used ratio, but its great advantage is its simplicity. If it is used with a detailed knowledge of the company and the sector it is an effective tool, which enables reasonable comparison of market expectations to be made between similar companies in that sector.

If for example the sector average ratio was 10, a company with a P/E of 12 would be seen by the market as having a significantly more rapid growth in earnings than the rest of the sector. On the other hand a ratio of 8 would indicate either expectations of much slower earnings growth or worries about the quality of future profits or strength of the balance sheet.

Analysts have to compare their forecasts with general market expectations to see if there are likely to be any surprises and then decide whether companies' different ratings are justified by quality or growth rate differences. Ideally, they are looking for a company which they perceive to have better than expected growth prospects, but is valued on a low P/E ratio.

Sometimes, and perhaps perversely, a company with an excellent track record and whose profits are still growing could face analyst recommendations of "sell" as its share price already reflects the future prospects.

The current P/E ratios for the seven top housebuilding companies currently quoted on the London Stock Exchange are shown in Figure 8.

Figure 8: P/E Ratios

Company	P/E Ratio
Barratt Developments	5.63
Bellway	7.26
Berkeley Group ³	14.89
Bovis	8.35
Persimmon	7.17
Redrow	7.24
Taylor Wimpey	4.82
Average	7.91

Source: FT.com, 25 October 2007

³ The difference in Berkeley Group's ratio is largely attributable to technical factors. The company embarked three years ago on a strategy of maximizing its returns to its shareholders. It therefore has a stated policy of optimizing its land holdings and generating cash, rather than focusing on its income statement.

More important is the longer term trend. Figure 9 below shows the P/E curves since 1998 and illustrates how these have changed since then.

Despite strong growth in house prices and earnings in recent years, the ratings have tended to fall. The sector was out of favour during the excesses of the dot.com boom, but was only mildly affected by the ensuing crash during 2000-2003 when the FTSE 100 index fell from a peak of 6776 to a low of 3656. Subsequently it has seen an improvement in its rating, despite the prospect of weakening margins and uncertain growth prospects. During 2007, however, all the top quoted housebuilding companies have suffered substantial falls in their share price and thus, particularly in the recent past, in their P/E ratio as well.

Figure 9a: P/E Ratios 1998–2006

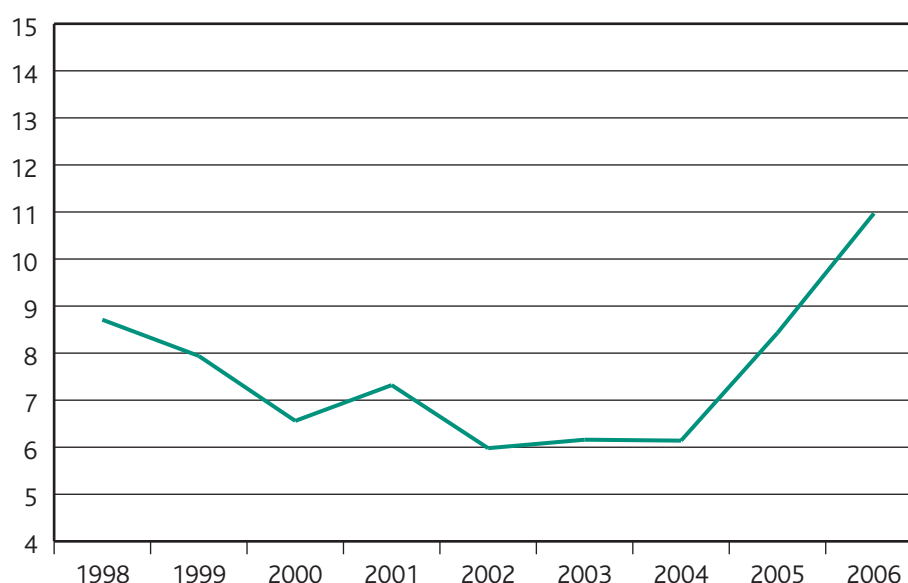
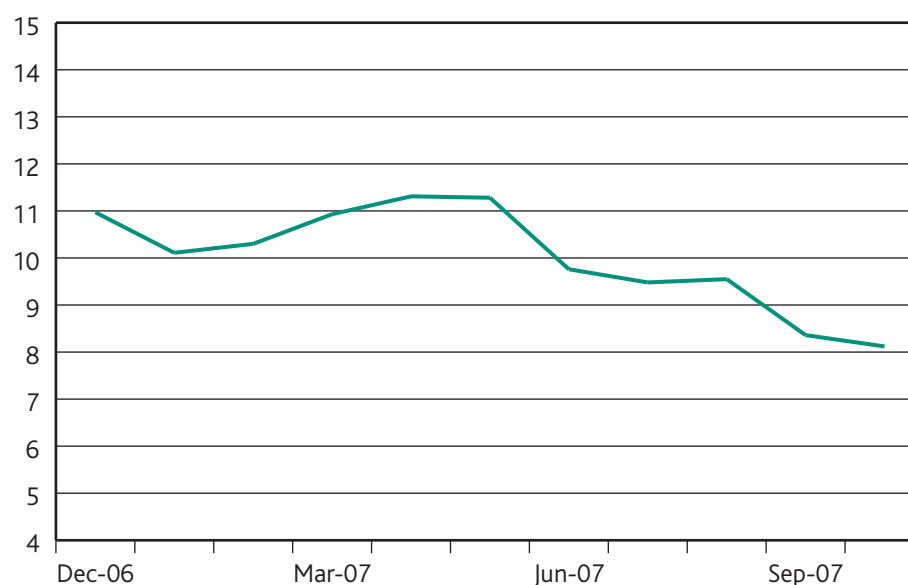


Figure 9b: P/E Ratios in 2007



Source: Ernst & Young, FT.com

It is worth noting that housebuilding is one of the lowest rated sectors, which reflects historic concerns relating to the volatility of the housebuilders' earnings.

Return on Capital Employed (ROCE)/Return on Average Capital Employed (ROACE)

ROCE is calculated as earnings before interest and tax divided by the total of shareholders' funds and long term debt and liabilities, as at the end of a period. (ROACE differs from ROCE in that it takes the average of the capital employed at the start and at the end of the period. Some companies use ROCE, others ROACE.) It is a measure of the efficiency with which a business is applying its assets to the process of generating income.

Since there are both profit and capital components to ROCE, it serves as combined indicator of both:

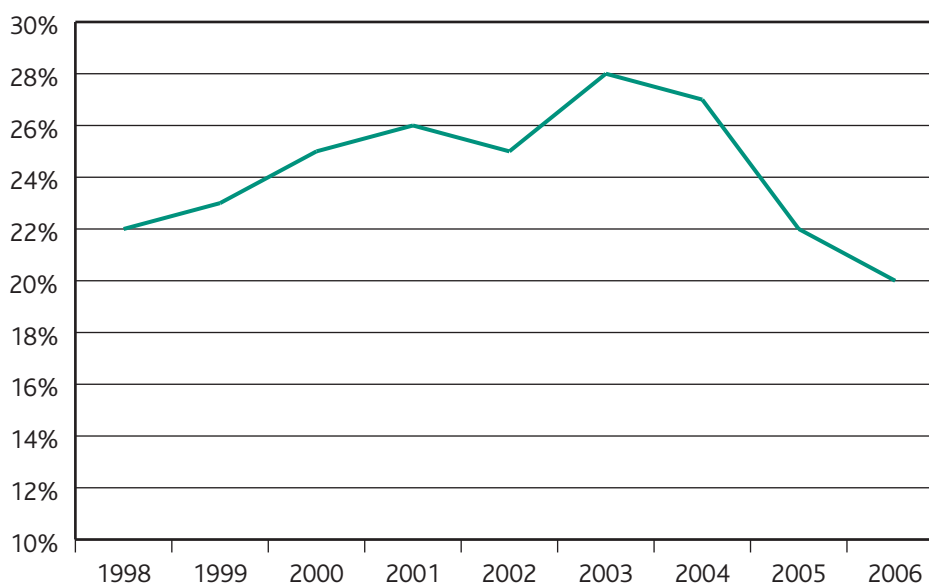
- For a given level of capital, ROCE can be increased through operating efficiency – increased selling prices and reduced production costs and overheads – leading to higher operating profit;
- For a given level of profit, ROCE can be increased through capital efficiency – reduced land banks, faster throughput of land into development and sales, improved matching of sales rate to build rate to minimise voids, better management of trade debtors and creditors – leading to a higher asset turnover and lower asset requirement in running the business.

A low comparative ROCE can be a sign of a business with untapped potential to increase shareholder value through better management, either by the existing management or that of a predator. However a low ROCE can also indicate that a housebuilder has a very low risk profile and/or has significant amounts of capital tied up in land underpinning future profits growth.

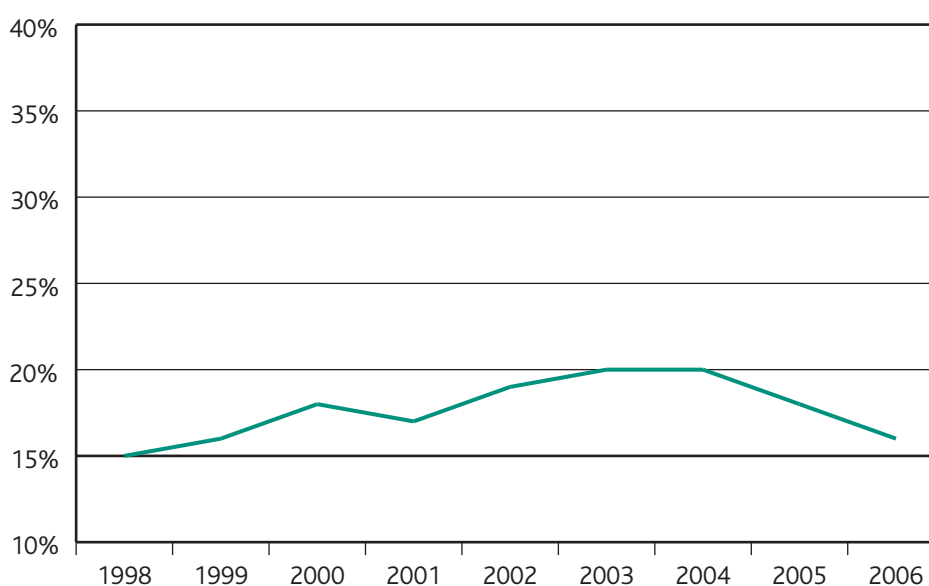
Return on Equity (ROE)

A similar, but more focused, indicator is ROE. It is calculated as earnings after interest and tax divided by shareholders' funds (net worth). With interest and tax stripped out of earnings and debt stripped out of capital, ROE is a direct measure of shareholders' return.

The average Return on Capital and Return on Equity for the top housebuilders' is shown in Figures 10 and 11 below. These show clearly how their profitability has been squeezed over the past few years.

Figure 10: Return on Capital

Source: Ernst & Young

Figure 11: Return on Equity

Source: Ernst & Young

Gearing

There are a number of gearing or leverage measures. The most common one is calculated as debt divided by shareholders' funds. Low gearing is a safe posture but in many cases inefficient in terms of use of capital. Since, up to a point, debt is cheaper than equity and interest is tax deductible, adding debt increases ROE and EPS. However,

debt has an absolute servicing commitment, so it is more risky and the benefits diminish as the risk of defaulting on interest payments increases. At very high levels of gearing ROE becomes extremely volatile.

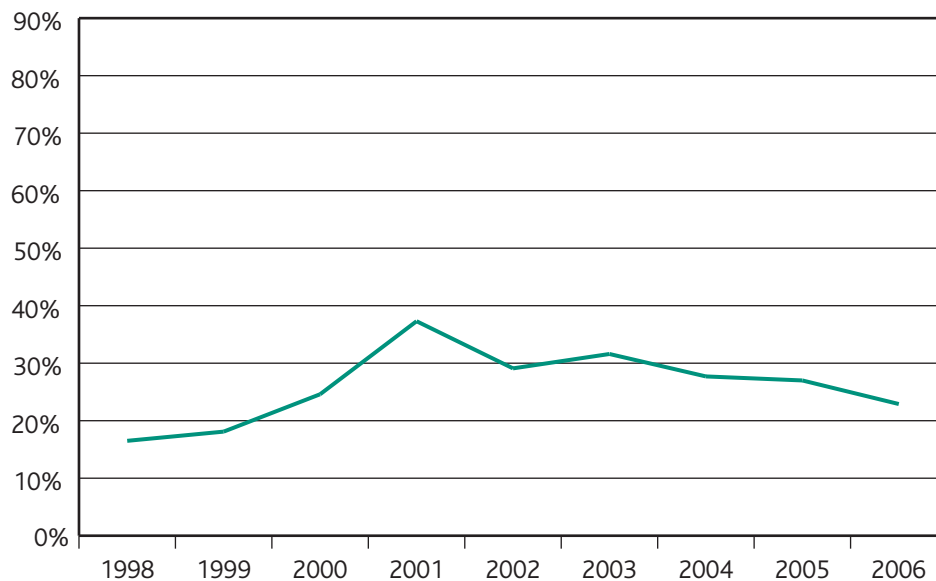
The appropriate level of gearing depends very much on the nature of the business and its risk profile.

For instance, investment in a prime commercial property with a first class tenant covenant is regarded as being low risk and banks will therefore be more relaxed at lending low margin, senior debt at up to 80% of the value of the assets; the debt/equity ratios of commercial property companies can be as much as 400%.

Property development, on the other hand, is riskier: and residential development even more so, due to the long time in which capital is tied up and the propensity of the market to undergo significant adverse change during the life time of a project. Consequently, debt/equity ratios of less than 50% are normal for quoted housebuilders.

The housebuilders' average debt/equity ratios since 1998 are shown in Figure 12.

Figure 12: Debt/Equity Ratio (Gearing)



Source: Ernst & Young

A low debt/equity ratio can mean either that the company is not using its balance sheet efficiently, possibly through excessive caution, or that there are not enough new business opportunities against which it needs to borrow.

The market's view on whether a given debt/equity ratio is good or bad will depend upon the reasons for it and the future outlook.

CHAPTER 3

Finance

Financing housebuilding through cashflow

There are two vital elements in the housebuilding business model: land and cash. Issues relating to the acquisition and use of land are discussed later in this Part 2. Whilst land is a relatively long term asset, cash is very short term and critical to a company's survival. A company without cash and without the ability to get hold of cash – whether through long-term borrowing or through short-term sales proceeds – will go out of business. Both investors and companies' managements therefore pay particular attention to the management of cashflow.

Housebuilding is a business in which significant sums of cash are invested with no absolute certainty as to how much will come back, or when. Most of the cash outflows occur at the beginning or in the early stages of a project; it is invested first in the land and planning consent, then in site preparation and infrastructure, and finally in the construction and marketing of homes. It is not until the homes are sold that cash can finally be extracted. Much of a project's funding will thus be "trapped" within the project for many years, all the while bearing an interest cost.

To counteract this, housebuilding companies always need to ensure that they have sufficient cash at their disposal to enable each construction programme in progress to continue uninterrupted. It would be financially disastrous for progress on a site to be halted because of a temporary shortage of cash, when most of the funding has already been invested.

Housebuilding is therefore a business in which financial prudence is of paramount importance. Long lead-in times, uncertainty in the site assembly and planning process, difficulties on site, and fluctuations in housing demand mean that the timing and amount of the cash release is unpredictable.

In recent years housebuilders' cashflow has been further impacted by the increasing number of flats being built. When constructing houses a developer can recover cash on the completion of individual units; in the case of flats, an entire block or section has to be completed before individual units can be sold and the cash received. This has placed an additional burden on housebuilders' cashflows and ability to finance additional volume growth.

Companies involved in building houses tend therefore to adopt conservative financing policies.

Measuring the company's liquidity

A housebuilding company does not require significant levels of fixed assets; typically, because permanent staffing is low, it owns little property in terms of land and building other than for its own administrative offices. Because it rents construction equipment as it

needs it for each site, it requires little in the way of capital equipment. Most of its funding needs are for working capital – to finance the process from land acquisition through to construction and sales. But its working capital turns over slowly and irregularly.

Both investors and, particularly, lenders pay careful attention to various ratios relating to a company's working capital to identify the degree of its liquidity. Particularly important is the "Current Ratio", which relates current assets to current liabilities. Other criteria which are looked at include the extent to which a company relies upon creditors and the speed with which stock is turned over.

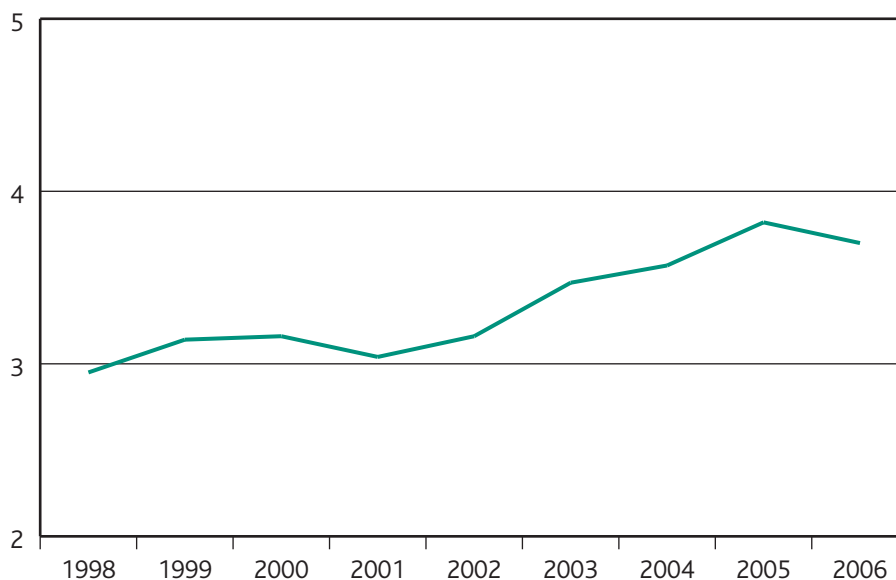
Current Ratio

The Current Ratio is calculated as current assets divided by current liabilities. It is a financial ratio that indicates the liquidity of a business and its likely ability to meet short-term debt obligations. On the asset side are stocks, short-term debtors and cash. On the liability side are short-term creditors and overdrafts.

A low Current Ratio – below 1 – is generally an indication of poor liquidity, that a business may be overwhelmed by an inability to settle its creditors, and therefore unable to secure vital supplies of stock to enable it to continue trading. A high current ratio – over 2 – is generally a sign of good liquidity and safe trading.

As Figure 13 below shows, the average Current Ratio for the leading housebuilding companies rose from 2.9 in 1998 to 3.7 in 2006.

Figure 13: Current Ratio



Source: Ernst & Young

Such high ratios are a feature of housebuilding. It reflects the amount of working capital that is tied up in high stock holdings, principally land. For companies operating in other industrial sectors, this will be financed chiefly by bank overdrafts and trade debtors; housebuilding companies tend to fund it by equity and non-current debt.

Sources of cash and managing cashflow

As securing future cashflow is essential to the health and survival of the business, it is vital for companies to be accurate in their forecasting, regular in their monitoring and constant in updating their anticipated cashflows. Nevertheless, there will still be occasions when more money is required to support the operations of the business, no matter how efficiently the management of funds within the business is handled.

Housebuilders will manage future cashflow by fine tuning the various aspects of their operations, so as to optimise the trade-off between holding too much unproductive cash and the risk of running out. This is often done through computer-based modelling programmes to assess the sufficiency of cash reserves to meet adverse trading conditions and to model the impact of specific site or market risks.

Depending upon the circumstances of an individual company and its overall financial strategy, it may use one or more of the following sources.

- Raising equity – either through a rights issue or a direct placement. Equity has the advantage over debt in that it does not have to be repaid, but the company's management must be confident, however, that it will be able to use the new cash to generate a sustainable higher level of long term profits;
- Debt securities which are appropriate for the medium or long term;
- Bank debt facilities which can be short term or revolving;
- Phasing – which itself can include a number of aspects:
 - where a developer has a large project, and if the land acquisition agreement permits, it will plan the take-up of land and the sequence of building works to optimise the project cashflow. This will often take on the pattern of minimising the amount of initial infrastructure and starting with traditional housing so as to generate an initial cashflow. It can use the proceeds from early completions to finance further stages of infrastructure, as well as the more capital intensive building of flats.
 - Prudent companies will also embark on a combination of large and small projects, which helps provide a smoother flow of cash and avoids their becoming over dependent upon relatively few large projects.
 - Through increasing the number of off-plan pre-sales, a housebuilder can assure his future income and can be more confident in committing himself to embarking upon a construction programme;
- Profits from the existing business – assuming the projects that a housebuilder undertakes are profitable there will be a surplus of cash over and above the capital that was originally invested and this surplus is available to reinvest as capital in subsequent land acquisitions and developments. Typically, however, much of the cash generated from profits go to funding dividend distributions, leaving external sources as a key element in financing future operations;

- Trading in land – housebuilding companies trade land for many reasons, such as increasing the number of sales outlets or generating more cash. Large sites that have to be purchased outright and without deferred payments or with expensive initial costs can be split up and sold on to other developers, thereby creating cash for working capital, albeit at the cost of on-site competition and possible lower overall margins;
- Sale of assets – a cash injection to the business can be generated by selling assets that the business does not need in order to continue trading. In the process of their evolution from small family firms, many housebuilding companies have tended to diversify into a number of markets, usually closely related to construction and property development. Many of these companies have undergone a period of refocusing as the organisation has grown larger, and they have sold off some non-core elements of their business as separate entities, thereby releasing cash to grow the primary business;
- Joint venture partners – if a project is too large to be easily fundable out of existing resources, a housebuilder may prefer to enter into a joint venture with a well funded partner. Typically the builder will bring construction and marketing skills to the relationship and the partner will bring finance. Either of them may contribute the land. Although the cashflow burden can be shared, so too are the ultimate profits from the development.

Types of debt

A wide variety of debt is available from banks and other lending institutions:

- Senior debt – as the name suggests, this ranks ahead of all other loans and borrowings. This means that, in the event of a company being wound up, the senior debt will be repaid before the creditors that rank below it;
- Subordinated loan – is any loan that is not senior debt. It can take many forms, but because there are loans that rank higher in the repayment priority, it is a greater risk for the funding provider and is therefore usually more expensive;
- Mezzanine finance – this is a type of subordinated debt, but it usually carries warrants, options or other types of “financial incentives” that allow the funding provider to participate in some of the upside benefits of equity ownership. Because of its very low ranking this type of debt is riskier than other types and thus more expensive;
- Syndicated loan – where a particularly large cash injection is required, or the project itself is particularly complex or risky, the lead financier may look to other banks to share in the investment. This effectively widens the base that carries the risk, making it more attractive to individual institutions;
- Overdraft – is a loan facility on a current bank account. It is only suitable for very short term cashflow issues as it carries a high rate of interest. Providing the borrower can provide security, there are more appropriate ways to fund longer term cash requirements;

- Quasi-equity – this is debt that ranks below ordinary debt and the interest on which ranks little higher than equity. The private equity funds that have recently entered the housebuilding sector have tended to use this type of debt in place of equity. The high interest charges on such debt absorbs profits to a point at which the companies which are acquired by such funds, and restructured on this basis, make little or no profit, and thus effectively pay little or no corporation tax.

Terms of debt

Debt providers are risk averse. As it is not usually possible to share in any upside of success within the business, the best that can be normally be achieved is the prompt payment of interest and full repayment of the loan. A debt provider looks on a new loan from the most pessimistic angle and needs to be assured that in the event of a default there will be sufficient assets to recover the debt.

- security – other than in the case of the very largest and “bluest of chip” companies, security will be taken. Security can be provided by means of either:
 - a fixed charge that gives the lender a right to look to a specific asset, or group of assets, in the event of the debtor’s default, which is enforceable either by power of sale or the appointment of a receiver. A fixed charge is appropriate for a land bank; and/or
 - a floating charge against all the assets of a company. A floating charge will allow the assets to be substituted – bought and sold – while the charge is in place, making it appropriate for construction;
- recourse – in the event that a borrower defaults on the loan the lender will have the right to seize the security charged against the loan to repay the liability. If the value of the asset is not sufficient to fully cover the debt, the lender may have recourse to seize other assets within the borrower’s company until the debt is discharged. If the lender is willing to accept the risk of loss, then recourse can be limited, either partly or in full;
- term – is the time between the commencement of the debt contract and the date of final repayment. Borrowings taken on for a specific project, known as “project finance” will typically be matched to the likely term of that project;
- draw down and repayment – not all funding is advanced in one go and then repaid (as a bullet) at the end of the term. Instead it may be drawn down in tranches over a period, for example, to match a construction programme and repaid over a period, out of a sequence of home sales. Facilities may also revolve, thereby enabling the borrower to keep both borrowing, servicing, and repaying within a ceiling. This is appropriate for funding continuous, but overlapping, development cycles.

Lenders are also likely to impose corporate covenants in the terms of their debt. These often take the form of mandatory ratios of the value of security to the level of debt, or of company profits to interest payments.

Many housebuilding companies, especially those with very modest borrowing requirements, will use short-term bank facilities. For larger and longer-term borrowing, however, the companies will enter into revolving credit facilities with consortia or clubs of lenders. Alternatively, they may opt for long-term loan notes from other institutions, such as pension funds.

Widespread use is also made of interest and currency swaps to hedge interest and exchange rates, in order to minimise risk exposure and cost.

In addition, many companies will negotiate standby facilities with their lenders, often of a very substantial size and irrespective of their cash/debt position. The availability of such undrawn facilities enables them to take advantage of business opportunities, such as acquisitions. By disclosing these facilities in their annual reports, they provide reassurance to the outside world as to their financial stability.

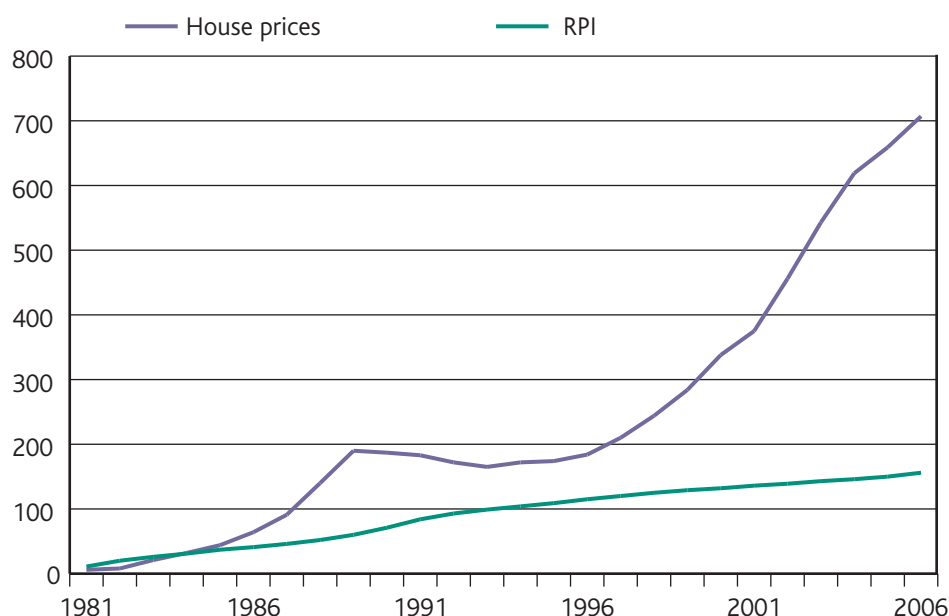
Cost of debt

The cost of debt is usually related to the rate of interest at which banks can borrow funds from each other, in marketable size, in the London interbank market. This is known as the London Interbank Offered Rate, or LIBOR.

The margin over LIBOR charged to a borrowing company depends on the lender's overall view of the risk; the higher the risk, the higher the margin. The risk will be determined by a combination of the likely ability of the borrower to both service and repay the debt and the level of security provided.

Up to moderate levels of gearing, the major housebuilders with good landbanks represent sound security; they are therefore able to borrow relatively easily and cheaply.

Since, traditionally, house prices have moved on an upward trend – as illustrated in Figure 14 – even if sales slump and interest cannot be temporarily be paid, the market will eventually improve and cash will be released. If prices rise, then even unpaid and rolled up interest may be settled and the lender repaid in full.

Figure 14: Retail Price Index (RPI) v House Prices

Source: Ernst & Young

Interest paid on overdraft and loan debt, and the cost of hedging foreign currency exchange rates, do not represent the full cost of financing for housebuilders. Since the introduction of International Financial Reporting Standards in 2005 which have to be followed by all publicly quoted companies in the European Union, other items are now disclosed as financing costs. These include:

- Interest on creditors and provisions;
- Imputed interest on deferred land payables;
- Amortisation of discount on land creditors;
- Interest and notional interest on pension liabilities;
- Movement on interest rate derivatives.

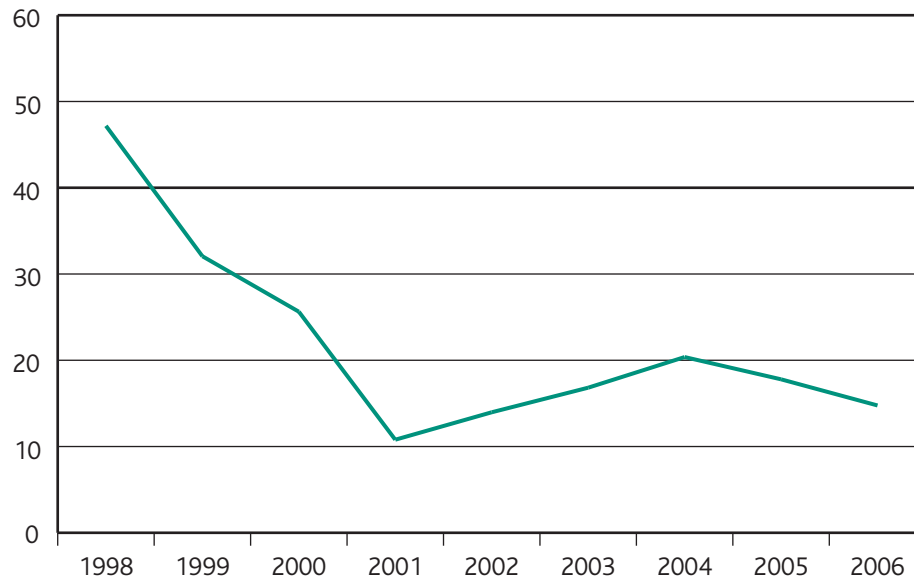
As a result of having to include these other charges under corporate debt, the total cost of finance that companies have to report to their shareholders increases very substantially – in some instances doubling it.

Interest Cover

A different way of illustrating the effect of borrowing on a company's financial performance is to look at the level of Earnings Before Interest and Tax (EBIT) – which is good reflection of the company's underlying profitability – in relation to the amount of interest it has to pay on its debt. This is known as Interest Cover and is a key ratio for banks and other lenders since it indicates the ability of borrowers to service its borrowings: the higher the cover multiplier, the healthier the position.

Despite substantial falls in the late 1990s, the housebuilders have been able to maintain an average cover of between 10 and 20 times. This demonstrates a comfortable, low risk position and is reflects the comparative low levels of gearing in the sector.

Figure 15: Interest Cover



Source: Ernst & Young

CHAPTER 4

Land

Identifying, acquiring, preparing, developing and selling land (with houses on it) is the key activity of all housebuilding companies. The level of a company's land bank – the quantity of land that it owns or controls for its future activities – is something that the company will boast about. As has been pointed out already, the higher the land bank, the more secure (in principle) is that company's future earnings potential.

Land banks have two key components:

- Strategic land: land that is either without any allocation within the planning system or has no designation for residential in any approved plan. It is often greenfield – typically in agricultural use – or is being used for commercial purposes. Housebuilders will control strategic land either through ownership or through options to purchase it.

The size of the strategic land bank is usually referred to in terms of acreage or the estimated number of plots that eventual planning permissions are expected to realise.

- Current (or short term) land: land which is either included in an approved plan for residential development or on which an outline planning consent for that purpose has been granted.

The size of the short term land bank is usually defined to as the number of plots that have permission to be built or where the developer believes the intended use will not prove controversial.

Strategic land

One reason why it is essential for housebuilding companies to maintain their land banks, in terms of both size and composition, is to ensure a smooth flow of land into the development production process.

Strategic land represents a supply of land that can be transferred into the short term land bank, so that together with any "oven-ready" land bought in the open market, the short term land bank is kept topped up. This enables a smooth supply of land into production, which is critical to efficient business operations, and enables the business to cope with the often very long and uncertain lead time involved in bringing sites into production.

In theory a builder could operate with just a short term land bank, sufficient for his immediate production requirements. However, such a policy would be both very expensive and risky. Short term land is at its highest value when it is ready for production. It is expensive and difficult to source in the market in reliable quantities. The irregularity of supply and high cost of land would make any housebuilder relying on a short term land bank vulnerable to production shortfalls.

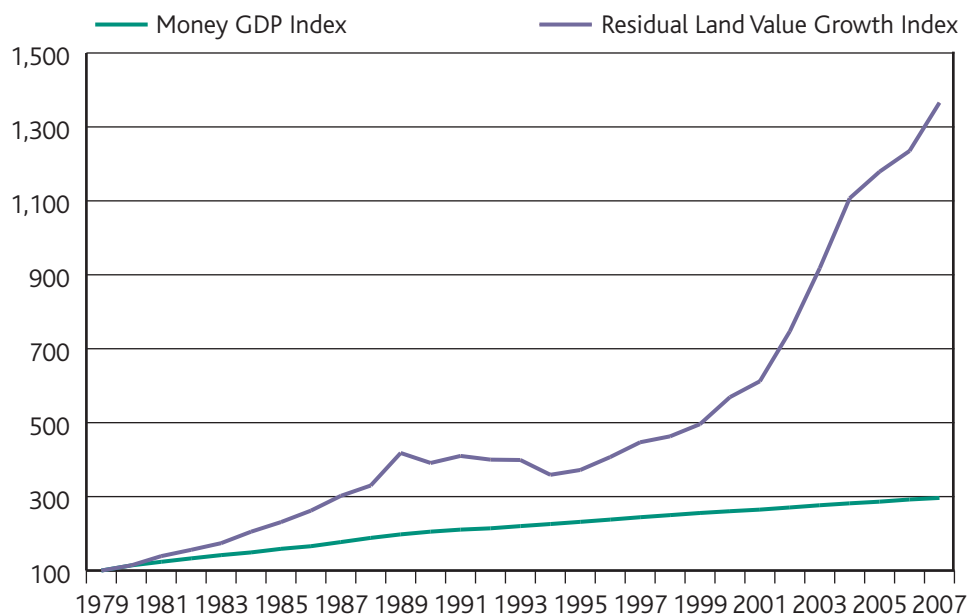
Generally speaking, the terms a housebuilder can negotiate with a landowner become more favourable the more remote the prospects are of obtaining planning consent. By way of illustration:

- a farm that comes forward in a structure plan review may require 10 years' promotion and many millions of pounds of investment beforehand and even then with no certainty of success in planning terms. In such a case the developer will require a significant discount on market value;
- at the other extreme, land within the curtilage of a new bypass that is being promoted by the local planners as housing land will be subject to intense competition. The vendor would expect a high option premium and little discount against its eventual market value.

The main downside of building a strategic land bank is the extent and cost of long-term capital that is tied up in it. Developers will seek to mitigate this by holding land on options or conditional agreements, rather than buying it outright. Risk management is therefore required to strike a balance between land with different chances of obtaining a planning permission and an acceptable level of holding costs.

It is also the case that, while land in some locations may enter into a spiral of permanent decline, land values for housing rise considerably faster than the rate of growth of the economy as a whole.

Figure 16: Gross Domestic Product (GDP) Index v Residual Land Value Growth



Source: Savills Research, ONS, HM Treasury

In recent years, due to house price inflation and planning policies to increase densities, strategic land has grown in value at a considerably higher rate than the housebuilders' cost of capital. This has meant that strategic land banking has been profitable, although as housebuilders can only realise that profit by building and selling houses, it confers no balance sheet or profit benefits until developed out.

It has therefore been cheaper to acquire, and hold, a very large quantity of un-consented land for a long time and process it through planning to extract development plots, than it would be to purchase a smaller quantity of short term land to fulfil the same plot quota.

Whilst the margins on strategic land have generally been significantly higher than on short term land, strategic land is generally to be found on large individual sites where the timing of its eventual development is very uncertain. Consequently housebuilding companies have at best been able to secure around 30% of their production through strategic sourcing. The balance of the land still has to be acquired in the open market. It is quite common, therefore, even for companies with many thousands of plots in their land bank still to have insufficient land to meet their short term production needs, and who are forced to buy expensively in the open market.

Housebuilders will target land in which they can see potential primarily for residential development. However, if they are unable to achieve an allocation or a change of use to residential, they may instead seek outline consent for a commercial or mixed use development. Inevitably, the flow of consented sites delivered by the strategic land bank will at times contain other, often valuable, uses that are needed to provide services to purchasers on large developments. For such sites, housebuilders may choose to sell the land on to commercial developers or directly to end users, such as retail grocery outlets.

Many housebuilding companies carry out only a limited amount of commercial activities, but as the level of mixed-use development increases, so they are developing their skills in commercial property.

Short term land

The definition of short term land suggested that such land should have planning consent.

However, the number of short term plots that a company holds is not always particularly clear or precisely defined in its annual reports and analysts' presentations. Moreover, because housebuilders do not describe their land holdings either on the same basis or using common terminology, it is not always possible to assess precisely what proportion of the short term landbank is actually available for immediate production.

As has already been noted, it is in the interests of the individual housebuilding company to impress their investors and the analysts that they have a plentiful supply of land, so that they do not run the risk of exhausting their stocks and being forced to re-stock at short notice, at a high price and at the wrong part of the housebuilding cycle. This means, perhaps inevitably, that the best possible gloss is put on the actual figures. Whilst the number of available plots within the above definition can be, and usually is, reported, this does not mean that building works can actually start on all these sites. Detailed planning permission is required first.

The key figure to be considered therefore is the number of plots with an implementable consent, but this is not always disclosed by housebuilders. However, as part of its evidence to the Review, the Royal Town Planning Institute (RTPI) provided, and subsequently published, statistical details of housebuilders' land-banks, completions and supply – based on the most recent data available, which were at dates during 2006.

This information forms the basis for Figure 17:

Figure 17: Housebuilders' land-banks, 2006

	House completions in previous 12 months	Plots with implementable planning consent	Years' supply
Barratt	19,808	37,229	1.9
Bellway	7,117	22,600	3.2
Berkeley	3,001	19,860	6.6
Bovis	3,123	12,395	4.0
Crest Nicholson	2,946	16,322	5.5
Galliford Try	3,000	4,115	1.4
Miller Group	3,960	12,500	3.2
Persimmon	16,701	41,711	2.5
Redrow	4,735	16,850	3.6
Taylor Wimpey	22,000	57,063	2.6
Average	8,639	24,065	2.8

Separately, the Home Builders Federation (HBF) has also assembled land bank data for the Review, which was presented on an aggregated basis. This covered 21 of the larger companies amongst its membership and reveals that the whilst the average total land bank amounted to 5.1 years, the average implementable land bank covered only 2.4 years, a very similar figure to that calculated by the RTPI.

Land and site acquisition

In most cases, the larger housebuilders have central strategic land departments within their organisations, tasked with the specific function of finding strategic land through a number of different channels. Although practice varies between companies, they tend to use their Regions to spot the opportunities, but leave the long term promotion of strategic sites to the central department, as this is an activity better conducted by specialist teams.

Land can be acquired at all stages of readiness, and from a variety of different sources, and under a range of different contractual mechanisms. Usable sites may be acquired under a single transfer of title but frequently, and especially for large sites, a process of land assembly ensues with the purchase of parcels from adjoining owners to create one single site. Assembly may take a number of years as parcels come on to the market at different times, and may be in the face of competition from other developers or speculators.

Housebuilders will promote their strategic land through the planning systems within the intention of securing its identification as primarily residential development land in an approved policy document. This process can prove both time-consuming and expensive; particularly large or complex sites can often take five to ten years before detailed planning consent is obtained and consultants' fees of several millions of pounds are not uncommon.

The sequence of events would typically be as follows:

- The housebuilding company will familiarise itself with the likely allocation of housing numbers in those regions in which it is commercially interested.
- It will look particularly closely at those local planning authorities within a particular region whose future housing allocation has not yet been identified, with the aim of selecting the areas that will be chosen by these authorities for future housing allocation. In practice, such searches are often undertaken by professional planning consultancies who carry out a detail examination of potential locations seeking to identify the areas which are least constrained and which have the strongest sustainability characteristics. The consultants will also take other local factors into account: for example, the need for a by-pass may change the boundaries of the existing urban envelope and influence the decision of the local planners as to where the next phase of development may best be located, especially if there is an opportunity for much needed infrastructure to be funded.
- Landowners will then be approached. They are increasingly aware of the potential increase in value of a change in land use from agriculture to residential development, with the latter worth possibly 500 times as much as the former. Even if the change of use is from low value commercial to residential, significant gains will be made. Vendors will retain their own planning consultants and professional property and legal advisers to ensure they obtain maximum value for their land.

In the majority of cases the acquiring developer will succeed in purchasing an interest in the land after a competitive tender in which the vendors' professional team will have regard to both the financial offer made and their confidence in the ability of the bidding developers to successfully promote the land for development.

Land purchase and options

Land will normally be secured by conditional contract or through an option arrangement, although occasionally it will be acquired by outright purchase. Documentation has become increasingly complex and prescriptive as landowners seek to ensure the best commercial terms.

An agreement would typically include the following arrangements:

- A fee will be payable upfront; it can range in size from a purely nominal amount to several millions of pounds. The amount of the initial payment will reflect the "hope value" for the land's future use for residential purposes.
- The option will be valid for a specific time period, usually sufficient to promote the site through the regional spatial strategy and local development framework processes.
- The eventual purchase price will usually be at a formula based on the Open Market Value (OMV) less a discount for promotion. A minimum value may sometimes be agreed or terms imposed restricting the amount the housebuilding company can pay by way of planning obligations or other payments.

- For cashflow purposes, land will usually be taken up in phases or tranches.
- The housebuilder will contractually bind itself to use all reasonable endeavours to promote the site and obtain the optimum planning permission. In many instances the landowner, or his professional advisers, will retain the right to monitor progress to ensure the developer is acting in his best interest. Because of this, any potentially anti-competitive practices – such as attempts to slow down the planning process or to control supply in a locality by having all the land under their control – will contravene the housebuilder's obligations to use its endeavours diligently to promote the land.

Whilst the cost of holding options and the increasingly high cost of land promotion make it expensive for developers to hold strategic land, it is usually much less expensive than holding short term land which usually has to be paid for in full, either on acquisition or upon receipt of planning consent.

Land swaps

The first substantial construction stage in any housebuilding development is the provision of the enabling infrastructure. The cost of this for housebuilders, especially on large sites, is very high and will cause a significant adverse cashflow. Even receipts from several years' sales could fail fully to offset the initial site infrastructure costs.

Housebuilders may choose to compensate for this negative effect by selling parcels of land to other companies. In many cases plots will be sold with the tacit or express agreement that the purchaser will, in return, sell a parcel of land on one of his own larger sites. This has the effect of creating an additional outlet and improved cash flow for the vendor housebuilder. In some cases where the builder is seeking to generate cash and profit rather than generate an additional outlet, the land will be sold on the open market.

The practice of such land "swaps" or linked sales tends to exclude from the market those small to medium sized companies that have no land with which to barter or which are unable to participate in such large scale transactions.

Their exclusion does not, however, arise from any attempt to restrict competition by the large companies, but is a logical commercial response to the overall shortage of outlets that housebuilders are facing. For this reason most large development areas are broken up into a patchwork of smaller sites, thereby delivering a combined rate of sale far in excess of that which any single developer could expect to achieve.

A negative aspect to the process can be that when housebuilders sell or swap land from large, often strategic sites, they generally have little interest in imposing conditions relating to style, design, layout or materials on the acquiring developer. There is little commercial incentive to do so since the imposition of such terms would inevitably increase the purchaser's cost of production and reduce the value of the land. Controls are left to the planners who, on large multi-developer sites, then have to assess literally dozens of applications from developers on their individual units.

CHAPTER 5

Valuing land

Land is the basic raw material of house building. Unlike other construction products, such as bricks, tiles or labour, it is only available for housing supply if it has the requisite planning permission for that purpose. Its quality varies from site to site and its value is subject to many variable factors that determine supply and demand and therefore set the price.

There are two different approaches in the determination of land values:

- The residual value method, which is the principal approach
- The comparison method

The residual value method

When considering how much they can afford to pay for a site, housebuilders focus on the potential value of a completed property, known as the Gross Development Value (GDV), then deduct all the development costs and the required target profit requirement. The resulting figure represents the potential land price.

This approach is employed by most housebuilding companies and is the principal method by which land values are calculated. An example is as follows:

Figure 18

Selling price	100
Building costs	(50)
Sales and marketing costs	(3)
Target gross margin	(20)
	<hr/>
Residual land value	27
Operating outcome (level prices and costs)	
Gross Profit (as above)	20
Central overheads	(6)
	<hr/>
Operating profit	14
Return on Capital Employed (ROCE)	
Turnover	100
Capital employed required	60
Operating profit	14
ROCE	23.3%

(The building costs have been assumed at 50% in this model. Because of differences in construction costs across the country, the actual figure will vary depending on the geographic location of the site, as well as product type and the state of the land, eg how much infrastructure or clean up is required. We have also assumed a required gross margin of 20%, but this will vary – depending on a housebuilder's requirement for land at a particular point in the cycle.

It is also assumed that a housebuilder needs capital equivalent to about 60% of its turnover to operate efficiently, but again it will vary depending upon what type of product is being built. In this example it results in a Return on Capital Employed of just over 23%.)

Although appearing comparatively simple to calculate, in practice the exercise is almost always very complex. A large number of estimated costs have to be taken into account for each component and tend to be specific to individual housebuilders. Some general factors are common to all calculations and these are looked at in greater detail below.

The comparison method

In contrast, the comparison method is a relatively straightforward valuation calculation. It assigns a value to a site by comparing it with the prices obtained in the market for the sale and purchase of sites with similar characteristics. The weight given to each element of comparable evidence is determined by the valuer based on his judgement and knowledge of the market.

This method is used extensively in the external valuation of land for the purpose of establishing open market value in, for example, land purchase agreements, where the parties agree a value based on the Open Market Value (OMV). Comparison is also used as a confirmatory check on land which has been valued using the residual method. To housebuilders its value is as a check to verify that the various values and costs used in the residual valuation method are realistic.

Factors affecting land value

The value of land is determined by a large number of issues affecting both the value of dwellings developed upon it and the cost of producing them.

Value of dwellings

The main factors affecting the value of dwellings include:

- Geographic location – sites in affluent areas of the country such as the South East, and London in particular, where high demand and limited supply has driven up house prices, against sites in less affluent areas which are depressed by low earnings and an adequate supply of properties;
- Locality – two sites only a short distance apart can have very different values. The quality of housing in the immediate neighbourhood, schools, access to transport and social issues are a few of the many factors that influence local property prices;
- Density – increasing the density of a development tends to support higher land values, but only to the point at which the additional costs of construction outweigh the additional revenue from the higher density. The lack of garaging and the feeling of “cramming” may also tend to reduce sales values and lower the point at which higher density becomes uneconomic;
- Second hand housing supply – new houses compete with secondhand homes, which are substantially more numerous across the country. Unless, exceptionally, new houses are being built in an area with little existing housing, the prices a housebuilder will be able to charge for his new properties will be influenced heavily by the general price level pertaining in the vicinity;

- Volume of housing land supply – land is usually made available and granted planning consent for house building in quantities that do not significantly disturb the local market. However on sites being developed by more than one housebuilder, competition drives down prices and reduces the land values. Generally speaking, the more developers that are in direct competition with each other, the lower prices are driven;
- Ground conditions and abnormal costs – numerous difficulties and challenges can face developers, all of which will add to the time and thus the cost of development. These range from the need to deal with poor drainage through new ponds and culverts to full scale ground decontamination and addressing the danger of the risk of flooding through flood defences;
- Infrastructure burden – a small site within an area well served by infrastructure may face no additional cost burdens. However, where the proposed development cannot be supported by existing local infrastructure, the developer may be obliged to provide or improve existing facilities, such as road and junction capacity, access roads, schools or community facilities;
- Government and local planning authority policies on sustainability – energy efficiency, combined heat and power generation, wind turbines, grey water recycling, eco-home standards, use of sustainable materials and carbon neutrality may all be socially desirable additions to housing, but they increase the cost of development and add little, if anything, to ultimate sales values. Their costs therefore have the effect of reducing land value;
- Affordable housing – any requirement for a housebuilder to provide affordable housing, whether for rent, intermediate or shared ownership or any other type of subsidised or non-market tenure, will reduce the land value to the extent that he has to bear the net cost of such housing. Reduced sales revenues can, however, be offset frequently by lower risk, stronger cash flows and reduced marketing costs. It is possible that affordable housing might also have an adverse impact on the sales values of the open market housing, in which case land values would be reduced.

The effects of each factor can be quantified and fed into the valuation calculation used to determine the residual value. Some factors, such as local house prices, access and achievable density may be fairly well known, whilst ground conditions may be revealed by surveys. Other aspects, particularly those involving negotiation with the local planning authority, can only be estimates until the planning consent is finalised.

It is clear from this that competitiveness tends to be very site-specific. Whilst many of the relevant factors have nothing to do with Government, others (particularly those that add to infrastructure costs or the social load) are directly influenced by Government.

Costs of Development

The principal factors affecting development costs include:

- Costs relating to the land acquisition, such as legal fees, agents' fees and stamp duty land tax;

- Site preparation costs for converting the site from its state at the time of purchase to a state suitable to enable the start of construction. This would include, for example, demolition, decontamination and remediation;
- Brownfield land: the estimate of costs quoted in Part 2 of the Report relate primarily to developments on greenfield land or straightforward sites at the edge of town. In the case of city centre and other brownfield sites, many of which require regeneration in addition to redevelopment, substantial additional costs can also arise. These include:
 - Site assembly: urban sites can frequently be in multiple ownership and having to progress several site acquisitions simultaneously can make the whole process much more expensive. From time to time, the precise ownership can be uncertain or even untraceable; there may then be little alternative to seeking the assistance of the local authority for compulsory purchase;
 - Reclamation and remediation: previously used land exists in a wide variety of forms. Many difficulties or unusual situations can occur on brownfield sites, such as:
 - making safe or refurbishing existing buildings;
 - demolishing structures;
 - dealing with listed building status;
 - assessing and then dealing with actual or potential contamination from previous obnoxious site uses, including asbestos in the buildings;
 - commissioning archaeological surveys and perhaps incorporating significant finds within the development; and
 - surveying for and looking after protected wildlife.
- Most commonly, perhaps, is the requirement to decant existing occupiers. Where these are commercial users, it may involve little more than identifying and providing new office or workshop space. Where people's homes are involved, the human aspects of buying people out of their home can be a very long task that needs particularly sensitive handling. Objections and active protests may have to be overcome, with the requirements of the Human Rights Act needing to be observed.

What these factors have in common is that they can all lead to delays in development and extra expense, compared with building on greenfield sites.

- Off-site infrastructure necessary to access the development, such as immediate roads, road junctions and roundabouts, together with any financial obligations imposed by the local authority as a condition of the planning consent. These could include new motorway junctions or contributions to public transport schemes;
- Construction costs;

- Fees for professional advisors including, for example, architects, quantity surveyors, engineers and project managers;
- Marketing and sales costs, including show homes, promotions, commission to agents and legal costs.

Additional costs of land

In addition to establishing the land value for a transaction, housebuilders must take a number of other potential costs into account and manage them carefully in the interests of efficiency and profitability.

Depending on the circumstances of a site, the key elements may include:

- Finance – the cost of finance tied up in the land bank and the consequent exposure to increases in the cost of finance. The cost of increasing the land bank may constrain investment in other areas of the business. Finance costs can be mitigated by the use of options, instead of outright purchase, and interest rate risks can be hedged. Options are also an effective mechanism to help avoid the risks surrounding the outcome of the planning process;
- Taxation – the transfer of an interest in land generally attracts a charge to Stamp Duty Land Tax at a rate, if the value exceeds £500,000, of 4% on the value payable on the date of the transfer;
- Acquisition fees – unless in-house staff are used exclusively then fees will be payable for agents and lawyers involved in the contractual process, and finders' fees are also a possibility;
- Surveys – any number of aspects of a site may require a survey to be carried out in order to determine the status by measurement or other assessment of a specific feature. They may be necessary for the planning application or to promote subsequent development;
- Planning – the costs of taking a scheme through the planning process can be very high, particularly for very large developments or if a planning inquiry is involved. This may require extensive use of external professional advisers and the overall costs may run into many millions of pounds. The role of conditions attached to planning consents (incorporated in what are known as Section 106 agreements) are discussed in Chapter 6, but their cost to a housebuilder can be substantial and will almost always serve to reduce the land value. In many cases, the net value can prove to be a small fraction of the gross value, which can become a source of dispute between housebuilders and landowners who believe that planning consent has been obtained at their expense;
- Other rights – other parties, in particular utilities companies, may have the right to run services, such as cables or drains, across the site either above or below ground. These easements together with other rights such as to water or light may need to be negotiated with the owners in order to optimise the site's developable area and height;

- Vacant possession – where a site has existing tenants in possession under unexpired leases, such interests must be extinguished in order to obtain vacant possession. This may involve the cost of buying the lease and relocating or compensating the tenant. Frequently housebuilders will prefer to keep tenants in place until the last moment, in order to benefit from rental income and avoid maintenance costs;
- Maintenance and security – vacant land is rarely cost free and ownership will mean incurring the cost of maintaining the land, including for instance, securing the boundaries to keep out random visitors, maintenance of footpaths, paying rates on commercial property, ensuring health and safety regulations are complied with, and good public relations are fostered while the site is awaiting development. This cost can be mitigated by renting land, say for agricultural use, pending its redevelopment, where the opportunity arises;
- Purchase price – the contractual price paid to the seller. This may be a single payment or a deposit followed by the balance, perhaps upon the grant of planning consent. A builder will almost always prefer to have the freehold, but may settle for a long lease if that is all that is available.

Cost effective development

In arriving at the most cost effective development concept the housebuilder will be faced with a range of alternatives, some of which it will determine, some of which it can influence and some of which are external. The company will need to decide on a wide range of issues affecting cost and value in order to optimise the project and create the highest land value. In particular it may consider:

- planning application stance – the housebuilder will have to decide what he believes is achievable in terms of design, mix and density, and whether it is more cost effective to accede to the requirements of the planners on, for example, materials, density and the number of affordable homes than to risk delay through negotiation or appeal;
- delivery methodology – builders have many choices of procurement, materials and project management, all of which can affect the timing and cost of the development;
- sales and marketing strategy – establishing the mix of house types, pricing and rate of sale in an uncertain and sometimes volatile market which is probably the most demanding and riskiest aspect of the development process;
- development profit – the criteria applied and the required level of return will depend on the financial circumstances of each developer. Factors such as need for land, market outlook, risk and trading position to date will influence this requirement;
- the residual value which is based on an assumption of the dates of payment for the site. If these are in the future, they are discounted back to the valuation date.

Impact of residual value approach

Because it derives from many estimated factors, residual value is highly sensitive to inputs and may vary widely between different developers. Errors in judgement or unforeseeable events affecting cost or value can significantly impact on a developer's profits if they remain uncorrected or arise after a legal commitment has been entered into.

Consequences for land values and profitability

An area of particular difficulty for housebuilders is the impact of changes in sales prices or its costs between the time of the land acquisition and the sale of the house.

In a market with no house price inflation, the margin that housebuilders can achieve is the same as they forecast when buying land. If sales values prove lower than expected, the impact is felt directly on the bottom line, with profitability declining by far more than the reduced sales price, as is demonstrated in Figure 19 below. Similarly, if building costs prove to be higher than anticipated, whether from general inflation or from changes to the regulatory regime, for example the introduction of zero-carbon requirements, profitability suffers accordingly.

Figure 19

Land purchased using Residual Value			
Selling price	100		
Building costs	(50)		
Sales and marketing costs	(3)		
Target gross margin	(20)		
	<hr/>		
Residual land value	27		
Operating outcome			
	Scenario 1	Scenario 2	Scenario 3
	Expected outcome	Impact of a 5% fall in selling prices	Impact of a 10% rise in building costs
Selling price	100	95	100
Land value	(27)	(27)	(27)
Building costs	(50)	(50)	(55)
Sales and marketing costs	(3)	(3)	(3)
Overhead	(6)	(6)	(6)
	<hr/>	<hr/>	<hr/>
Operating Profit	14	9	9
Profitability			
Turnover	100	95	100
Capital employed	60	60	60
Operating profit	14	9	9
ROCE	23%	15%	15%
<p>It should be noted that a relatively small change in the key elements of the business model will have an inordinately bigger impact on a company's profitability. In this case, a 5% fall in selling prices and a 10% rise in building costs both lead to a 35% reduction in the operating profit.</p>			

In the case of Scenario 3 above, the cost rises occurred after the land had been acquired. However, if the increases can be factored into the equation beforehand, the land value will decline accordingly, but profitability for the company can be maintained, as is demonstrated in Figure 20 below.

Figure 20

Land purchased using Residual Value		
	Scenario 1	Scenario 2 Higher building costs are anticipated
Selling price	100	100
Building costs	(50)	(60)
Sales and marketing costs	(3)	(3)
Target gross margin	(20)	(20)
	<hr/>	<hr/>
Residual land value	27	17
Operating outcome		
	Scenario 1 Expected outcome	Scenario 2 Expected outcome
Selling price	100	95
Land value	(27)	(27)
Building costs	(50)	(50)
Sales and marketing costs	(3)	(3)
Overhead	(6)	(6)
	<hr/>	<hr/>
Operating Profit	14	14
Profitability		
Turnover	100	100
Capital employed	60	60
Operating profit	14	14
ROCE	23.3%	23.3%

A downside is that some sites may become unviable without government assistance or reduce the value of the land so much that owners are not prepared to sell. In either case it is likely to result in unit volumes falling and pressure on margins.

Apart from house price volatility the unpredictability of costs is a major element of risk for housebuilders. Such uncertainty can arise due to operational uncertainties or, for example, to ground conditions. However, they also arise out of planning decisions and planning gain negotiations, especially where the requirements of the planning authority are not clear or change after the land has been purchased.

CHAPTER 6

Town & Country Planning – Development Control

The use of land in the UK is controlled by Town and Country Planning legislation, particularly the Town and Country Planning Act 1990 and the Planning and Compulsory Purchase Act 2004.

In general, a site cannot legally be developed for housing, other than within the bounds of an existing consent for the current use or under permitted rights, unless there is a planning permission for the development.

There are two levels of permission:

- Outline planning permission gives consent in principle for the building operations in the erection of a property. It is not a sufficient authority to proceed with development but secures the development rights, and possibly a change of use. This will normally give housebuilders the confidence to proceed with a scheme and, if necessary, to convince any lenders who might be involved in financing it. Most of any change in the value of a site occurs upon the grant of outline permission.
- Detailed planning permission requires a much higher level of detail in terms of the many potential aspects of a development.

Local Planning Authorities (LPAs) will be fully aware of the value of strategic land and, as a condition of the planning consent, will therefore look for as substantial a contribution as possible from developers towards the provision of infrastructure, affordable housing and other essential educational, sports or community facilities. These are known as “Section 106 agreements”, after the relevant section in the 1990 Act which allows the LPA to enter into a legally-binding agreement or planning obligation with a land developer over a related issue. Once the agreements have been signed, the housebuilder has a full consent to proceed with the development.

The interface with housebuilding

Because planning lies at the heart of the development process, controlling the type of development that may be undertaken, the terms and conditions on which it is granted, the ancillary commercial terms and the timescale before which development activities may start, it dictates both profitability and financial returns for housebuilders.

Where the price paid for land is not supported by the current use value, a housebuilder will normally endeavour to purchase land on condition that a planning consent for the intended development use is granted. Intense competition for development land has, in many cases, forced builders to anticipate the planning outcome and purchase land at the full value of its intended use.

Before taking such a risk they will generally ensure that land lies in an area that is designated for residential use and they will seek reassurance in two ways:

- a) they will obtain expert planning advice that the land falls within local policy guidelines for residential planning, and
- b) they will endeavour to meet with local planning officers and obtain their commitment that in their opinion the land is suitable for the intended use; this would take the form of a "comfort letter". Such reassurance can only be conditional, since the right of the Planning Committee to determine the application as they deem fit cannot be pre-empted.

After initial discussions, a housebuilder will draw up application plans and supporting documentation and then seek to meet planning officers to obtain their reaction to the intended application. The aim is to secure officers' recommendation for approval to the intended use when it goes to the LPA's Planning Committee for determination.

In most authorities officers are willing to meet the developer and constructive negotiations take place on the application covering such issues as densities, layout, design materials, landscaping, accommodation, works and other detailed aspects of the development. Housebuilders then have the choice of either:

- a) submitting an application for an "outline" consent which generally sets out the principles of intended use, density and indicative layout, or
- b) making a full and detailed application in which matters such as elevations, materials and detailed layout are included.

On larger applications, where the principle of residential development is not established, developers are generally keen to ensure that the value of the investment is established quickly and will submit an application for outline approval, with the detail consent sought at a later stage.

A dialogue between the applicant and planning officers will therefore normally take place so that both sides can establish agreement on both the nature of the intended development and the terms of the Section 106 or other ancillary agreements.

It is not unusual for the parties to be unable to reach agreement within the statutory period for determining an application, in which case both sides look to agree time extensions to allow negotiations to continue. If time extensions are not agreed the application is deemed refused and the only redress for an applicant is to appeal against the "deemed refusal" to the Secretary of State. In many contentious developments, agreement is reached at the "eleventh hour", since neither party wishes to be involved in the cost and uncertainty of a planning appeal.

In some cases the parties are unable to reach a compromise either because the local planning authority will not accept the principle of the intended development or because an unbridgeable gap exists between the requirements of the planning authority and the final offer of the applicant in terms of the intended development or on the planning gain.

In such cases the application may be submitted to the Planning Committee with a recommendation to refuse. In most, although not all cases, Planning Committees will turn down any application that is recommended for refusal. On the other hand they frequently also refuse applications that have been recommended for approval.

Under the 1990 Act, a default life for planning permissions of five years was stipulated, after which time the permission would expire if no material start had been made under the permission. Most planning permissions were granted subject to this condition although, by exception, planning authorities could grant planning permission for different periods; complex regeneration schemes were often assigned a life of ten years or longer.

Coupled with the ability to extend the life of the permission, developers were able to obtain consent but wait until the time was right to implement the permission and start work on site. This freedom is nevertheless constrained by the ability of the LPA, in cases where it believes a development will not be completed within a reasonable period, to serve notice on a developer that the planning permission will expire at a given future date.

The 2004 Act has introduced some important changes. It has, inter alia, put the following measures into place:

- the default life of a permission is reduced from five years to three years;
- it is not possible to apply to renew the life of permission due to expire because it has not been implemented in time.

Planning and housebuilding quality & design

The planning process is one of the key means in which higher standards of quality and design can be enforced, since housebuilders have to specify all aspects of a proposed development to the LPA. Whilst many authorities take the issue of quality and design particularly seriously, in other instances housebuilders are able to submit applications that fall short of the ideal. Since there is rarely any premium in terms of the house selling price, there is frequently little incentive on a housebuilder to adopt more costly processes than he has to.

It is therefore very much up to the individual LPA to decide how far to press for higher standards and what general considerations, reflecting local sensitivities and traditions, are incorporated within their planning policies.

External frameworks for good practice also exist, such as the Building for Life standards, agreed by CABI and the Home Builders Federation. Since this was introduced, the standards of some developments have improved, with the housebuilders demonstrating their capability of delivering better standards of design and layout on some showpiece projects. Nevertheless, the planning process does not differentiate between high quality applications and poor ones.

Planning, housebuilding and the local political process

The planning system is not simply process driven; it is politically sensitive, since in many cases development proposals will impact directly on the lives of residents in the locality in which an application is being made. Local residents and other stakeholders may object to development plans for their town or street and often organize themselves to object to proposals. They both utilise any formal consultation process and, increasingly, organise themselves into pressure groups. Residents' objections may arise out of the general principle of development, its particular type or its location.

It is not unknown for local councillors, sensitive to the wishes of their electorate and in many cases also sharing their views, to refuse planning applications even if they comply with the local development policy. In many local authorities development is welcomed for bringing much needed vitality or prosperity. In others, Members only reluctantly accept that they must meet their housing supply targets and that development should be allowed to take place.

CHAPTER 7

Marketing

Market segments

Many of the factors that influence a house buyer's decision to purchase are often particular to the individual. Location may be dictated by the need to be within a particular distance of work and size of property may relate to the need to accommodate a family. Increasingly, aspiration and lifestyle create demand beyond basic accommodation need. However, there are broad categories into which buyers can be grouped and the housebuilder's product is tailored to appeal to these categories.

The traditional existing markets include:

- First time buyers – these are usually both single people and young couples who need functional, cheap accommodation to enable them to get on to the property ladder while they develop their earning potential. Principally, studios and one or two bedroom homes or flats are sought;
- Professionals – these people have more disposable income available to enable them to move up the property ladder and are usually looking for more space or a better quality of lifestyle than necessarily requiring more bedrooms. Houses and flats are often based in the centre of towns and cities, providing good access to work, shops, and evening entertainment;
- Young families – the arrival of a family changes the lifestyle choices for many people. Additional bedrooms are needed and a secure private garden is desirable. This is also the stage at which many people may prefer to commute longer distances in order to bring up children away from what they perceive as the difficulties of urban areas. The surrounding community also becomes more important as good schools and other children's facilities feature more highly in the decision-making process;
- Mature families – as well as education needs remaining important, there is a need for facilities to keep older children occupied, and entertained, and usually good public transport links to enable them to travel independently;
- Empty nesters – these people have usually reached the height of their salary earning potential and may have fully repaid any debt on their house. They are accustomed to a quality of life and are unlikely to downsize significantly as they will still need to accommodate their children and their children's families during visits. They may make a lifestyle move as there is no longer a need to remain near schools;
- Retirement – traditionally this is the time to downsize to a smaller property to ease the maintenance burden and often to release cash to fund a higher quality of life.

With changes to demography and to the economy, the demarcation between these categories is becoming blurred. Many more people remain single or are much older before they marry or they may find themselves alone again after divorce. Their requirements from a property perspective are likely to be different from those of the young professionals. Accumulation of possessions, greater disposable income and a desire for greater space, challenges the traditional house types put forward by the housebuilders.

These shifts can be catered for, either by offering a greater degree of customisation within the standard house models or by widening the range of the standard house models.

In addition to the existing markets, housebuilders are developing new markets by creating aspirational lifestyle developments. These are developments that are based around an additional significant feature, such as a marina or a golf course. In a similar way, retirement and other age-focused developments offer a lifestyle choice, albeit often with additional essential facilities.

In all markets, the housebuilders compete with each other. To attract a larger share of any available market they need to differentiate their product in ways over which they have control. Location is the main differentiating factor, but once that is decided they can promote further distinctiveness by exercising their discretion over pricing and incentive policy, branding, quality of build, and finish, or by limiting themselves to developing a specific type of property to target a selected segment of the whole potential market for the given location.

Determining the mix

When presented with a new site a housebuilder will need to work up an ultimate development masterplan. Faced with an almost infinite number of choices for the combination of size, type, layout and number of properties to plot on a site, the builder will need to consider a large number of key factors in order to determine the optimum commercial mix.

Location of the site

Location is the dominant factor and while every location has its own unique characteristics they can be grouped into categories, for example:

- City centres – for developments in the middle of cities or in prestige locations within the city, such as waterfronts or areas of architectural character, buyers are likely to be single people, couples, and professionals, seeking studio or one to three bedroom flats. With high levels of discretionary income, design quality and expensive conversion from other uses becomes cost effective. Views and the prestige of the location are as important as the proximity to leisure, entertainment or convenient access to transport to business and professional hubs. Whilst private gardens are not required, developments with private space and good views can command a premium price. Large scale city centre development has taken place in many of the UK's major towns and cities but it should not be confused with "inner city" development;

- Inner cities – usually lying just outside the city centre, these areas often comprise either large post-war estates or rundown and abandoned pre-war housing and “problem” council estates. Such areas of low demand are characterised by depopulation and urban flight. Consequently the costs of regeneration are often greater than the revenues that can be generated and this has limited the rate at which large scale regeneration can take place. Where market driven redevelopment has taken, significant subsidy has often been needed. There is often a mixture of public sector rentals with low to medium cost private housing. People’s preferences are for medium to low density housing; this would usually take the form of terraced housing, semi-detached houses with gardens and parking facilities, or low rise apartments. Key issues in the inner cities are schools, health facilities, crime and access to jobs;
- Areas designated as new settlements or edge of town expansion areas – here buyers are likely to fit a wide demographic range, with a high proportion of families. Demand will be for low density housing with good car parking provision and private gardens. Development may well be undertaken by several housebuilders operating side by side, with their own range of house types, competing to provide the best value for money product. Such developments may require the provision of services and amenities such as retail areas, schools, medical centres and recreation centres. It is on the large multi-developer sites where competition is at its most intense and where some of the poorest quality and worst co-ordinated development occurs;
- Infill and rounding off development – This can take the form of back garden redevelopment, demolition and densification of existing residential areas and change of use. New building may encompass anything from low cost housing to executive style homes, with numbers ranging from single units to developments of 100 units or more. The location of such development is often in or close to existing housing, with the result that planning applications often tend to be opposed by local residents who see it as detrimental to the area and their quality of life.

Socio-economic profile

Developments generally need to match the socio-economic characteristics of local people if they are to succeed in attracting buyers who want and can afford what is on offer. Issues such as the nature of local industry, rates of employment, and levels of income will play a large part in determining the target market.

In order to ensure a successful development, housebuilders will also need to take into account the fact that many people prefer to live in areas where the other residents share similar values to themselves. These can comprise a number of social factors; social status, income level, single or family status and age are amongst the most important.

Housebuilders tend therefore to plan developments with this in mind and group broadly similar market sector housing together, so as to avoid the most inappropriate couplings. Since affordable housing was first introduced under Section 106 agreements as an obligatory element of a development, owner occupier acceptance of affordable housing has increased, although at the upper end of the market the proximity of social housing

can still adversely affect house values. Adopting a "pepper potting" approach to layout and non-discriminatory elevations can, however, help avoid any social stigmatisation and minimise adverse value impacts.

Existing local facilities

The pre-existence of good facilities such as local schools, shops, transport and other amenities will support demand for family homes on small developments where the house builder is not expected to provide additional facilities.

Competition

Housebuilders will consider the potential for competition with a site from both the pre-existing stock of second-hand housing and any new build developments in proximity in determining the optimum mix. The new development may be more successful if it offers a range of properties with something more distinctive and complementary to that which is available elsewhere.

Quality and distinctiveness

Once all these factors have been considered, the housebuilder will be aware of the appropriate level of design quality and specification. Once this has been determined, any additional expenditure must be recovered in additional sales value. For example, if a builder decides to spend more by providing greater energy efficiency above the required minimum standard, he will look to recover at least the amount of the outgoing plus his target profit margin. Otherwise the profit on the site will be reduced, as was illustrated in Chapter 5. A major issue here is price per unit of area, which is one of the key value for money factors. If, for example, a buyer is deciding between a high quality 3 bedroom 100m² unit for £300,000 and a standard quality 4 bedroom unit of 120m² unit for the same price on a competing site, the housebuilder needs to be confident that his decision to offer the higher quality is cost effective. He can mitigate some of these risks by offering additional specification features as purchasers' extras.

Many developers offer buyers a range of discretionary upgrades, provided these are agreed early enough in the construction process for the work to be carried out.

CHAPTER 8

Sales

An integrated part of the sales and marketing process is the need to determine net revenue. This involves setting both gross asking prices and also sales incentives that attract and secure buyers in a way that optimises net revenue and controls the rate of sale.

Pricing policy

The housebuilder will always want to sell his product for the best possible price consistent with obtaining a given rate of sale. In maximising returns a builder will calculate the combination of price and rate of sale that will generate the highest achievable rate of return. In the housing sector this generally entails adopting a pricing policy that matches the receipt of sales revenues with the physical completion of the property. This will mean that the prices will move in line with demand and the most popular locations will be the most expensive.

Local estate agents are used in "sales surveys" to establish the optimum product mix and likely pricing levels. Additional research to establish the optimum range of products likely to meet demand and to establish realistic prices is often carried out either directly by the developer or through the use of research advisors.

Online price databases, such as that provided by Hometrack, based on all transactions carried out in an area are also available. These allow a precise picture of demand by product and price to be established.

In setting the pricing a housebuilder will need to consider a number of issues:

- Where a site is subject to immediate competition from other new build sites in similar locations, the pricing will depend very much on the levels that are being achieved at these competing sites. However, where a site is relatively isolated and perhaps represents the only opportunity for buyers to obtain a new property in the vicinity, a price premium may be expected. However, many buyers are mobile and search over a wide area for their homes. Since there are almost always a large number of second hand homes available across the country, pricing for new build is constrained by these competitive factors;
- As a development proceeds, adjustments will be made to the prices so as to ensure sales performance is in line with the budget and, where necessary, management attention will be directed to underperforming programmes. Pricing is carried out at the individual unit level and generally small batches of units will be released for sale to test prices. If sales are proceeding too fast, prices will be increased; if sales are too slow, prices will be reduced either in absolute terms or through the use of sales incentives and marketing campaigns.

Complex management information systems track and coordinate sales and building progress to enable management constantly to adjust prices and building progress so as to achieve the optimum financial outcome for the development. Pricing changes to reflect changes in demand in the market; where the market is buoyant or with high rates of inflation the price ceilings will be constantly tested to ensure the maximum prices are obtained. Pricing is therefore very much a matter of timing and judgement, with frequent revisions to ensure that the product is priced attractively for the circumstances that prevail at the time;

- Pricing may also be determined by the housebuilder's risk preference. One who rates certainty of sales highly may under-price in order to accelerate sales and many developments have been sold off-plan prior to construction. This is especially the case with high-rise apartment developments where pre-commitments by buyers may be needed to give the builder and his financial backers the confidence and security to proceed with construction. Early sales and discounting may reduce risk, but if the developer is too cautious or the market risk does not materialise, the benefits of price inflation pass to purchasers. (The investment market in apartments is, at least partially, fuelled by speculators contracting to purchase apartments 2-3 years from completion and potentially reaping substantial returns for the price only of a 10% or 20% deposit.) Risk preference will also be significantly influenced by the economic outlook. Where this is weak, risk aversion will begin to exert much greater influence. The pricing strategy will switch towards securing forward sales, albeit at the expense of price;
- Affordable Housing is usually built by a housebuilder for a Housing Association under a Section 106 agreement as a condition of planning consent. The amount of affordable housing to be delivered will be clearly set out in that agreement and the developer will contract to deliver it, generally for a fixed price. There is however scope for negotiation, since there is intense competition between Associations for affordable housing. Even if part of the costs is grant funded, some Associations may supplement their offer to a developer by using their own resources.

Many Local Authorities seek to ensure that their preferred Association is used. Although the profit margins on affordable housing are generally lower than those on commercial market housing, it can still be a financially attractive business. There is little market risk and the cash flows are attractive since Associations are usually prepared to pay for the land immediately, followed either by stage payments as building progresses or full payment on completion. As there is no need to ensure construction is phased with sales, highly efficient build programmes deliver finished units and cash more quickly than market housing.

Discounting

Housebuilders employ a range of techniques to obtain the maximum price for each house they sell. Each house will be individually priced and generally the asking price will be higher than the market value, but not so high as to deter purchasers from making offers. If the asking price is immediately acceptable it generally means that a mistake

has been made by one or other of the parties. In some cases the housebuilder has special circumstances that dictate a policy of sacrificing margin for sales volume, for example pre-sales on apartments before the start of construction. Prices are generally negotiable in all but the strongest markets and sales personnel are incentivised through commission to achieve the highest values consistent with volume targets.

Example

A housebuilder has 3 identical homes for sale and they are viewed on the same day by three potential buyers each of which has a different perception of how much they are willing to pay. Buyer 1 is willing to pay £200,000, Buyer 2 is willing to pay £195,000 and Buyer 3 is willing to pay £190,000.

If the seller sets the price at £190,000 he will capture all 3 buyers and earn revenue of £570,000 today. If he sets the price at £200,000 he will sell only 1 home today. He will only sell the other homes to earn £600,000 when 2 other buyers at £200,000 have arrived, and this may take some time. However if he sets the price at £200,000 and offers discounts to Buyer 2 and Buyer 3 to match their offer prices then he will earn revenue of £585,000 today.

Discounting simply means a reduction in the headline asking price to a lower level, but there is also another tool that enables sellers to manipulate the net price. At any transaction price level the seller can control the net price by offering incentives.

Incentives

Optimising net revenue from sales involves not just setting the asking prices and then allowing these to be discounted for individual buyers, but also offering other incentives in order to achieve the net price or “deal” that will secure each buyer. The use of incentives will depend on the state of the market and the housebuilder’s circumstances at the time. They can be offered or withdrawn at any time.

Incentives can be offered as part of the marketing and publicity material for a development, in which case they are made available to any potential buyers, subject to status, as a way of increasing the attractiveness of the offer. Alternatively they can be available but unpublished, in which case they act as a form of non-monetary discounting, used to secure buyers.

There is a wide range of potential incentives that can be deployed. Some of the more common are:

- Fixtures and fittings – the builder can offer to increase the building specification at no charge to the buyer by providing items that the buyer would have to install anyway, such as kitchen equipment, carpets, turf laying;
- Stamp duty paid – a pure financial discount from the asking price;
- Cheaper mortgage – to make a property more affordable to the buyer in terms of reduced monthly mortgage payments;

- Part-exchange – lifts the burden of selling an existing property from the buyer enabling them to proceed with the purchase of a new home; this is particularly useful in a slow market to secure buyers and also to break chains;
- Shared ownership – the majority of shared ownership is with Housing Associations, but housebuilders and developers are now beginning to enter this market. The buyer purchases part of the equity in a property, but with an option to purchase the balance at a later date. The seller remains joint owner of the property either until it is sold or the purchaser exercises his or her option to increase the equity stake to 100%;
- Rental guarantees – introduced at the inception of the buy-to-let boom. Investors acquire a high proportion of new properties with the intention of using the rent to settle the mortgage payments. This incentive enables them to cap their letting risk in the early years following the purchase of a property.

All incentives entail some cost to the house builder. General incentives are treated as akin to advertising and are usually added to the marketing budget. Transaction- specific incentives are generally, but not always, valued and deducted from the sales value to determine a net sales price.

Rate of sale

Pricing, discounting and incentives are complementary tools in the housebuilder's revenue setting armoury. A further factor in the selling process that interacts with revenue generation is the rate of supply of the product. The production rate for new housing on a site will be set at a level that keeps pace with the anticipated best rate of sale/sales price at which profitability is optimised. Similarly the net pricing will be set at a level which both attracts buyers and enables the development to be delivered and sold at a desirable rate.

If prices are too low then sales may occur too quickly to keep up with the most efficient production schedule, with the result that either costs will rise or revenue will be foregone, or both.

If prices are set too high, sales will occur too slowly or not at all, in which case either completed, but empty, properties will accumulate or construction will have to cease for a time. Since switching production on and off cannot be achieved efficiently or profitably, this is an approach that housebuilders would want to avoid.

The art of juggling these tools is a matter of experience and judgement, applied on a regular and continuous basis to maximise revenue from a site.

In the past few years of high house price inflation, housebuilders have generally been able to achieve higher than anticipated sales prices. As long as the incremental revenue thus generated exceeds the combined effects of higher building and finance costs, a housebuilder will achieve greater profitability from a high-price, slow-delivery strategy. He will have little incentive to sell more units more quickly, but at a lower price, since this would erode profitability and use up more of the company's valuable land bank.

Housebuilders must of course look also at the efficient use of capital, particularly the return generated on it, as was described in Chapter 2. Against a backdrop of investors expecting housebuilders to achieve a Return on Capital of not less than about 20% in any year, pricing policies will not only have to maximise profitability, but also achieve a rate of sale that strikes the best balance between profit and the return on capital.

A housebuilder therefore continually faces a tension between the pressure to hold up the gross margin percentage and the rate of return on capital. How this tension is resolved over the medium term is a matter for the individual housebuilder, as each attempts to tune its performance indicators in order to impress investors and grow shareholder value. Since investors compare performance between housebuilders, and reward and punish them accordingly, there is a strong tendency for them all to operate in a way that makes their indicators converge with those of the sector.

Anecdotally it seems that, up to a point, housebuilders will defend their gross margin and prefer to suffer a lower sales rate than use up their valuable land bank. However, they will adjust supply rate to match sales if it is economic to do so as part of the process of fine-tuning supply, sales, and net pricing.

CHAPTER 9

Costs of production

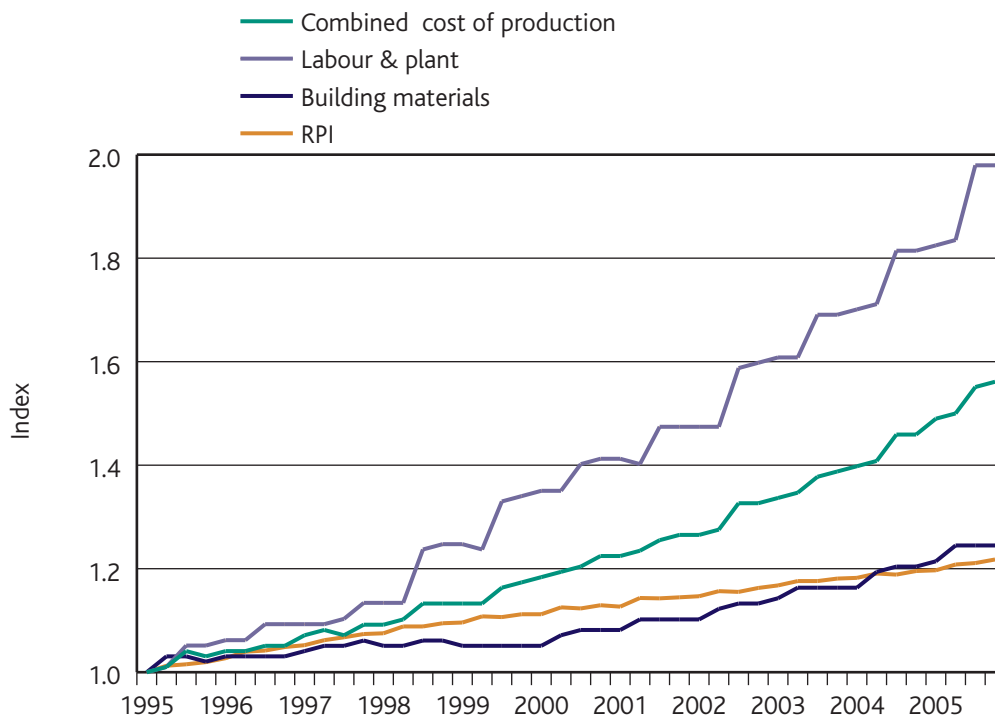
This chapter explores the factors, other than land, which affect the cost side of a housebuilding company's business. These include both the direct costs, which include building materials (and other aspects of the supply chain), plant and professional fees, as well as the indirect costs, or overheads, which every company has to bear.

Cost inflation

Keeping costs under control is one of the main challenges for any business. As already outlined, building costs can vary considerably due to factors such as site conditions and the amount of enabling infrastructure required. Nevertheless they can frequently comprise more than half the overall development costs.

The "cottage industry" nature of much of the housebuilding subcontractor supply chain results in labour costs being highly responsive to industry demand and rates are often negotiated on a site-by-site basis. The buoyant housing market over the last 15 years, coupled with skill shortages, has resulted in significant growth in labour costs in many trades.

The graph below shows that growth in the cost of building materials, at 24%, has only slightly exceeded the Retail Prices Index (RPI), at 22%, over the 11 years from 1995 to 2005. On the other hand, the cost of labour and plant has nearly doubled over the period, rising by 98%.

Figure 21: Construction cost inflation in housebuilding

Source: Ernst & Young

The supply chain

Building houses is an assembly process that, other than for a minor component of pre-fabrication, is carried out almost entirely on-site. Construction products are, in the main, produced by specialised firms and in large volumes in order to realise economies of scale. High volume housebuilders typically produce few of the construction components themselves, purchasing them instead in the market at competitive prices. They are usually able to negotiate group purchase agreements with manufacturers or merchants and can also negotiate extremely competitive prices, achieving significant economies over their smaller competitors.

Sourcing from abroad has increased significantly recently. In Europe the scale of production of a range of products has lowered costs to a point at which real savings can be made, notwithstanding the high weight-to-value transportation costs. Housebuilders have, however, to be robust in their demands for agreed standards of quality, certification and audit in order to ensure that such products are reliable and safely deliver to their specification.

Pre-fabrication

A certain amount of pre-fabrication is undertaken both by housebuilders and suppliers, but this forms a relatively minor part of overall production. The majority of innovative or modern construction methods in housebuilding are employed in the construction of high rise apartments. Their use in more traditional development is somewhat limited

and driven by contractual or planning requirements rather than cost effectiveness. At the moment under-investment in capital by many suppliers and reluctance on the part of housebuilders to commit to unproven building systems has resulted in a low rate of commercially driven take-up of modern methods of construction.

The advantages of increased speed of production, lower defects and warranty costs are not currently perceived as outweighing the additional cost. Consequently most developers believe that apart from timber and steel frame systems, traditional methods of construction are more economic and yield a higher land value.

Nevertheless some housebuilding companies are looking at ways of reducing costs and construction time. Since much of their product is generic and could be modularised, it would seem to be ideal for factory-based prefabricated construction. However, and although they can be just as fireproof, energy efficient and sturdy as brick houses, prefabricated homes are not widely accepted by buyers in the UK, where there has been a preference for more than two hundred years for what are regarded as traditional methods of building. The poor reputation of the post-war "pre-fab" bungalows has not helped either to enhance the image of such methods of construction.

The use of timber framing would however be an effective alternative and is a popular choice in countries such as Canada and Australia, although the ready supply of timber there in times past was undoubtedly a contributory factor. Unfortunately, where timber framed houses have been constructed, they have sometimes been clad in bricks, which although adding to their "kerb appeal", rather defeats the object.

Other than in multi-storey developments where innovation is more acceptable, pre-fabrication therefore remains a minor feature, but this is likely to alter in the years ahead.

One of the factors that will drive the move to pre-fabrication will be the need to achieve higher environmental standards. These are likely to be harder to achieve using traditional methods of construction on site. With the move towards zero carbon, quality of build and tolerances will become more critical; achieving the necessary standards of installation with the existing subcontractor base may well become less cost effective, especially in a more rigorous regulatory environment.

The industry supply chain is facing a number of important strategic challenges:

- will the increasing importance of quality installation justify a move into "supply and fit" on a much wider scale than at present?
- will the delivery of cost effective energy efficiency be best delivered through prefabrication or pre-assembly?
- will the building products supply industry anticipate the impact of the timetable for implementing levels 3, 4 and 6 of the Code for Sustainable Homes with capital investment and pricing policies designed to capture the future "assured" demand?

Much will depend on the industry's confidence in the Government's resolve to press forward with its environmental policies against predictions of an adverse impact on volumes and prices.

The physical components of housebuilding

The main physical components required for residential development include:

Construction materials

- Sand, gravel, aggregates and cement: leading companies within the UK construction materials industry include Lafarge, CRH, Holcim, CEMEX, RMC and Hanson. The largest component used by the industry is cement, forming approximately 21% of the market by price. The recent increase in output by the UK construction industry had fed through as demand to producers of raw materials which have responded by initiating increases in capacity through expanding production infrastructure and developing new plants. New facilities and increased capacities are being put into place in order to remove uncertainty in the supply chain, improve consumer confidence and make products more sustainable. Companies are also seeking to reduce costs and improve production efficiency. Overall the sector is undergoing a period of growth and rationalisation, with many UK companies now forming part of international companies.⁴

Building products

- Timber and joinery, together with concrete, clay, metal, glazing and plastic products: leading companies within the UK building products industry include Saint-Gobain, Pilkington, CRH, Jewson, Lafarge and Hanson. The largest components are metal (22% of the market) and concrete products (18%). Driven by increasing demand from infrastructure and new build development the UK building products market is undergoing a period of growth but it is facing challenges from the rising cost of energy and raw materials which continue to squeeze profit margins.⁵
- Companies have responded by increasing innovation in order to differentiate themselves and their products. Traditionally, price has been the main consideration in the choice of building product supplier, but variety in design, environmental issues and legislation have changed the market for both producers and customers. Increasing the use of prefabricated building materials enables savings to be achieved in the skills level required and volume of labour input. Producers of building materials are focusing on innovative solutions for the construction industry, with some reorganising their R&D operations in order to give absolute priority to meeting new market expectations as well as improvements to the way its products are used.

⁴ "Construction Materials in the UK – Industry Profile" (Datamonitor, June 2006)

⁵ "Building Products in the UK – Industry Profile" (Datamonitor, July 2006)

- Overall the supply chain in the UK is healthy and growing, reflecting a strong nationwide demand from infrastructure and built developments. It meets the needs of the housebuilding industry and is investing in Research and Development (R&D) to facilitate more efficient and environmentally sound products. Pricing is highly competitive, with the larger house builders able to negotiate the bigger discounts.

Vertical integration

New technology is being increasingly introduced into the housebuilding and general construction industries. Much of the specialist equipment associated, for example, with energy efficiency in the home, such as photo-voltaic cells, requires specialist installation. It is not sufficient for traditional builders to take responsibility and it is certainly in the manufacturers' interests that the process is correctly and efficiently carried out. Manufacturers are therefore taking on a greater share of installation works, either by expanding their operations or by acquiring the organisations that are best equipped in this field. This is an example of vertical integration.

Equipment hire

Equipment and services supplied on a rental basis include:

- diggers, dump trucks, cranes, lifts;
- scaffolding, rubbish removal.

Professional and consultancy services

In the interests of being cost effective and efficient the larger housebuilders tend to employ their own staff to carry out the professional tasks associated with the business. However, smaller housebuilders and those companies where internal resources are fully committed or specialised expertise is needed will buy in professional and consultancy services, particularly for the larger and more challenging schemes.

Examples of these advisors, divided into the main categories, include:

Land and Planning

- Ground condition surveyors – specialist surveyors are required to determine ground conditions, including:
 - site archaeology, geology and composition;
 - methane monitoring;
 - pollution from ground contaminants;
 - drainage, water table, and flooding issues;
 - site survey and layout;
 - trees.

- Town planning advisors – the planning process is frequently complex. Builders can benefit from the local knowledge provided by advisors with experience of, and contacts within, the local planning authority.

Design Team

- Infrastructure consultants – housebuilders will usually be able to deal with the normal process of site preparation, utilities, and local roads but expert advice will be required for addressing specialised issues such as:
 - removal of contamination, like asbestos and toxic spillages, from a site;
 - study of traffic flows in order to inform the layout of roads, site access points and traffic management plans, including motorway junctions and bridges over roads, rivers and railways;
 - treatment and management of pollution, both in the ground pollution and airborne pollution like smells and noise;
 - upgrading and provision of the utility supplies for electricity, gas and water;
- Architects – where a big impact is required, for example to support a bid to regenerate a major public sector site, or for a town centre high-rise scheme. It may be necessary to bring a “signature” architect on board to produce an imaginative design for the scheme;
- Quantity surveyors/cost consultants – professional advice is essential in determining the volume of materials required and the costs, when performing the residual value calculation and in setting construction budgets, where non-standard products are being developed;
- Mechanical and electrical engineers – are not necessary for ordinary housing but provide advice and solutions in high-rise blocks on issues like lifts and ventilation;
- Civil and structural engineers – advise on solutions for issues such as:
 - infrastructure – highways, bridges, tunnels, seawalls and flood protection;
 - site conditions – geology, ground stabilisation, methane and pollution management, drainage and foundation requirements;
 - construction – building methods and materials;
- Sustainability and environmental consultants – there are an increasing number of requirements, possibilities, and opportunities to be understood, solved, and managed, around which an industry has arisen providing advice on issues including:
 - archaeology – the legal requirement to permit and fund archaeological investigation can be a considerable source of delay and expense;
 - wildlife – developers have a responsibility to ensure that their actions do not impinge upon protected species and they must be aware of Sites of Special Scientific Interest (SSSI) and the requirements of bodies such as English Heritage;

- energy – combined heat and power schemes, wind turbines, heat pumps, and insulation methods, the significance of all of which is rapidly increasing;
- environmentally (more) friendly materials.
- Construction, project, and development managers – are used to manage large projects and aspects of projects with specific issues where the builder is short of expertise, such as high-rise dwellings or civil engineering construction.

Legal and Finance

- Solicitors – many projects involve complex arrangements relating to land purchase and title, easements and rights, development agreements, partnership and joint venture agreements, funding agreements, where the housebuilder will benefit from specialist legal advice on drafting and negotiation;
- Financial advisors – the support of professional accountants may be needed to understand, optimise, and negotiate complex deals and this can be combined with specialist financial modelling and taxation advice.

Regional offices

Housebuilders have generally found that they need to have their housing production units close to the markets which they serve. Regionalisation allows the development of local knowledge with respect to sites, planning authorities, markets as well as the local supply chain. The very large, national housebuilders have networks of regional and sub-regional offices covering the entire country.

Typically, regional offices will have a strong operations focus, staffed with personnel specialising in such activities as land identification and acquisition, product design, surveying, engineering, construction and project management, sales and marketing.

Indirect costs

Overheads

Overheads are the cost of running and operating the business that is over and above the direct costs of production in terms of labour, capital equipment, and materials.

Direct overhead

Direct overhead is a cost that is directly attributable to the volume of production. It is incurred as a consequence of production and varies in volume, and cost in almost direct proportion to changes in production. In the house building industry direct overheads include:

- staff dealing with site identification, vetting, and acquisition – this will include buyers, land surveyors, development surveyors, and legal staff;

- staff dealing with site master planning, design, and planning applications – including the skills necessary to design a scheme to bring it to the planning stage, generally comprising master plan architects, building architects, infrastructure engineers, structural engineers, quantity surveyors, development surveyors, planning surveyors, specialists dealing with issues such as transport or the environment, and planning lawyers;
- project delivery staff – the teams able to deliver the completed development, generally comprising the design and development team plus the construction and project managers as well as building surveyors;
- capital equipment allocated to projects;
- marketing operations – including staff who man the show homes and deal with sales.

Direct overhead will be procured mainly from the permanent staff and supplemented with external professionals as required, to provide capacity and specialist skills.

Indirect overhead

Indirect overhead is a cost that has either no scale relationship with production or only a very loose one. It is located at head office or regional offices, rather than at sites. Indirect overhead tends to be generic amongst most businesses and the house building industry is typical in having indirect overhead that includes:

- operating departments – senior staff, including heads of departments who supervise land and house building operations;
- human resources;
- finance department – dealing with the accounting systems, the processing of transactions, the production of management and financial accounts and reports, all the varieties of taxation, the imposition and maintenance of internal controls, internal audit, external audit;
- treasury operations – dealing with fostering and maintaining relationships with the City and raising capital as needed to support the business, and with the management and disposition of corporate funds to promote optimal cashflow;
- corporate marketing, public relations, investor relations – to promote the business to a variety of stakeholders and to promote and protect the corporate image including spending on corporate social responsibility;
- group strategy, company secretary, and the board of directors – providing business strategy, company secretarial services, leadership, and control;
- operating capital equipment – management and information technology, office equipment, staff motor vehicles;
- property administration – the head and regional offices, which may be owned or rented.

Whilst indirect overhead mainly comprises the office costs and staff to run the business, it will also be supplemented by external specialists, for example, corporate lawyers, merchant bankers, PR and advertising firms.

Overheads are a significant cost to housebuilders and, like the costs of production, need to be carefully monitored and controlled to ensure that they are of a quality and cost appropriate to the size of the business as overspending and inefficiency will compromise profitability and leave the organisation more at risk to predatory acquisition.

The larger the organisation the more efficiently it can use its indirect overhead spreading the costs over a much larger turnover. Additionally expert capability that smaller companies have to acquire through expensive consultancy arrangements can be more economically employed.

CHAPTER 10

Use of contractors and subcontractors

Building remains a labour-intensive process with relatively little substitution by capital, particularly on traditional housing developments. Most housebuilders have some “in house” labour, particularly at the supervision level, but they generally use local subcontractors, in the form of firms and individuals, to provide the bulk of the required labour for each building site.

Throughout commerce and industry most labour is employed directly, and generally for the long term, by each business. Employers are able to select, train and promote staff in a way that benefits both the business and the staff and engenders mutual loyalty and shared values. In addition payroll staff are protected by employment law. The building trade is, however, different. Due to the geographic diversity of development sites it is not practical to employ labour centrally and transport people to and from sites every day; instead self-employed labour is recruited, often locally and on a temporary basis, ie for the duration or a phase of a project. Since labour is not affiliated with any particular housebuilder the benefits of employment are lost, labour tends to be transient and career-less, training is haphazard, availability is random, and quality suffers accordingly.

Without an internal stock of labour, housebuilders are dependent on local recruitment, but the availability of construction labourers in any one location tends to be fairly constant over time, although individual workers can be bussed short distances if necessary. Any rapid increase in construction activity in an area leads to pressure being put on the supply of labour, bidding up prices, imposing the use of less experienced people, and the temporary drawing in of labour from elsewhere in the UK and from abroad.

The availability of such labour to meet the demand is very beneficial to housebuilders, enabling production supply to be maintained and substantially offsetting what would otherwise be the inflationary impact of labour shortages.

The nature and structure of the subcontractor supply chain makes it very difficult to establish a quality culture amongst trades on site. Quality control is usually managed by the housebuilder carrying out quality inspections using foremen, site management and regional quality controllers. Proactive quality management is difficult and it generally pays housebuilders to keep the construction process as standard and simple as possible. This is one of the reasons why building in the UK is mainly “traditional” block and brick.

In addition, housebuilding is only one of the activities undertaken by building contractors who are engaged also in other building work, such as civil engineering, infrastructure, industrial and commercial work, and repairs and maintenance. Apart from the case of large apartment developments, housebuilding uses a different subcontractor base from commercial or civil engineering projects which often employ a single large contractor to deliver the project.

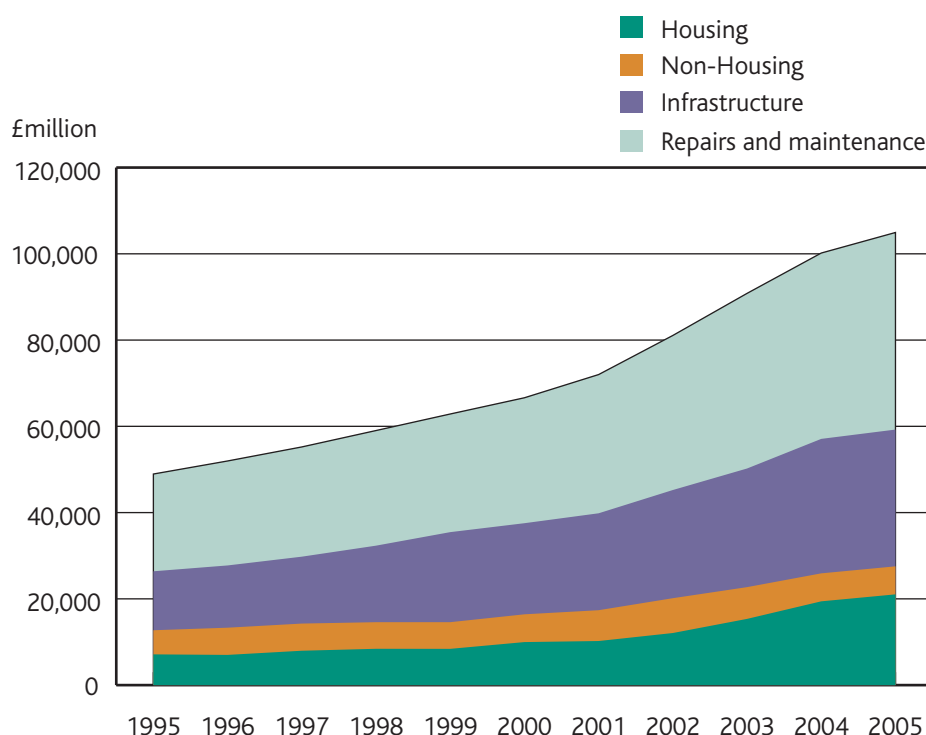
The subcontractors used by the main contractors also tend to be much larger with directly employed trades. According to DTI statistics, in 2005 total projected contractors' output was £105 billion, of which about £58 billion was accounted for by new work. New housing amounted to £21 billion, about 20%, of the total.

Figure 22 below shows contractors' total output at current prices for the 11 years from 1995 and indicates nominal growth of 114%, but after restatement to 2000 prices (Figure 23) real growth was 32%, equivalent to 2.8% per annum overall and 3.3% per annum for new housing.

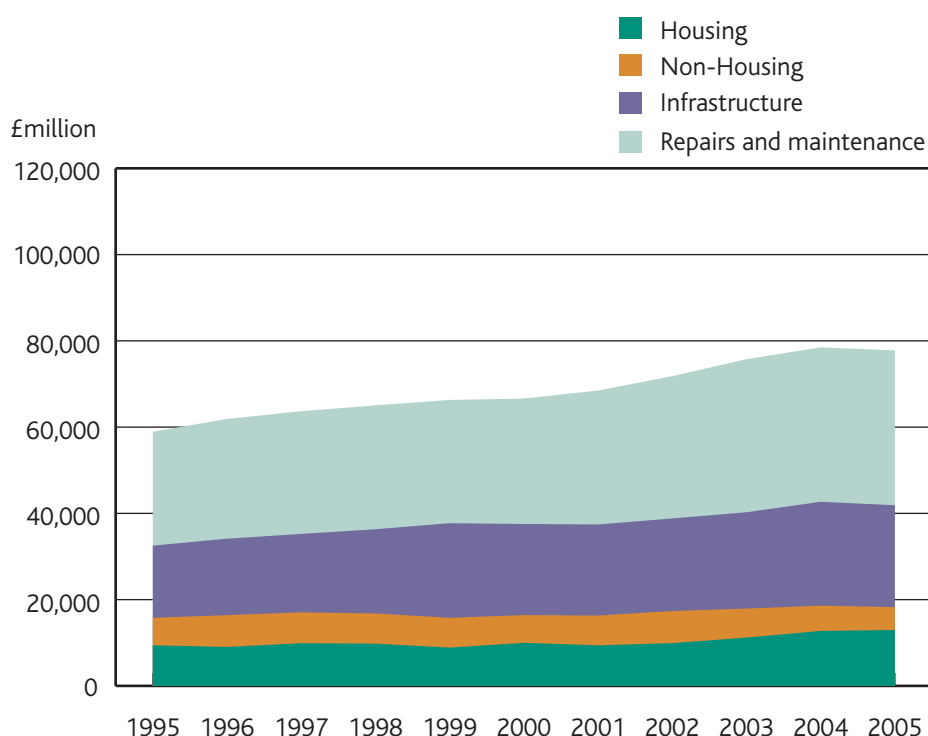
Modest growth at these levels is sustainable over the long term. However, contractors' output on new housing increased by 38% (8.4% per annum) over the 5 year period to 2005. This is attributable chiefly to the increase in apartment building and mixed use development particularly in city centres where, due to the increased complexity of the product, housebuilders and other developers have made much greater use of main contractors and large specialist subcontracting companies.

If it were not for compensating reductions in growth on other building activities, particularly in infrastructure which reduced by 23%, such an increase in new housing output would have put even more pressure on housebuilders, as they competed for contractors. This could have implications for any intended future above-trend increase in housing volume, especially if large infrastructure and other projects make competing demands on sector capacity.

Figures 22: Contractors' output (current prices)



Source: Ernst & Young, DTI

Figures 23: Contractors' output (2000 prices)

Source: Ernst & Young, DTI

Moving towards more sustainable construction

Housebuilders also have to be aware of, and where necessary take into account, moves by Government to seek to alter the ways in which the construction industry operates. The Department for Business, Enterprise and Regulatory Reform is, during the second half of 2007, consulting interested parties on its strategy proposals to make construction more sustainable and to help the industry deliver more sustainable construction methods and products.⁶ Some of the key areas in the strategy will particularly affect the housebuilding industry and include:

- Reducing the carbon footprint of activities within the construction sector;
- Production of zero net waste at construction site level;
- Developing voluntary agreements and initiatives between the construction industry and its clients with the aim of reducing the carbon footprint and use of resources within the built environment;
- Creating a safer industry by improving skills, boosting the numbers of workers taking part in training programmes, and retaining more skilled workers.

⁶ <http://www.berr.gov.uk/sectors/construction/sustainability/page13691.html>

Health and safety

Improving the health and safety on housebuilding and other construction sites has been a concern of Government for many years. All responsible housebuilding companies will therefore pay particular attention to this aspect of their business, for which they have legal and moral responsibility.

Building sites are intrinsically dangerous places: heights, solid materials, incautious labourers, variable weather and heavy machinery all contribute to making them more dangerous than most other workplaces. Constant supervision is therefore needed to promote health and safety in all its aspects.

The statistics do not differentiate specifically between housebuilding and other parts of the construction industry. Nevertheless, of the 77 fatalities recorded by the Health & Safety Executive in 2006/07, whilst 23 occurred during the course of construction of buildings, only 1 was classified as occurring during the construction of domestic buildings.⁷ Health and safety on-site remains a serious concern for housebuilders, both morally and legally.

⁷ <http://www.hse.gov.uk/statistics/fatals.htm>

CHAPTER 11

Factors affecting margins and profitability

A wide range of factors can affect a housebuilding company's profitability; increasing sales revenue is a principal means, but for the reasons already outlined, this is frequently outside the company's control. Reducing costs, on the other hand, is much more within the company's gift and can encompass a variety of approaches, many of which can be regarded as exploiting economies of scale. Obvious sources include reducing staff costs and numbers, but a number of more subtle means also abound.

Value engineering and product standardisation

Value engineering has been defined by the Institute of Management Services as "an approach to productivity improvement that attempts to increase the value obtained by a customer of a product by offering the same level of functionality at a lower cost." It attempts "to eliminate costs that do not contribute to the value and performance of the product."⁸ It is an approach that is adopted across all industries, not just housebuilding, as a way of increasing profitability.

Product standardisation

The need to achieve the lowest possible cost of production relative to sale price has driven the housebuilding industry towards designing and producing houses which seek to meet the minimum requirements as economically as possible. This in turn has led to a standardised house type with the maximum amount of saleable space for the lowest cost and without any non cost effective features or detailing from house design.

Housebuilders that develop the most cost effective range of products achieve real competitive advantage, both in terms of cost of production and efficient use of expensive infrastructure. They will also either enjoy higher margins or be able to create higher land values without sacrificing any element of their profit.

Mainly because of location, no two dwellings are ever exactly the same. Nevertheless, housebuilding is a production process that is more cost effective at higher levels of output volume. In the interests of both space and construction efficiency, houses would ideally be built in straight rows of identical units, with street length terraces constructed to a rudimentary design and specification. Indeed this was the approach adopted in the 19th Century when volume house building began and can still be seen in many of the Victorian areas of the larger cities.

Minimisation was the key at that time: in the variety of design and the internal specification; in the materials and elevations; and, ultimately, in the overall quality. Over a period of decades housing was cheaper to produce, but it also became bland.

⁸ <http://www.ims-productivity.com/resources/tools/tools29.php>

Victorian and Edwardian design touches gave way to plain walls and low pitched, concrete tile roofs as detailing and the more expensive materials were removed in the interests of economy. This model typified housing, both council built and privately built, as late as the last quarter of the 20th century.

The process of economy and uniformity was further advanced with the introduction of modern methods of concrete construction in the latter half of the 20th century, enabling the inception of high-rise apartment type housing.

Over the years, housebuilders have endlessly designed, refined and value engineered their products to create the standard, or template, house design on which they can hang a variety of standardised elevations and features. On all but the smallest sites the use of standard house types creates significant efficiencies in terms of cost of speed of production, recovery of infrastructure costs, layout and density and overheads.

Standardisation has many advantages:

- All non-cost effective features will generally have been removed and replaced by the minimum needed to achieve regulatory compliance. The appeal to potential buyers can be enhanced by the selective use of standardised features which are often simply attached to the basic house shape. These are known colloquially in the trade as “gob ons” and can range from fake beams fixed to external walls to UPVC dovecotes and are frequently used without reference to any styles or materials indigenous to the locality.
- The unit is easy to build and facilitates the efficient sequencing of trades. Large runs of standard house types allow sub-contractors to become extremely efficient in production using a relatively low skilled workforce. Sub-contractors are able to employ labour that merely has to carry out a repetitive task with only a few variables.
- Materials can be purchased in bulk on long term supply contracts from wholesalers or direct from the producers, thereby achieving significant discounts. The supply chain is also able to organise itself to maintain and control the stocks of products and materials required in housebuilding.
- Standard house types are also designed to allow the optimum compliant densities to be achieved. Optimum density is not necessarily the highest density, but the combination of house types and densities which yields the highest value per hectare at a given rate of sale.
- Standardisation can produce a more cost effective ratio of expensive infrastructure to houses built: for example, it makes sense to serve as many houses as possible by constructing the minimum length of expensive public highway.
- By standardising the internal design of dwellings, it is possible to ensure they have the maximum cost effective space in the minimum area.

On the other hand, it also has one major disadvantage: standardisation can all too easily lead to an undesirable uniformity of layout and poor design, although some housebuilding companies can use their skills to produce an attractive and good quality dwelling.

One of the most significant savings is that of overhead, speed and pre-operational planning. Using standard drawings and specifications will help avoid a significant amount of expensive drawing and design costs. The only design work that needs to be commissioned relates to the topography, shape and ground conditions of the specific site.

Other areas affecting profitability

Other areas that will impact on a housebuilding company's margins include:

- Density – the link between densities and standard house types has already been described. Increased density can sometimes, but not always, increase the value of land. Over-dense development, on the other hand, can often lead to diminishing returns. The most cost effective densities are those that increase overall project returns after taking into account the increased costs of build. Depending on site location and the intended market, there will, however, come a point at which increased density makes a development less, rather than more, profitable. The inclusion of non-residential uses, such as food retail or leisure, can significantly increase the returns.
- Layout – the efficient use of roads and expensive infrastructure will allow a developer to minimise costs. Developers constantly seek to negotiate planning consents which service the maximum amount of saleable product from the minimum provision of infrastructure. This does not always produce the optimum layout in terms of visual appearance or convenience to eventual purchasers.
- Public realm – developers generally seek to minimise the amount invested in the public realm, ie open spaces accessible to the general public and maintained by the local authority. In most standard estate developments, extensive high quality investment in the public realm is not considered cost effective and developers usually seek to negotiate down from the minimum requirements of the local planning authority. Examples of where savings can be made include materials used for roads, edging and pavements, quality of landscaping, the design and materials used in public open spaces and street lighting. In some prestigious locations such investments may prove cost effective; in the majority of cases, however, it is not.
- Section 106 agreements – being able to negotiate down the planning contributions sought by the planning authority can make a significant difference to profitability. The amount and location of affordable housing is a major factor. Developers will generally seek to provide the minimum by way of affordable housing since it yields either a zero or low land value. Given a free choice, they will also seek to locate the affordable housing in a position where it will have the least adverse impact on market values. This has led to layouts in which affordable housing is concentrated in the most remote and often undesirable section of a site, often separately accessed, although planners may seek to counter-balance this by a better distribution of affordable housing, such as “pepperpotting”.

CHAPTER 12

Risk management

Risk Management has been developed as an indispensable control in all businesses, not just housebuilding, as a means of preventing (or at least mitigating) inconsistent performance or financial failure through the systematic analysis of possible risks and their impact.

The most common methods of risk management entail an assessment of both the probability and impact of a particular risk on the business, assigning a combined probability/impact weighting in order to produce a list setting out risks in order of importance. Those risks which pose a material threat to the business are then analysed and management action taken to avoid, mitigate, accept or lay off the risk. In some cases risks are unavoidable, but in relation to housebuilding the key areas are:

- Running out of land – most housebuilders have minimum lead in times for securing sufficient outlets to achieve production targets. Whilst timescales may vary a developer will ideally require around 18 months – 2 years before land on new sites can be brought into production. For example, for a financial year commencing June 2009, all sites should be identified and consented by the end of 2007. This ideal is, in reality, seldom achieved. Failure will force a builder either to buy “oven ready” sites at very high prices or to try and increase volumes from existing outlets which will necessitate price discounting. Failure to meet City expectations can have severe consequences;
- Cost overruns – the increasing complexity of apartment construction, refurbishment and urban development has made building cost control more difficult than in traditional housing. Failure to either properly assess or control the costs of a project can have a major adverse impact on the profitability of a project and also, in extremis, on overall corporate performance;
- Failure to assess market demand correctly – whilst certain types of housing such as “town houses” and apartments can produce very high land values, putting the wrong product on a development will significantly affect sales proceeds. Generally over optimism in market assessment can lead to a mismatch of product type against demand and require significant discounting to achieve sales;
- Failure to assess the future market – the housing market is very difficult to assess and many economic forecasters have made predictions that have been wrong. Managing for uncertainty is a key part of the builders’ business and the financial policies, investment strategies and business processes of housebuilders are orientated towards fast reaction to adverse changes in the market. Such uncertainty makes housebuilding unattractive to many companies in related sectors, who could otherwise have contributed to housing volumes;

- Generic product failure – a single component failure, design fault or poor quality workmanship can and often does affect more than one dwelling. Failures can mean expensive rectification works across all the dwellings on one site or across many sites; generic failures in apartments can entail entire blocks having to be vacated and residents accommodated elsewhere at significant cost.

Operational risks are generally managed within the standard operating procedures, risk assessment and internal audit functions that all large companies operate. The key risks relate to the market and it is the unpredictability of that market coupled with the financial consequences of mistakes that have shaped the business practices of housebuilders.

After more than 15 years' steady growth in house prices, conservative risk-averse attitudes still prevail and are probably justified. The City still regards housing as relatively high risk because of its inherent unpredictability and requires a high premium on its use of capital.

In response to these potential risks, the industry's approach includes:

- Financial conservatism – unexpected downturns can, if severe, cause a rapid deterioration in cash flow. Provided a company has the cash resources to build out and market its product – even at a loss – it is more likely to survive than one which cannot. As was described in Chapter 3, most housebuilders have low borrowings, but many have high level of borrowing facilities which they can deploy in adverse market conditions;
- Land orientation – the failure to restock will result in either an uneconomic scale of business and/or downsizing. Most developers maintain land banks of 2-3 years but that does not mean that they have developable land in place for their short term needs – see Chapter 4;
- Fast reactions – if the housing market is inherently unpredictable, a fast reaction to events as they occur is the best policy. Housebuilders tend to react very quickly to downturns; firstly through their marketing and pricing policies, then through re-planning, stopping the production of houses as far as possible (apartments are more problematic) and eventually consolidating their operations;
- Maintaining low overheads – subject to the operational efficiency pressures described in Chapter 9, housebuilders balance the use of directly employed staff, who can be expensive to make redundant in adverse trading conditions, against the use of consultants and subcontractors. They tend also not to invest heavily in fixed capital equipment, such as plant or production facilities, for the same reasons.

CHAPTER 13

Corporate social responsibility

The principles of corporate social responsibility (CSR) apply to all businesses, regardless of industry, but as the housebuilders contribute in significant part to the built environment their influence on social and environmental issues is far greater than that of many others. They are a “high impact” industry.

A dichotomy exists between the need to maximise shareholder value, and the need for the company as a social entity to act in a socially responsible manner. Whilst there are some marketing benefits that can be achieved through promotion of non-mandatory “sustainability” credentials, in the short term at least high levels of CSR carry a real cost.

Institutions are demanding increased levels of CSR from housebuilders. However, fund managers look primarily to financial performance; CSR performance – along with other desirable non-financial criteria – play little or no part in investment decisions.

CSR activity and reporting has evolved over the last ten years, and for many housebuilders now forms an entirely separate published report, quite distinct from their annual report and accounts. It is only now, having gathered several years of information relating to key performance indicators, that improvements in their areas of focus can be demonstrated.

Many of the key indicators are primarily by-products of general efficiency improvements and therefore ultimately save cost for the organisation. Undoubtedly, though, some of the indicators, such as social housing completions and EcoHomes, involve costs to the business. However, these also tend to be imposed upon the housebuilders in the planning permission and it is an open question as to what extent those features would be provided voluntarily.

Ultimately, though, if they want to be recognised as being socially responsible, housebuilders will have to be able to demonstrate excellence at their core skill of delivering a high quality product and service to their purchasers.

CHAPTER 14

The links between housebuilding and environmental & sustainability factors

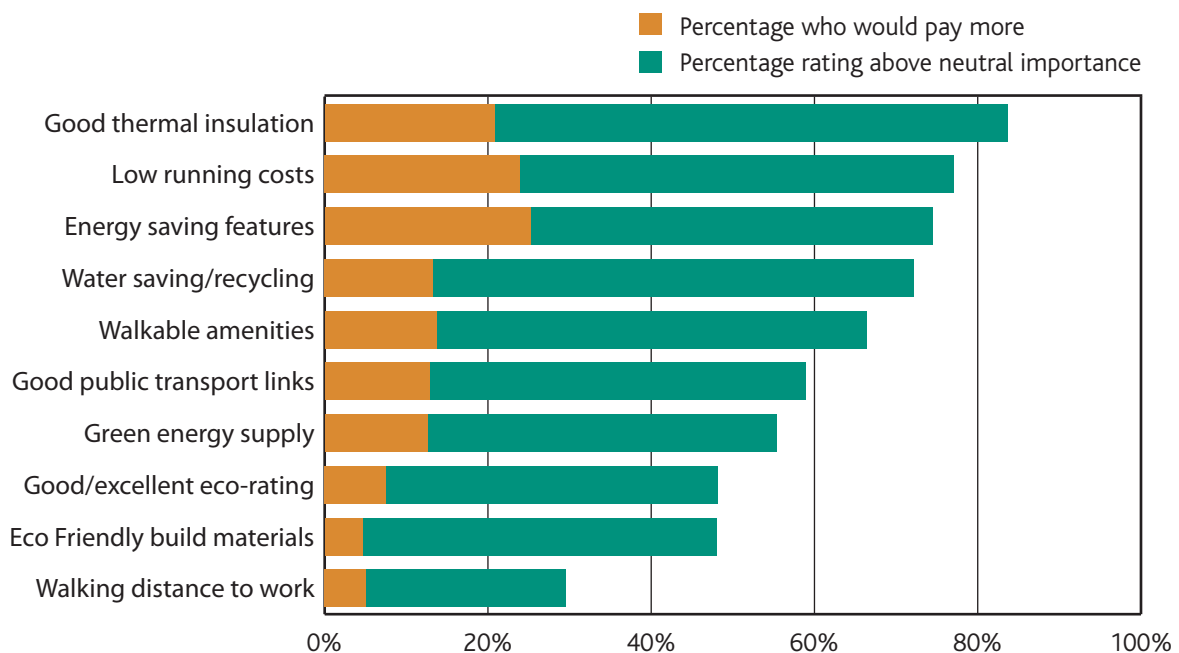
The Government is committed to a programme of reduction in carbon emissions. One component of this is environmental efficiency in new housing and minimum standards are in place through Building Regulations to help achieve this. The Code for Sustainable Homes will ramp the standard levels up still further.

Government policies are designed to ensure that, as far as possible, all new developments are more sustainable. The challenge for housebuilders has therefore become how to introduce much more original thinking into design – both at the estate and the individual building level – so as to produce housing that is attractive, well built and meets policy criteria in terms of social, economic and environmental sustainability.

The market reaction to higher environmental standards is mixed. In principle, most people are in favour; but only a few are prepared to pay more for new houses that are so equipped.

This point was made in several submissions to the Review. In many housebuilders' experience, buyers are very reluctant to pay much more, for example, for energy efficiency products – certainly not the full market price. This is also reflected in the outcome of research by Savills which shows just which aspects of sustainability are highly regarded and what people are prepared to pay for.

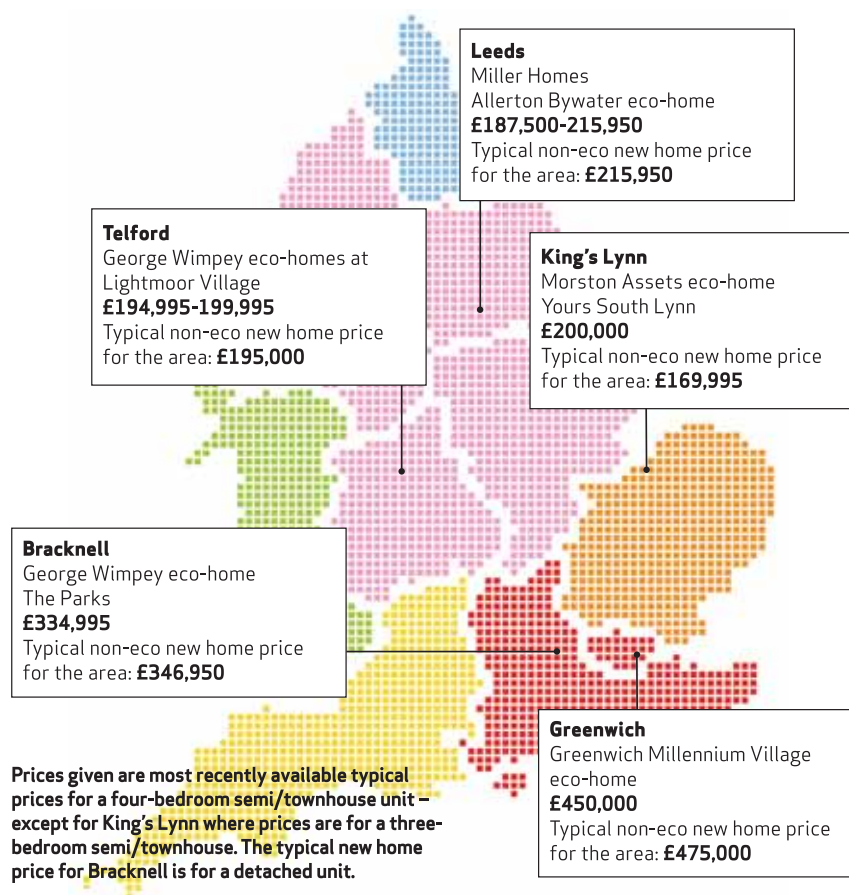
Figure 24



Source: Savills Research

The map below demonstrates how house prices in five schemes under development to Eco-Homes Excellent standard – which is currently the highest environmental standard – compare with similar homes in the area. Only in one area is there an indication of a higher price for the “eco-homes”. More interestingly, the other four are all located on sites owned by English Partnerships, a public sector agency. The higher costs which will have been factored into account when assessing the residual land value are therefore borne in these cases by the public sector, not the housebuilder.

Figure 25



Source: "Regenerate Magazine" July 2007

Without Government intervention, it is unlikely that the majority of housebuilders – left to their own devices – would do much to deliver any form of sustainability. Unless and until house buyers are prepared to pay a premium for quality and sustainability that would make such a product cost effective, it would not be in the financial interests of any housebuilder to adopt such initiatives unilaterally.

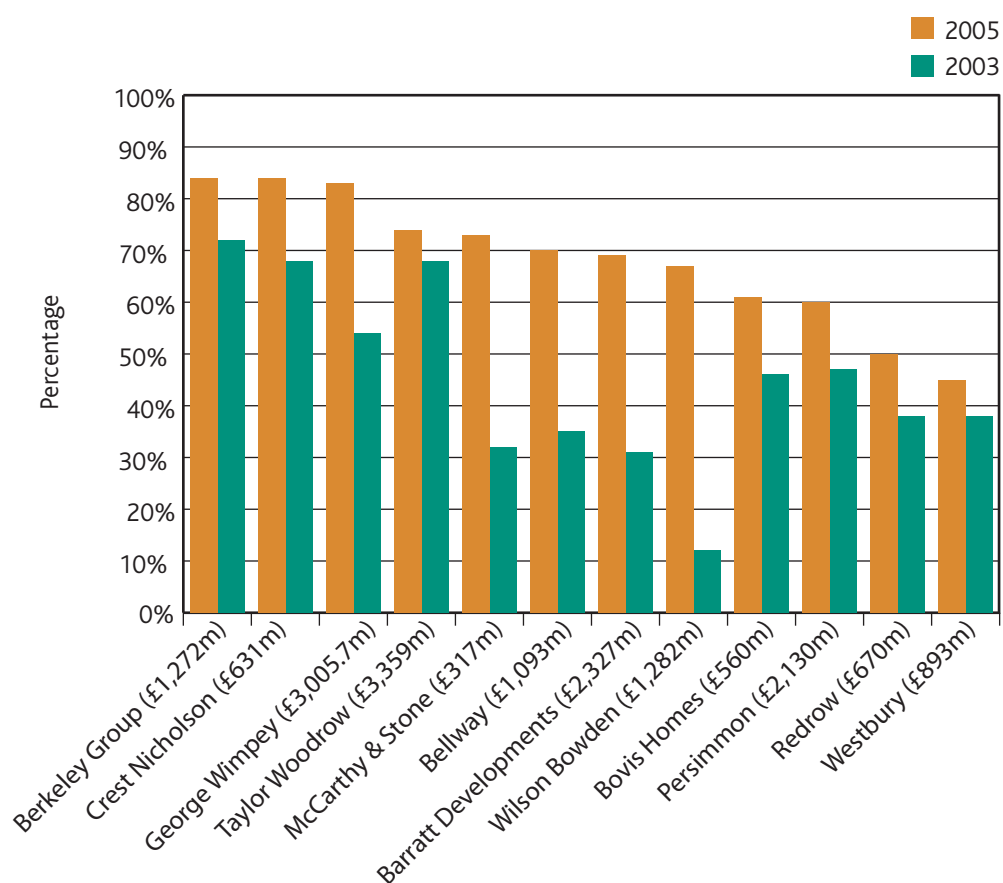
Nevertheless, as studies commissioned by WWF-UK (the British arm of the international conservation organisation) and Insight Investment (part of HBoS plc) show, a number of the top housebuilding companies are looking to respond to policy and market imperatives in order to deliver sustainable homes and communities, and that the level of their efforts is increasing.

The first survey was carried out in 2003 amongst 13 leading housebuilders and found that whilst some companies had gone a long way to reflect sustainability and corporate social responsibility criteria in their governance, management resources, policies and operational performance, others had not: the average score out of 100 was only 47%, reflecting perhaps how sustainability was a low priority where their investors' decisions were based largely on financial and corporate governance criteria.

In the second survey⁹ in 2005 – in which only 12 companies took part – it was found that there had been considerable improvement in companies' scores (the average score had risen to 68%), but it was concluded that there was still significant scope for further improvement.

As Figure 26 below demonstrates how, in 2005, there were three clear leaders amongst the companies, some substantial improvements in performance amongst the middle-rankers, but that several companies still lagged some way behind.

Figure 26



Source: WWF-UK/Insight Investment

⁹ "Investing in Sustainability – Progress and performance among the UK's listed housebuilders – revisited" (WWF-UK/Insight Investment, 2005)

The report concludes that the increasing emergence of drivers for sustainable homes coupled with the increasing demand for new homes in the UK now makes an even more compelling and urgent case for housebuilders to integrate sustainability into their business strategies.

Business benefits available can include:

- gaining planning permission more easily;
- winning more contracts with clients or partners that demand high sustainability standards;
- mitigating business risks;
- making savings through greater efficiency and lower resource use;
- enhancing their reputation with a wide range of stakeholders;
- differentiating the company within the market.

CHAPTER 15

Economies of scale and benefits of growth

Housebuilding companies can grow their businesses in two ways, either organically or by acquisition.

Organic growth

Organic growth entails increasing the scale and efficiency of existing operations and means, *inter alia*:

- increasing the rate of site acquisition – this enables the business to grow the land bank;
- increasing the number of sales outlets – to grow the volume of consented sites going into the development pipeline;
- increasing the rate of sale through improved marketing capability and pricing policies;
- acquiring new skills and methods – so that more effective design and construction solutions can be implemented on any given site, thereby enabling more challenging sites to be tackled.

The housebuilders have found a number of aspects of their business respond positively to scale as they grow in size organically. These include:

- Purchasing building materials and capital equipment – the suppliers tend to be large national and international businesses that can impose prices upon small customers; larger scale gives housebuilders more power in negotiations over price and the terms of supply and credit, thereby lowering their production costs;
- Management – increased size gives companies greater management advantages and flexibility. The larger the company the easier it is for them to recruit high quality management, often from outside the industry, and then to retain their services. The bigger housebuilders can also afford to employ specific staff to oversee such specialist areas as commercial property evaluation, road layout and engineering, community management and social housing. Small and medium-size builders would not find it cost effective to deploy their resources in this way, with the result that major decisions would either have to be made using non-specialist management or through the use of external consultants at high cost.

- Design and Research & Development (R&D) – larger housebuilders are better able to spread the costs of design innovation and R&D, for example on new construction methods or the cost effective delivery of sustainability, over a much larger turnover and thereby reduce the unit cost of production. Consequently larger organisations can more easily develop products that are both efficient to build and meet regulatory requirements. A larger housebuilder will also accumulate a wider range of house types through the pooling of regional designs, thereby enabling its regional operations to respond more effectively to the requirements of the planning authority and market in any particular location.
- Larger housebuilders are better able to negotiate with local planning authorities. On the other hand, this can result in some authorities feeling unable to resist poor quality applications, once the principle of development is conceded.
- Indirect costs – whilst very small businesses, owned and managed by a single person, can be very efficient in its use of overheads, intermediate sized developers can suffer from diseconomies of scale in which high indirect costs cannot be efficiently recovered from the scale of business undertaken. Amongst housebuilders the prevailing model is one of a central headquarters which carries a high proportion of the general management and other indirect costs, along with a number of operational regions in which the majority of management are operational. The optimum size for a region is generally felt to be about 400-500 units, above which geographic and organisational diseconomies tend to reduce profitability.

This figure is based on the experience that a management team is only effective when controlling sites no more than 90 minutes drive time from the office. Within this “catchment area” a division is unlikely to be able to acquire and operate more than 15 sites per annum. As the average sales rate per site is about 35 units per annum, a division will therefore be able to complete just over 500 units each year. A limiting factor for output for a division is the number of sites it can manage at one time and the output of the division will be determined by the type of product that is put on those sites.

Most housebuilders tend therefore to split up any of their regions that exceed this optimum size. The only exception would be in geographically focused urban areas, where high levels of activity, including the construction of blocks of flats, might be able to support much larger regional units.

- Market profile – with one or two possible exceptions, the larger housebuilders have not been successful in using “brand building” as a way of achieving higher sales through customer loyalty or a cost effective price premium through a reputation for quality. On the other hand, those developers with a poor reputation for quality do not appear to have suffered appreciable financial damage. It is interesting to note that a few smaller companies, such as Octagon and Urban Splash, have managed also to create niche reputations for themselves, based overwhelmingly on their reputation for innovation and quality.

- Credibility in land purchase – planning, managing and negotiating land purchase, especially for large tracts of land, is weighted heavily in favour of buyers who have the financial and management resources to make a long term investment. The promotion and development of strategic land can take 10 years or more and involve many millions of pounds, but with no certainty of success at the end of it. In many cases developers compete in the same locality each promoting different tracts. For a small developer, the costs of failure would be ruinous. Large companies, on the other hand, are better able to spread their risks over a wider range of projects, with successes offsetting the occasional failure.

Private sector landowners generally seek partners whom they can be confident have the necessary resources to see a development through to final completion. Public sector landowners also pay particular attention to financial and management capability when seeking partners for major regeneration or development projects. Although public sector rules on competition, procurement and tenders are intended to provide equal opportunities for all private sector bidders, they sometimes benefit the larger and better resourced developer over smaller firms;

- Diversification and size of landbank – the cost of financing an undeveloped land bank is such that small housebuilders cannot afford to hold land for the long term. Larger businesses, however, can afford to take chances in acquiring sites and take the risk that a site may not be realisable for development for many years. A large housebuilder is also better able to trade in land banks in order better to balance the overall portfolio and to gain additional sites in new areas. This can be achieved, either by buying and selling sites or, where land is in short supply, through barter. It can also often prove a more attractive option than sale, as it is not necessary to compete in the open market with other potential developers. Although the intention behind land swaps is not anti-competitive, the practical effect can be to squeeze out smaller housebuilders from access to large sites;
- Access to the capital markets and lower cost of capital – size and financial profile are key factors in establishing a high credit rating. Whilst small businesses find capital raising difficult, large companies with strong balance sheets are able to borrow money for long term periods at extremely competitive rates.

A critical ingredient of growth is funding. It is not efficient for housebuilding businesses to be funded solely out of retained earnings. Substantial growth requires new capital, involving a mixture of equity and debt. More modest and gradual growth is supportable by retained earnings and bank borrowing.

Growth by acquisition

The concept of the benefits of economies of scale in the housebuilding industry is largely proven. The evidence suggests, however, that housebuilders have found growing organically to be a very slow process and generally have preferred to grow by acquisition, which is much quicker.

Whilst housebuilders have always seized opportunities to take over their smaller competitors, the present land shortage has given this process added impetus, as was noted in Chapter 1. By acquiring a smaller company, substantially eliminating its overhead costs and administering its landbank and work in progress through its existing regional outlets, a housebuilder is able to secure an additional supply of sites, operate more efficiently and reduce its central overheads as a percentage of turnover.

The first largescale acquisition in the recent spate was that of Westbury plc by Persimmon plc between November 2005 and January 2006.

Until 2005, Westbury had been a successful housebuilder operating mainly in the South of England and with a track record of increasing sales and profitability. In 2004, it had achieved sales of £893m, an operating profit of £142m and completed about 4,600 new homes. 2005, however, had proved a very disappointing trading year. Its output fell to about 3,500 units, sales were only £602m and it recorded a substantial operating and pre-tax loss.

Persimmon was a substantially larger company, approximately 2.5 times the size of Westbury. The acquisition therefore represented a growth potential of 40%. In 2005 it had sales of £2.3bn, an operating profit of £528m and an output of 12,600 units. Whilst Westbury was getting into difficulties in 2005, Persimmon was continuing to increase its turnover, outputs and profit. The costs of the acquisition totalled £664m, approximately 18% of Persimmon's market capitalisation at the time.

The challenge for Persimmon was for it to increase its Earnings per Share by at least 18% and extract the full 40% capacity potential. As the table below shows, 2006 proved a very successful year for Persimmon's shareholders, even if the full growth potential was not totally achieved.

Persimmon plc Key trading data	31/12/2003 12 months	31/12/2004 12 months	31/12/2005 12 months	31/12/2006 12 months
Sales (£m)	1,883.0	2,131.3	2,285.7	3,141.9
Operating Profit (£m)	381.7	498.0	527.8	652.7
Profit before tax (£m)	352.5	468.0	495.4	582.1
Earnings per Share (pence)	86.8	113.5	118.4	137.5
Completions (number)	12,163	12,360	12,636	16,701
Persimmon plc Key trading data	Year on Year change %		Year on Year change %	Year on Year change %
Sales	13.2%		7.2%	37.5%
Operating Profit	30.5%		6.0%	23.7%
Profit before tax	32.8%		5.9%	17.5%
Earnings per Share	30.8%		4.3%	16.1%
Completions	1.6%		2.2%	32.2%

Source: Ernst & Young

A further example of the effects of growth by acquisition can be seen in Barratt Developments' September 2007 announcement of its annual results to June 2007 – the first since it acquired Wilson Bowden. At the time of the acquisition, the forecast synergy benefits amounted to £70m over a two year period, but these were later increased to £90m. As well as a substantial increase in land stocks, the further benefits, as described by one newspaper¹⁰ were: "Barratt has shed 400 jobs as planned from the merger of the two firms, chiefly by removing duplicate head office roles. The new enlarged group has also benefited from better deals on larger bulk-buys of building materials."

High growth strategies do, however, carry risks:

- Organic growth can expose the company to the risk of overpaying for land, running down existing land stocks, building up an expensive overhead or of increasing borrowing to the point at which the company is highly vulnerable to a downturn in the market;
- Acquisitions provide a means of rapid corporate growth, but overpayment can permanently dilute a company's returns, especially if the synergies of acquisition are overestimated. Acquisition also brings with it the hidden liabilities of the acquired company and despite due diligence, unpleasant surprises on large scale-buildings defects and unreported cost increases on major projects, are common.

¹⁰ *The Times* (Thursday, 27 September 2007)

RECOMMENDATIONS



Chapter 3: Business Models

1. Government should take an early opportunity to discuss with the development and property management industries what are the business and regulatory risks which might otherwise inhibit the free development of long-term private investment in affordable housing provision and management.
2. Government and its agencies disposing of land should consider the opportunity for self-build and should aim to offer a proportion of the land in the form of small plots, where possible with ready access to services and other infrastructure, for sale to self-builders. Local planning authorities drawing up their strategic housing land assessments under PPS3 should similarly aim to identify a supply of small plots suitable for self-build and other smaller housebuilders.

Chapter 4: Land Supply

3. CLG, working with the National Housing and Planning Advice Unit, representatives of local government and housebuilders, should build on current work to assess current information gathering arrangements and develop standard definitions and methodologies to improve the quality of house building data.
4. The Government should explore with the appropriate parties, which will include the investment community at large and the UK Accounting Standards Board, ways in which the reporting of land holdings in all companies' financial statements can be made more transparent.
5. The Government should **not** take measures to force more rapid build out of land banks with implementable planning consents.
6. The Town and Country Planning Act 1990 should be amended so that a planning permission is not considered to have been exercised until a substantial start on site has been made.
7. The Guidance accompanying PPS3 should be amended to stipulate that at least 10% of the 5-year supply of housing land should consist of small sites (for 10-15 units or smaller), and to give more prominence to the requirement to consider planning applications for windfall sites on their own merits, even where they are additional to the planned 5-year supply.

8. The Government should commission research, possibly in partnership with an industry body such as the Housing Forum, into the marketing and other factors which constrain the optimum build-out rates on large sites.
9. In disposing of large sites for housing development, the Government and its agencies should wherever possible either break up a proportion of each site into smaller parcels for separate disposal or stipulate as a condition of sale that the primary purchaser should do so.

Chapter 5: Viability and Potential

10. Government should review the advice on local planning authorities' flexibility for negotiating lower levels of developer contribution on marginal sites than set out in their plan, and should consider the scope for specifying clawback in the event that the housebuilder, thus freed of obligations, makes additional profits. CLG should work with the Homes and Communities Agency, local government and the development industry, either to develop a new standard methodology, or to adopt an existing methodology, as a basis for determining the level of mitigation.
11. All local authorities should review the scope for forming partnerships with one or more housebuilders, in order to ensure that the viability for development of previously developed land in their areas is fully recognised and exploited.
12. The Government's guidance in relation to PPS3 and Sustainable Community Strategies should be amended so as strongly to encourage local authorities to consider the scope for drawing new private investment for housing and other development into areas where property values are currently low.
13. Local planning authorities should be ready to offer specific commitments to service delivery, consistent with their LAAs, to potential investors in housing regeneration schemes; and should seek the agreement of other LSP members for their preferred housebuilding partners to join the LSP.
14. Where the Homes and Communities Agency takes an equity stake in a project, it should have full discretion over when it will best serve the Agency's wider objectives to dispose of that stake. Each case should be weighed on its merits and there should be no presumption in favour of early disposal.
15. The remit of the Homes and Communities Agency should include providing advice and expertise to local authorities, as required, to review local property markets and identify redevelopment opportunities which have the potential to draw in private investment. Its remit should also extend to providing expert advice as required on how to design, set up and run a suitable Local Delivery Vehicle.
16. The Government should commission an early review of relevant law and practice, in particular relating to covenants and leasehold, to ensure that it does not unnecessarily impede the delivery of regeneration and sustainability objectives to the community.
17. The Homes and Communities Agency should commission further work with the housebuilders and commercial developers, property management companies and local

authorities, on how community management on new housing developments can act as a stimulus for regeneration of wider areas and communities.

Chapter 6: Infrastructure and Planning Gain

18. The Government should consider how an attribution model for contributions to infrastructure provision from planning gain could fit within the Planning Charge.

Chapter 7: Quality and Regulation

19. Government should announce that after two years it will cease dealings with any housebuilding firm which fails to achieve a predetermined standard of customer satisfaction. This policy should extend to all public agencies, in particular the Homes and Communities Agency. Special arrangements should be made to ensure that new entrants to housebuilding and small firms are not disadvantaged.
20. The annual customer satisfaction survey of house buyers should be commissioned and funded by Government and run independently of any industry interest.
21. There should be a single design review process for housebuilding, arranged and available nationwide. This process should allow for type approval of standardised designs, including those using MMC techniques. There should be a presumption that any development proposal which passed the assessment process would not be subject to any further objections or conditions in relation to quality imposed by the planning authority.
22. The Government's planned "light-touch" review should consider CABE's possible role in relation to the housebuilding design review process.
23. A new strong regime should be created to provide assurance of high standards in the construction of new homes, incorporating compliance with planning conditions, building regulations and warranty in a single scheme. The scheme should be overseen by a national body responsible for consistency of inspection standards and approach, including sanctions.
24. The Government should take an early opportunity to loosen the statute restricting the role of local authority building control officers, to allow them to check all aspects of the quality of new homes.

Chapter 8: Skills

25. Local authorities should invest in multi-disciplinary strategic teams in their planning departments, who are able to enter into a productive dialogue with developers prior to the submission of schemes for formal planning approval. These teams should be supplemented by temporary secondments to and from the private sector, as part of a structured training programme.
26. When central and local government and their agencies, in particular the Homes and Communities Agency, dispose of land for housebuilding, the terms of sale should include

stipulations on training by main and sub-contractors. Compliance should be monitored and should be an explicit consideration in future disposals.

27. The drive by Government, announced in the Housing Green Paper, to ensure that the skills are available to meet future demand should also aim to simplify the current patchwork of initiatives, so as to focus effort and ensure that the Government's target of 240,000 new homes a year is reflected in them. This should also result in clear and comprehensive signposting of all organisations and initiatives so that they are easily accessible to industry.
28. ConstructionSkills, working with the other relevant SSCs, should be asked to build on their existing work with the industry to prepare a specific sub sector skills agreement for housebuilding, to be reviewed and published on an annual basis, consistent with the national data for the whole of the construction industry.
29. ConstructionSkills, with relevant Government departments and the industry, should promote common definitions for skills and shortages on which all future research can be based, so as to increase its value to the industry and minimise apparently conflicting results.

Chapter 9: Zero Carbon

30. The Government should continue to give a strong and sustained message that it is committed to regulate to achieve its target for zero carbon homes by 2016, and must not show any sign of wavering.
31. The Government should set out, as soon as possible and no later than the end of 2008, exactly how zero carbon performance is to be defined, and how far the use of renewable energy is to be taken into account into the assessment of performance. The assessment rules should differentiate between local and remote renewable generation, and should allow for the different circumstances of different sites.
32. The Government should update SAP to reflect the definition of zero carbon, and to incorporate other factors, as soon as possible and by the end of 2009 at the latest. Scope needs to be allowed for future technological development, but the core elements of SAP should not then be subject to further revision for at least 10 years.
33. CLG, with the housebuilding industry and representatives of building control, undertake work to ensure that regulatory requirements for zero carbon are verifiable in the course of building control inspections. The technical aspects of verification will need to be considered in parallel with the development of SAP.
34. Government and the housebuilding, construction products and energy supply industries should jointly commission a delivery unit to monitor, co-ordinate and guide the zero carbon programme.
35. The existing English Partnerships Carbon Challenge, the Government's Eco Towns programme and other initiatives focused on Code level 3, 4 and 6 homes should be brought into an exemplar homes programme, and where appropriate reshaped, so as to make the most effective contribution to the learning that is needed.

36. Local authorities should be encouraged to participate in a national exemplars programme. An early opportunity should be taken, either in the forthcoming Planning Policy Statement on Climate Change or separately, to stipulate that any planning conditions in relation to the energy efficiency of new homes or the provision of renewable energy as part of a development should support delivery of the national zero carbon target; and that the local planning authority should have strong regard to advice from the zero carbon delivery body on how this can best be achieved.

Chapter 10: Water and Sustainability

37. Defra and CLG, working with the housebuilding, water supply and construction products industries, should develop a programme of small and larger scale field testing of water recycling technologies and building designs.

THE HISTORICAL BACKGROUND



The purpose of this Annex is to set the historical scene, to describe the essential characteristics of housebuilding industry and to show how its corporate structure has emerged into its present form.

One aspect of the way the industry is regarded is firmly rooted in historical terminology. Private housebuilding is almost invariably described in rather pejorative terms, as being 'speculative'. Why this term should be applied to housebuilding, but not to other industries is unclear; but it can give rise to a somewhat lopsided view of how housebuilders function. Comments such as 'Housebuilding firms have two ways of making a profit. They can make profit directly on their building activities, or indirectly through land-development profit or speculation',² are not untypical.

The use of the term 'speculative' leads to the most common error in the description of the economic role of private housebuilders: that their wholesaling function is almost invariably ignored. Wholesaling and land improvement are the cornerstones of the private housebuilder's activity. Individuals cannot obtain single building plots in the middle of green fields: land needs to be bought in bulk, roads constructed, drains laid and utilities supplied until the point where individual serviced plots are available; this applies even more strongly in urban regeneration schemes. The wholesaling function requires the exercise of a diverse range of skills; it also needs a high level of capital commitment. The land holdings necessary to function as a wholesaler may or may not give rise to unanticipated stock gains or losses, but speculation on potential gains is not the primary reason for the land banks of the contemporary housebuilder.

From Local to National Builder

Regular observers of the housebuilding market will be familiar with the increasing market share taken by the largest housebuilders, which peaked around the mid-40 per cent level in 2002.³ The growth has by no means been inexorable: it was not until 2006

¹ This Annex was commissioned by the Review from Fred Wellings. It is based on some of his existing published work, where sources and statistics can be identified, and the arguments pursued in more detail: Wellings, 'The Rise of the National Housebuilder A History of British Housebuilders through the Twentieth Century', PhD thesis, University of Liverpool, 2005; *British Housebuilders: History and Analysis*, Oxford 2006; *Private Housebuilding Annual* 2006. Beckenham 2006.

² Gibb, et al., 'Housebuilding in Recession', *Environment and Planning A*, Vol.29 p 1745.

³ As some housebuilders include social housing output in their unit completion numbers without it being separately identified, a precise market share statistic is misleading. The recent mergers may mean a new peak market share in 2007.

that a housebuilder (Persimmon) matched the record unit volumes achieved in 1983 by Barratt Developments. And paradoxically, as the companies have increased in corporate size, so has the size of site tended to become smaller. One of the features of the inter-war period was that housebuilders may have had few sites, but they could have been taking hundreds of units a year from each site.

Although commentary on the construction and sale of houses can be taken as far back in history as one likes, the private estate developer as we know it today is really the product of the inter-war period. Before the First World War, some 90 per cent of the housing stock was rented; housebuilding was extremely localised with builders working on only one or two sites at a time. Numbers are hard to come by but even what were described as 'the really big builders' at the end of the nineteenth century built no more than 300-400 houses a year.

The first stimulus to the modern housebuilding industry came in the early 1920s from Government legislation, particularly the 1923 Housing Act, which provided cash subsidies to promote the construction of small working-class houses: however, subsequent reductions in subsidies meant that the private output of subsidised housing all but ceased by 1930. In its place came the boom in unsubsidised 'speculative' housing that reached its peak in the mid 1930s when annual private housing completions as high as 250,000 were consistently achieved. The driving forces have been well documented, and included demographic trends, rising real incomes for those in employment, lower building costs, substantial reductions in required deposits and falling interest rates. This was the era that created the modern private housebuilder. To place the industry's achievements in perspective, no post-war year ever saw annual private housing completions as high as in the mid 1930s; indeed, by the end of the century, the private housebuilding industry was fortunate to reach half that level.

In this boom period, the private housebuilder flourished; many started with little or no experience of either the construction or the development process. The housebuilders of the 1930s were almost entirely local businesses, although not always operating from their original base – the pull of London brought Costain, Henry Boot, John Laing and Taylor Woodrow down from the North. With rare exceptions, there is little evidence that firms spread their estate development business much beyond the immediate reaches of their head office. When they did move out of their home area the 'foreign' locations did not look to be the result of a cohesive expansion strategy in the way in which the current generation of national housebuilders established their regional subsidiaries.

There were about ten housebuilders that achieved an annual output of 1,000 units at some point in the 1930s. Ideal Homesteads stood out with sales consistently over 5,000 units a year in the middle of the decade and another couple of firms had annual output over 2,000 units. In total, the top ten in the industry were building of the order of 16-18,000 a year at the height of the inter-war housebuilding boom; however, the size of the total private housing market meant that they had a share of perhaps no more than six to seven per cent. The period was also notable in financial terms in that it saw the first systematic use of the stock market to raise capital for the industry – or its proprietors. Seven of the companies were quoted on the London Stock Exchange:

although Henry Boot had floated as early as 1919, a flurry of activity between 1933 and 1935 saw the flotation of Costain, Davis Estates, Ideal Homesteads, Taylor Woodrow, Wimpey, and Morrell Estates – the latter being distinguished as the first quoted housebuilder to fail.⁴

The outbreak of World War II in 1939 led to profound changes in the corporate structure of the industry, the effects of which could still be seen almost half a century later. The war itself led to the complete cessation of housebuilding and the new wartime activities of the housebuilders ranged from bomb damage repair to major civil engineering: it transformed some housebuilders into major contractors; others simply vanished. War was followed by a period of building controls, almost absolute until 1951 and then progressively lifted until 1954. Thus, for a period of some 15 years, between the outbreak of war in September 1939 to the final removal of building controls in October 1954, the private housebuilding industry was severely constrained, giving further impetus to corporate diversification away from private housebuilding as firms developed their construction operations.

The start of the post-war boom in private housing began in the early 1950s. In 1951, output had hit a post-war low of around 23,000 units; by 1954 it had recovered to 93,000, and by the second half of the 1960s consistently exceeded 200,000 units a year. By the beginning of the 1960s, the top ten housebuilders were producing some 14–16,000 houses a year, not far short of the level in the late 1930s and, at around eight to nine per cent, a higher share of the market. However, with the exception of Wimpey, which stood head and shoulders above its competitors, the larger pre-war housebuilders had not been overly successful in restoring their earlier volumes; a newer generation of housebuilders was emerging. By the end of the post-war boom, the early 1970s, there were some half dozen companies building more than 2,000 houses a year and as many as 26 building at least 1,000 a year; the top ten were responsible for 32–33,000 houses a year, and their market share had risen to around 17–18%. Perhaps of more interest as an indicator of corporate change, of the top ten housebuilders in the early 1970s, only one (Wimpey) had been of any significance before the War – five of the six largest firms were post-war creations – Northern Developments, Whelmar, Bovis, Barratt and Broseley.

It was in the 1960s and early 1970s that we saw the development of a number of semi-national housebuilders to go with the one undisputed national. Before the war, there was no doubting that housebuilders were almost entirely localised concerns, with no more than a handful building sporadically outside their home area. In contrast, by the end of the post-war boom Wimpey was operating nationally through a regional structure; on a smaller scale, Bovis Homes also claimed a national organisation. More common was the medium-sized firm that covered a significant area of the country – Northern Developments and Barratt, for instance, building across the north of England. By 1973, the regional housebuilder had arrived, helped in part by stock exchange financed acquisitions.

⁴ This excludes companies with a quotation before World War II that later became housebuilders, e.g. Bovis and Cala.

From the late 1960s through to 1973, private housebuilding volumes remained on a plateau but house price inflation accelerated to levels never before seen. *Competition and Credit Control* came into operation in September 1971 and by the end of the year limits on bank lending had been removed; building society new lending doubled between the beginning of 1971 and the end of 1972. House prices more than doubled between the beginning of 1971 and the end of 1973 and the ownership of development land provided a period of exceptional profitability to conclude a two-decade bull market for housebuilders. Some 70 individual firms took advantage of this to float their businesses on the Stock Exchange, only a handful of which remain today.

By 1973, many developers had known nothing but rising house prices and incorrectly assumed their continuance. It is difficult to know where to start in describing the severity of the 1973-74 crash. The FT Index fell 55 per cent in 1974; bank rates rose to 13.5%; the secondary banks that provided much of the housebuilders' finance were collapsing like ninepins. Closer to home, housing starts halved in 1974 and land prices fell sharply. With little support from the banking system, large and small housebuilders alike failed and others retrenched or withdrew from the market as the 1970s progressed. By the end of what had been an unforgiving decade, the number of firms building over 1,000 units a year had halved; however, the growth of Barratt to a size where it rivalled Wimpey meant that the volumes of the top ten actually rose slightly and, at 28 per cent, they had a significantly higher share of the much-reduced market.

The 1980s witnessed substantial volume growth in private housing, once again culminating in the house price inflation that had been all too familiar some 15 years earlier. Although the market share of the top ten had not changed from the beginning of the decade, around 30 housebuilders were now achieving 1,000 units a year. More significant as an indicator of the increasing size of the British housebuilder, there were 14 firms building more than 2,000 units a year compared with only six at the top of the previous boom; and five building more than 5,000 units compared with only one. If the late 1960s was the era of the regional housebuilder, by now it could be said that the age of the national housebuilder had arrived. Wimpey's national organisation had been followed in the 1970s by Barratt and in the 1980s by Tarmac's McLean, which actually became the country's largest housebuilder in 1987. Other housebuilders to have achieved a national structure were Beazer, Ideal Homes (then part of Trafalgar House) and the specialist McCarthy & Stone; behind them were another six to eight companies that could be described as semi-national.

The lessons that should have emerged from the 1974 collapse did not appear to have been widely learned by the housebuilders at the top of the next housing boom; apart from their trading losses, an estimated £2.5 billion was written off the value of the industry's land holdings in the early 1990s. Corporate failures in the early 1990s were as widespread as previously but the banks, at least, had learned from their past experience and were much more supportive of their customers. Of the 30 or so housebuilders with outputs of 1,000 units or more at the end of the 1980s, none went into receivership. Instead, the departures from the industry were managed and, by the end of the 1990s, half of those housing businesses had been sold or run down. Today only nine exist as continuing entities although another four have survived under different ownership.

Concentration of market share within the top ten steadily increased during the 1990s, rising to over 40 per cent at the start of the current decade. However, the number of housebuilders building over 1,000, 2,000 and even 5,000 units a year changed little; what did change was that there were consistently three very large housebuilders with outputs over 10,000 a year and the mergers seen in this last year means that two of those housebuilders will have outputs of around 20,000 a year.

The composition of the leading firms has changed considerably over the decades. As many as 39 different housebuilders have featured in the top ten since the 1930s, but only Wimpey did so on a consistent basis. The pace of change in the industry can be surprisingly quick – only two housebuilders from the top ten immediately before the 1990 crash still existed in the same form at the start of 2006.

The Focused Housebuilder

Although it is the increase in the concentration of output by the leading housebuilders and their changing identity that attract comment, there has been one other significant change in the way in which the industry is structured. As a generalisation, the larger housebuilders are now focused: they do little, if anything, other than housing; neither are they owned by non-housing organisations. Of the top 20 housebuilders in the *Private Housebuilding Annual 2006*, only one (Miller) promoted a genuinely mixed business with construction and commercial development side by side with private housebuilding. And to emphasise the concept of the cobbler sticking to his last, with two notable exceptions, the British housebuilders do not build abroad; and, after the sale of Fairclough Homes, there is only one foreign (Australian) housebuilder operating in any significant way in Britain.

The post-war path towards the focused housebuilder has been a lengthy one. Contractors have tried to be housebuilders; housebuilders have run contracting businesses; non-housebuilders have bought into the industry and, from time to time, housebuilders have bought into entirely unrelated businesses. Because of the physical similarity between speculative and contract building, this is a common area of overlap; housebuilders diversify into contracting and, more frequently, construction companies diversify into housebuilding. A financial argument was often advanced, in that the cash generated by construction advance payments could be invested in the capital-intensive development business. In practice, each thought that they could understand the other's business.

Some firms that were predominantly housebuilders at the start of the 1960s either entered or substantially increased their commitment to local authority contracting. The rapid rise in construction costs in the early 1970s inevitably impacted on fixed-price contracts but losses were also being made before the rate of inflation accelerated, suggesting poor estimating or cost control. Later on, the 1974 housing recession also encouraged some housebuilders to diversify into construction, although rarely with advantage. Whereas the housebuilders that moved into construction in the 1960s and early 1970s tended to be drawn from the ranks of the smaller- and medium-sized firms, when the reverse movement took place and construction companies moved into, or increased their investment in speculative housebuilding, they included more of the larger

companies. Contractors were attracted by the high returns on speculative housing, but just as the housebuilders had experienced difficulties with the disciplines of fixed-price contracting so in turn the contracting-dominated firms struggled to come to terms with the different management approaches required by the two disciplines.

Despite all the problems, the contractors continued to make significant housing acquisitions in the 1980s, particularly towards the end of the decade as the housing cycle was reaching its peak. At the same time, existing contractor-housebuilders were significantly increasing the scale of their private housing divisions: in 1989, six out of the top ten housebuilders and 12 out of the top 20 were part of groups which also contained large contracting businesses, and by the late 1980s private housebuilding was accounting for a significant part of their group profits.

In the event, the trading performance of the contractor-led housebuilders lagged behind that of the focused housebuilders, both in volumes and profitability. The mix of housebuilding and construction has now ended for almost all the large housebuilders and most of the medium-sized firms. Most of the companies operating a construction/housing business eventually chose to concentrate on one or the other. The construction companies, often those who had bought their way into housing in the 1980s, divested one business or the other. Amec (1999), BICC (1995), Birse (1995), Mowlem (1994), Amey (1998) and Tilbury Douglas (2000) all sold their housing as did longer-established companies like Costain (1993), Lovell (1999) and Tarmac (swapping its housing for Wimpey's construction and quarrying in 1996).

Just as there was a fashion for mixing housing development and contracting, so there was similar fashion for having housebuilding as part of a more widely-based conglomerate structure. By the onset of the 1974 recession, conglomerates or non-related owners were well represented in the top ten housebuilders: there were Salvesen's Whelmar (number 3), P&O's Bovis (4), GRE's Broseley (6) and London & Northern's Bardolin (9) totalling about 30% of the top ten output. By 1980, the top ten included Broseley (4), Bovis (5), Hawker's Comben (8), Trafalgar House's Ideal (9) and Whelmar (10) with output approaching 25% of the top ten output. The contemporary intellectual justification for diversification used by its proponents was 'a belief that the managers of the predator companies had greater ability and expertise than the incumbents',⁵ Moreover, to the extent that the predator philosophy was accepted by investors, and their shares accorded a high rating, earnings per share could be increased by the simple expedient of buying companies on lower ratings.

The 1990s saw a number of disposals of non-core housebuilding subsidiaries by their parents. By the end of the 1990s, there was no housebuilder building over 1,000 units that was owned by an unrelated owner. This does suggest that, as a business model, unrelated ownership of housebuilding companies had been found wanting. The failure of conglomerate parents to support their housebuilding subsidiaries in the early 1990s was a marked contrast to some of the specialist housebuilders who were able to persuade investors to provide new capital through rights issues in order to finance growth.

⁵ Toms, et.al. 'Corporate Governance, Strategy and Structure in British Business History, 1950-2000', *Business History*, Vol. 44, Jul 2002, p.98.

Large v Small Housebuilders

This Annex has described how the corporate structure of the housebuilding industry has changed, in particular the journey from small localised firms to large focused housebuilders with national coverage. The question why the industry needs large volume builders instead of smaller local or regional firms is a matter of some debate, but its relevance to this Review is whether the move to zero-carbon housing is better achieved by any particular size of firm.

The rationale for the mergers and acquisitions that are still being seen today has been popularly described as economies of scale, in the narrow sense of increasing the physical size of the individual operating unit. There might be some limited gains to be made by developing on large, rather than small, housing sites; but these sites do not have to be owned by large firms. Moreover, and perhaps uniquely, the housebuilders themselves have only limited control over the size of their operational units; even if there were economies of scale on site, there is little that management could do to obtain larger sites.

There are stronger reasons for suggesting that there are economies of scope, i.e. economies deriving from the size of the firm rather than the individual operating unit. The housebuilder with many sites may secure cost savings over a firm with few sites. The arguments for increased size in the key areas of land acquisition, marketing and purchasing do all exist, but they do not confer such a competitive advantage that smaller firms are unable to compete; they do not necessitate increased size. Where there are economies that accrue to the larger firm, they are offset by both organisational diseconomies and also by the dissipation of entrepreneurial flair, particularly in the land buying which lies at the heart of the development process. There is no consistent evidence to support the proposition that large companies earn superior rewards to small companies.

An alternative explanation of growth lies in financial motivation. The stock market provided an incentive for private companies to grow to a size where they can be floated on a multiple of profits. Once there, the ability to issue shares has allowed companies to finance a faster rate of growth and to make acquisitions. Furthermore, they are not allowed to stop growing: the pressure on quoted company managements is to produce profits growth and the only way that can be done in a static market is by increasing market share. In recent years the low cost of fixed interest financing has also facilitated the returns to be made from corporate acquisitions.

Whatever the arguments for and against the economics of large housebuilders, and they are hotly debated, the attention that focuses on them should not obscure the fact that more than half of the industry's output is delivered by small and medium firms – some of them very small indeed. The solutions that are proposed and adopted by this Review must be applicable to all levels of the industry.

AN OVERVIEW OF HOUSE PRICE MOVEMENTS AND THEIR DRIVERS



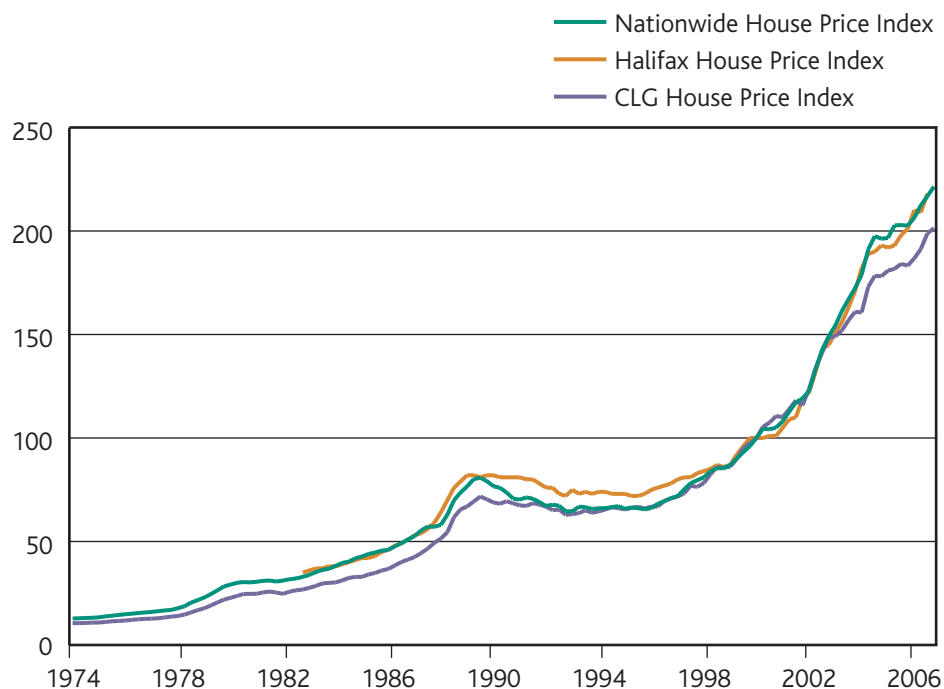
Commitment to quality. Regent's Square, Grapenhall.

The housing market has experienced a protracted boom over the past decade. This section seeks to set the current boom into an historical perspective. It also looks at the key economic drivers of house prices.¹

A history of house prices over the past 30 years

The three measures of house prices with the longest history are provided by Nationwide, Communities and Local Government, and Halifax. Despite being based on different samples and being compiled using slightly different statistical techniques, the alternative indices tell a very similar story, over long periods of time.

Figure 1: Alternative measures of national average house prices, 2000Q1 = 100

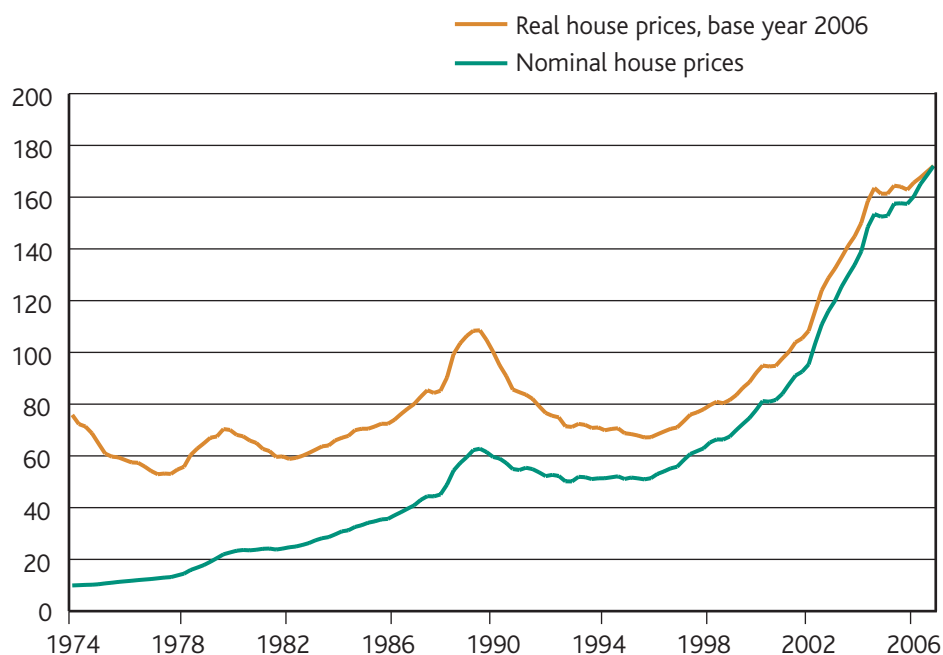


Given that, and in order to prevent confusion, the following analysis is based on a single measure of house prices, the Nationwide index.

¹ This Annex was commissioned by the Callcutt Review and written by Capital Economics.

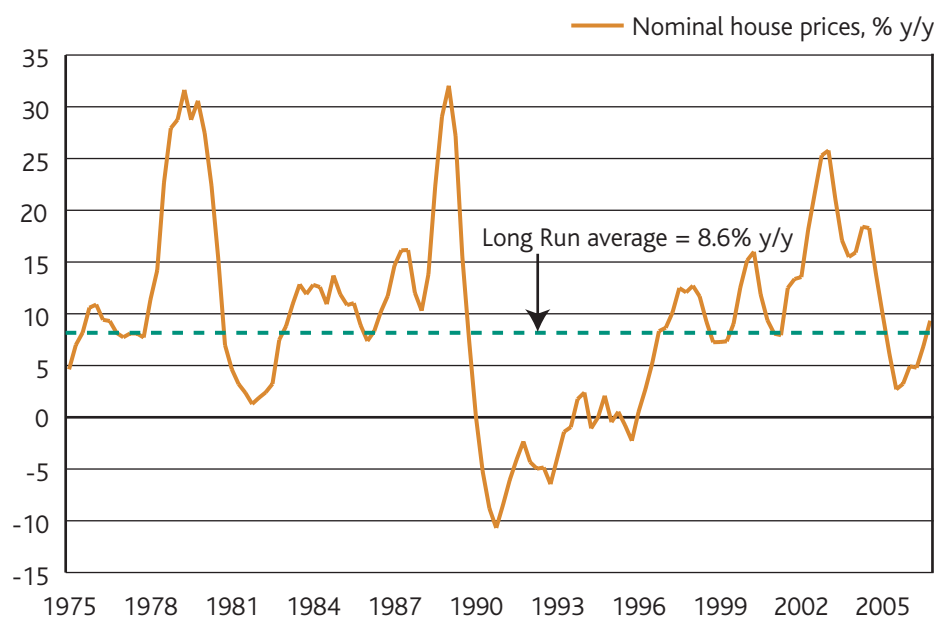
In 1974, the average house price was £9,930 but by the end of last year that figure had climbed to a little over £172,000. In total, therefore, average house prices have risen by 1,633% over the past thirty-three years (see Figure 2).

Figure 2: National average house prices, real and nominal, £000s



Much of that increase merely reflects the general rise in the level of prices in the economy over the same period, but Figure 2 also shows that, after adjusting for inflation, real average house prices have risen by considerably less. In constant 2006 prices, the average house increased in value from £75,840 in 1974, to £172,065 at the end of last year, a cumulative rise of 127%.

Another way of looking at this is to translate these house price rises into the average percentage increases seen in each quarter or each year. In nominal terms, since 1974 house prices have risen by an average of 2.2% per quarter, or 8.6% in year-on-year terms (see Figure 3).

Figure 3: Nominal average house prices

In real terms, over this same period, house prices have risen by an average of 0.6% per quarter, or 2.5% per year. (See Figure 4.)

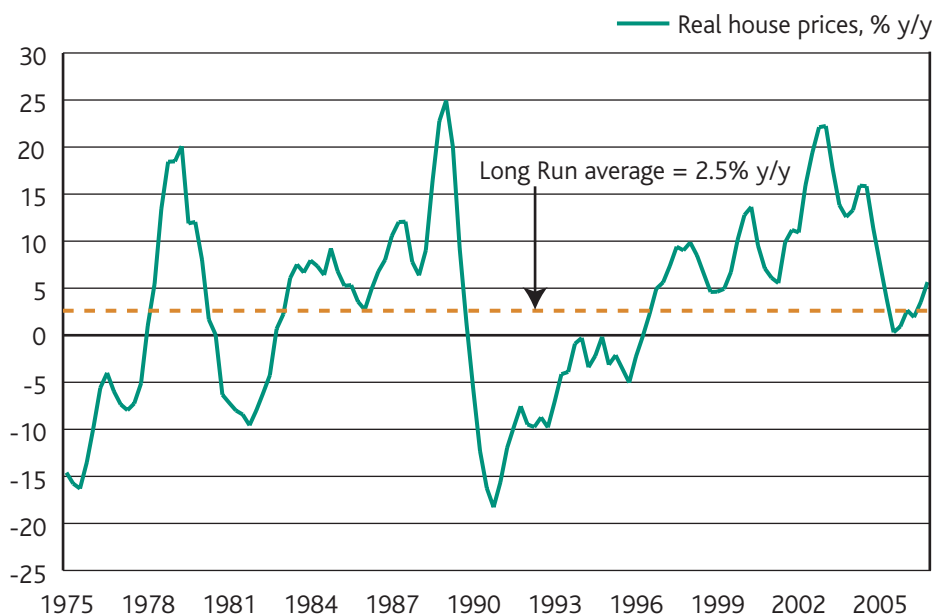
Figure 4: Real average house prices

Table 1 sets out a simple summary of nominal and real house price inflation over the period since 1974, as well as for successive ten-year periods and the period 1997 to 2006.

Table 1: Average rates of nominal and real house price inflation, 1974-2006 and selected sub-periods

	Nominal house prices				Real house prices			
	% q/q	% y/y	High	Low	% q/q	% y/y	High	Low
1974 – 1983	2.7	10.6	31.6	1.3	-0.4	-1.6	20.1	-13.5
1984 – 1993	1.4	5.4	32.0	-10.7	0.2	0.7	24.9	-18.3
1994 – 2003	2.4	9.6	25.8	-2.3	1.8	7.2	22.2	-5.0
2004 – 2006	1.8	7.1	18.4	2.7	1.1	4.5	15.9	0.3
1997 – 2006	2.8	11.3	25.8	2.7	2.2	8.8	22.2	0.3
1974 – 2006	2.2	8.6	32.0	-10.7	0.6	2.5	24.9	-18.3

As well as showing the average quarterly and annual growth rates, for each period in real and nominal terms, it also records successive highs and lows in the annual rate of house price inflation. Together with Figures 3 and 4, these data illustrate that long run average growth rates give little feel for the extent of the volatility in house price inflation over the past 35 years or so.

For example, despite incorporating the late 1980s' house price boom, the average rate of house price inflation between 1984 and 1993 was well down on its long run average and roughly half the rate seen in the previous ten-year period.

In nominal terms, the annual rate of house price inflation has twice exceeded 30%. The highest ever rate was recorded in 1989 Quarter 1, when prices rose by 32% in year-on-year terms. But this high was quickly followed by the early 1990s' housing slump. In the year to 1990 Quarter 4, average house prices fell by 10.7% in nominal terms, the weakest figure on record.

Table 1 also amply demonstrates the importance of looking at both real and nominal prices. For example, between 1974 and 1983 nominal house price growth averaged 2.7% per quarter. This was higher than any other ten-year period except 1997-2006. However inflation was so high at this time that, in real terms, house prices were actually falling.

Although falls in nominal house prices are rare, falls in real house prices are less so. Over each of the past three cycles, the annual rate of house price inflation has peaked at a rate of 20-25% in real terms. Yet in the mid-1970s and again in the early 1990s, these rapid rates of increase were followed by substantial declines. In both cases real prices fell at double digit year-on-year rates.

A final point worth drawing out relates to the current house price boom. Since 1997, house prices have increased at an average rate of 11.3% per annum in nominal terms, or 8.8% in real terms. Whether measured in real or nominal terms, the most recent decade has delivered house price growth that is significantly above average, and higher than any of the other ten-year periods presented here.

The drivers of house prices

It is sometimes asserted that there is no such thing as a national housing market; no two properties are ever identical and local housing market conditions can display very different trends even over relatively short geographical distances. Nevertheless, fundamentally, the housing market is driven by the health of the wider economy. At the aggregate level, economic indicators such as GDP growth, unemployment, consumer spending and household saving all display a fairly strong correlation with house price inflation.

A simple comparison of the growth in real house prices with the annual change in GDP, consumer spending and with claimant count unemployment makes this point (see Figures 5, 6 and 7). The performance of the housing market and the wider economy are clearly inter-related.

Figure 5: Real house prices and GDP

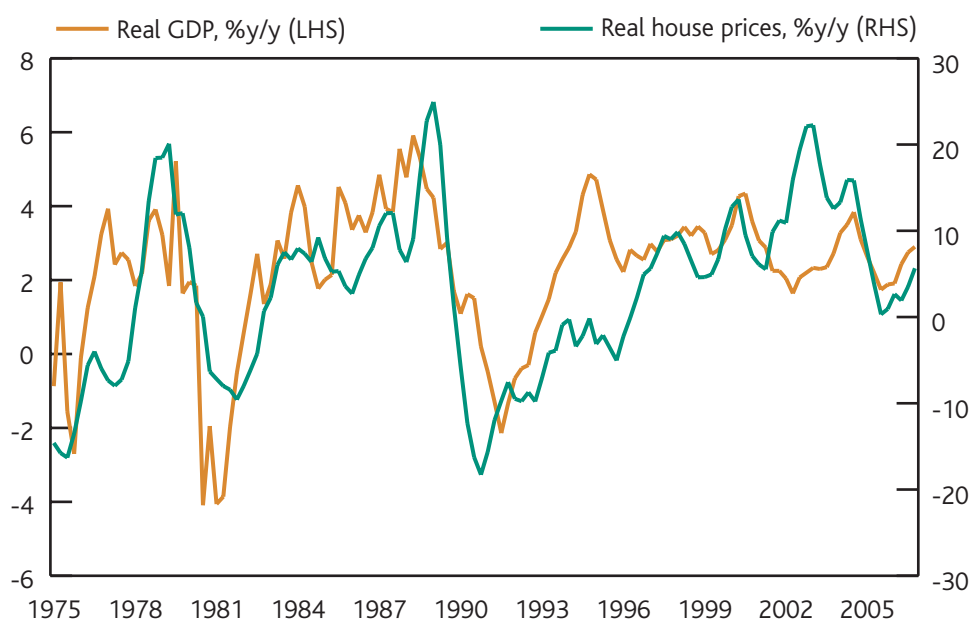
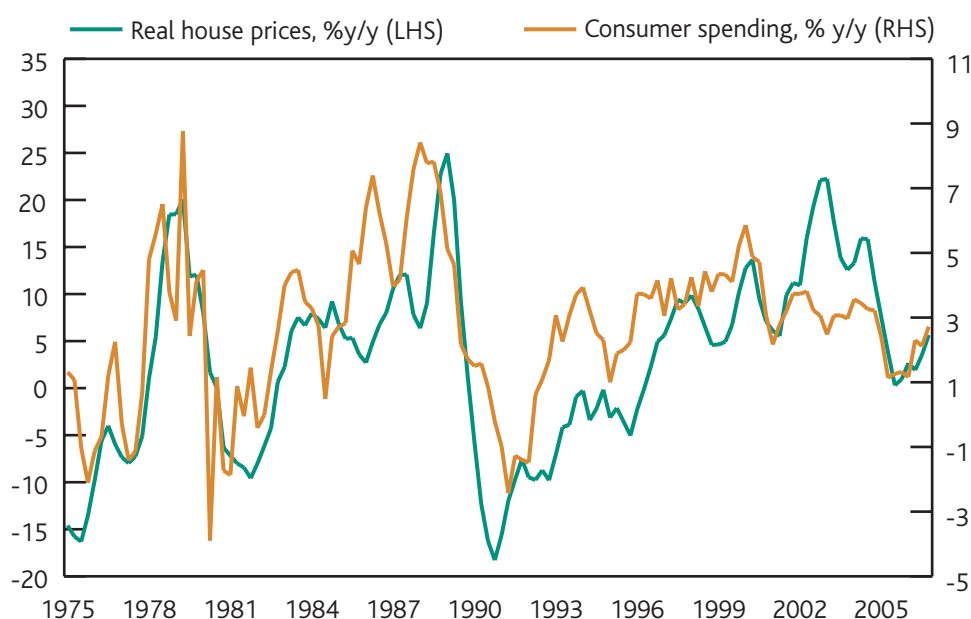
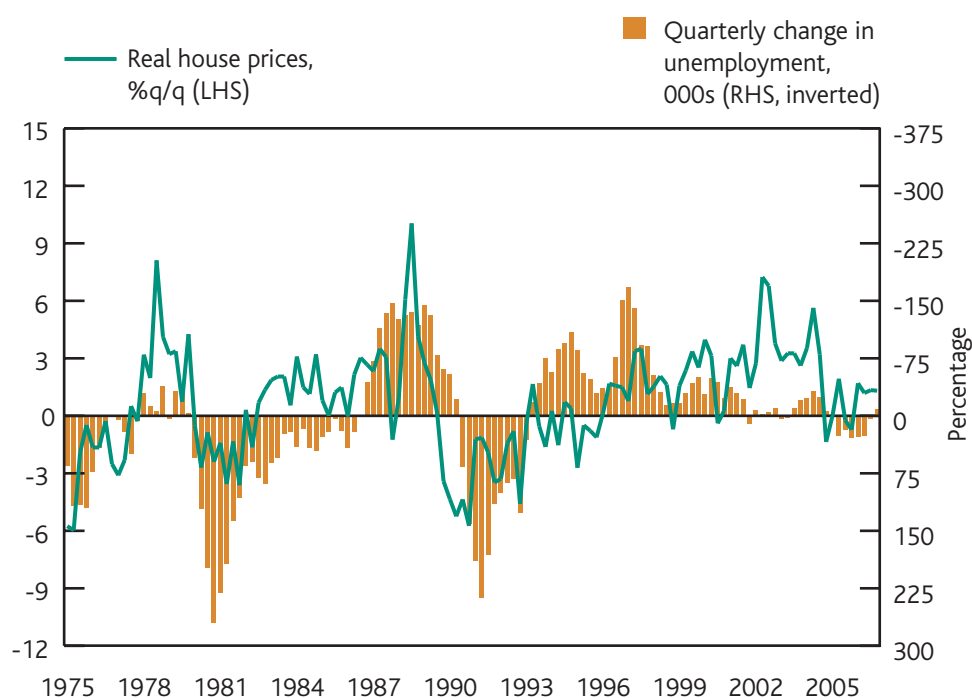


Figure 6: Real house prices and consumer spending**Figure 7: Unemployment and real house prices**

These charts also support the common perception that periods of sharply rising house prices are associated with periods of economic expansion and falling unemployment, while housing market downturns are associated with recession and higher unemployment.

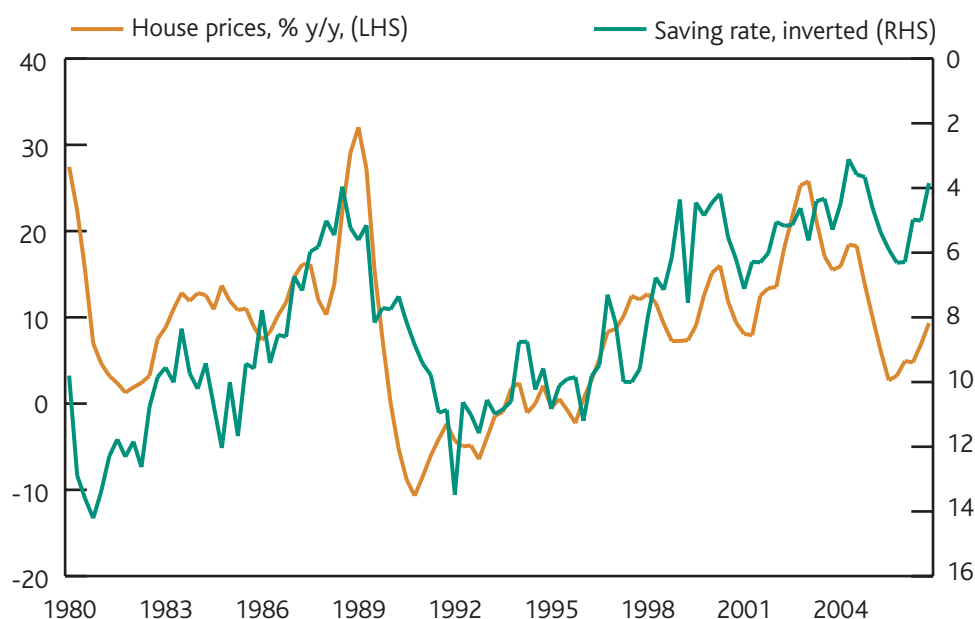
The causal relationship between economic growth and the housing market, however, is less clear. For example, Figure 5 shows that in the early 1980s, the onset of economic recession and the corresponding drop in consumer spending appeared to trigger the subsequent downturn in real house prices.

By contrast, in the early 1990s, real house prices plunged ahead of the rest of the economy. In this case, GDP and consumer spending growth did not turn negative, nor did unemployment rise, until at least three quarters later, suggesting that the housing market was at least partly responsible for the downturn.

One way in which a weaker (or stronger) housing market can impact the wider economy is via its effect on households' consumption and savings decisions. Houses have the unusual status of being both a 'consumption' and investment good. In other words, not only do they serve the purpose of providing shelter but for most households their house is their largest financial asset.

In view of that, it is perhaps not surprising that when house prices are rising rapidly households see less need to save using other forms of saving. Similarly, stable or falling house prices can be interpreted as a risk to household wealth, thus encouraging higher savings rates (see Figure 8).

Figure 8: House prices and household saving



Household income

Amongst economists there is a general consensus that four factors are by far and away the most important influences on house prices. These are:

- household income;
- interest rates;

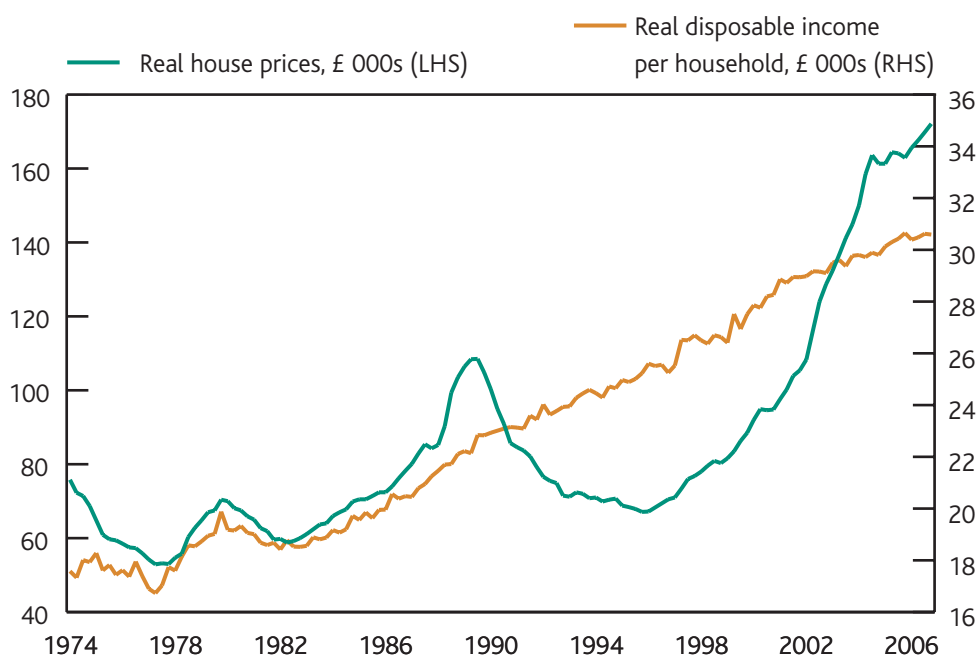
- the supply of housing;
- the demand for housing.

Over more recent years, the availability of mortgage credit has also been given increasing prominence in explanations of house price inflation.

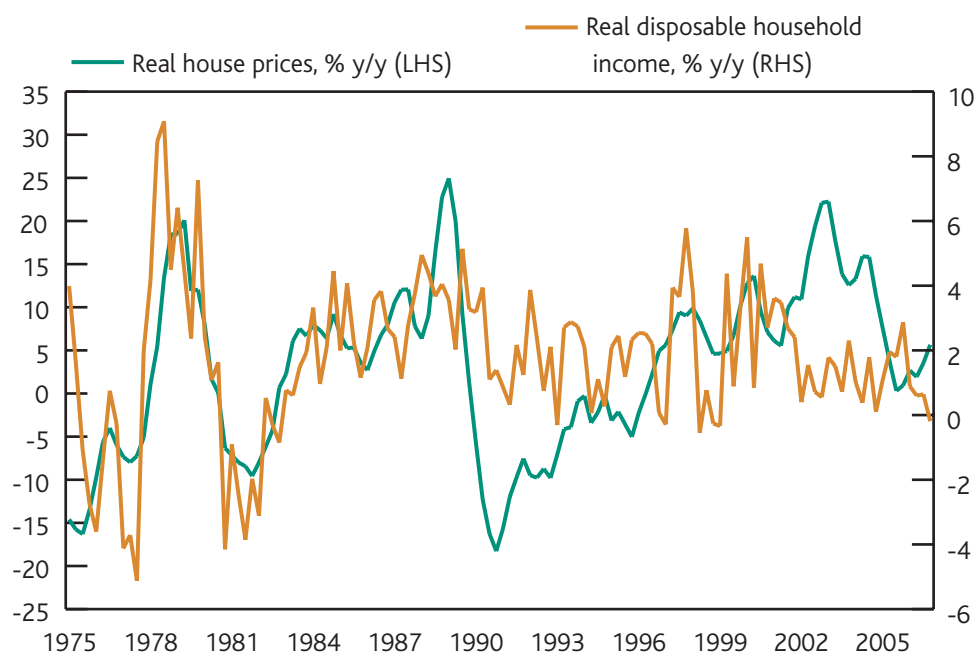
Of the factors listed above, however, disposable household income is widely regarded as being by far the most important. Given that disposable income encapsulates employment and average earnings growth, as well as changes in taxation, the importance of this variable is not surprising.

Indeed, over long periods of time, real household income acts as an anchor for real house prices (see Figure 9). That seems sensible, since income levels ultimately determine how much a household can borrow and thus afford to pay for a property.

Figure 9: Real house prices and real disposable income per household



As well as acting as a long run anchor for prices, variations in disposable income can explain a high proportion of the variation in house prices over the past 30 years or so, although there have been periods when disposable income growth and house price inflation have diverged (see Figure 10).

Figure 10: Real house prices and real disposable household income, % y/y

This suggests that, while it is an important driver of house prices in both the long and the short term, factors other than household income are also important.

Interest rates

One of those other factors is interest rates. Historically, economists have tended to emphasise real interest rates as being the key driver of house prices. However, the relationship between real interest rates and house price inflation is not particularly compelling (see Figure 11).

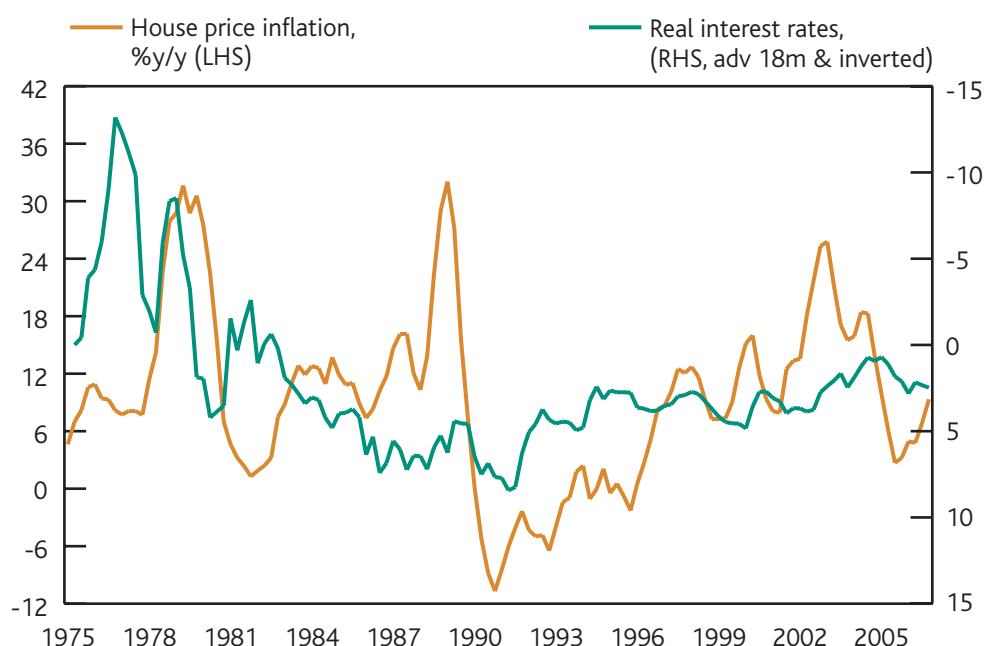
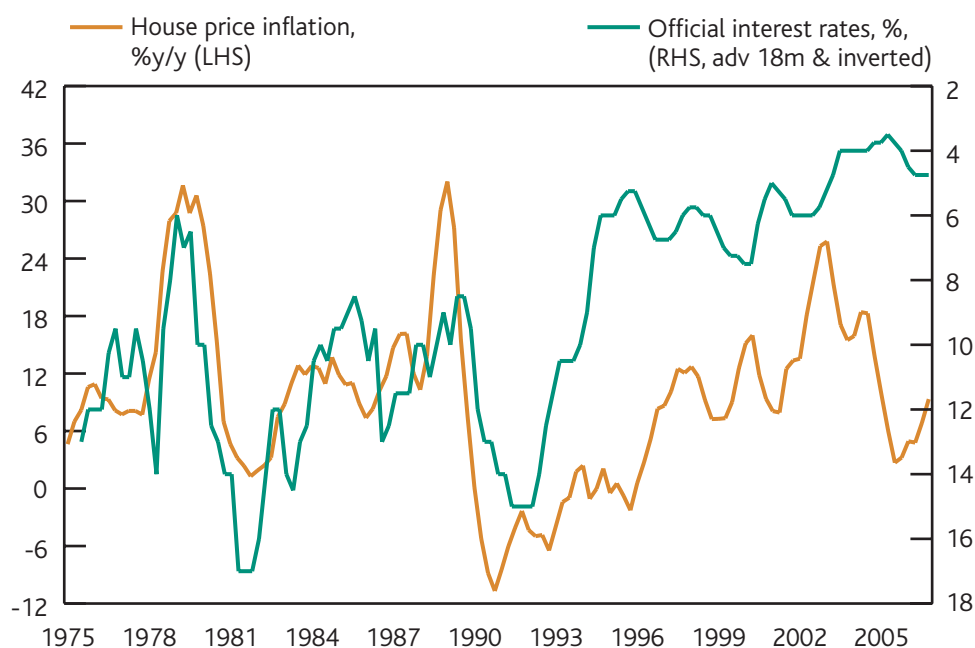
Figure 11: House prices and real official interest rates

Figure 12 shows the relationship between house price inflation and nominal interest rates. On balance, a comparison between the two charts suggests that nominal interest rates have been a better indicator of house prices in the past. Even so, the relationship between nominal official interest rates and house price inflation is not as strong as one might intuitively expect.

Figure 12: House prices and nominal official interest rates

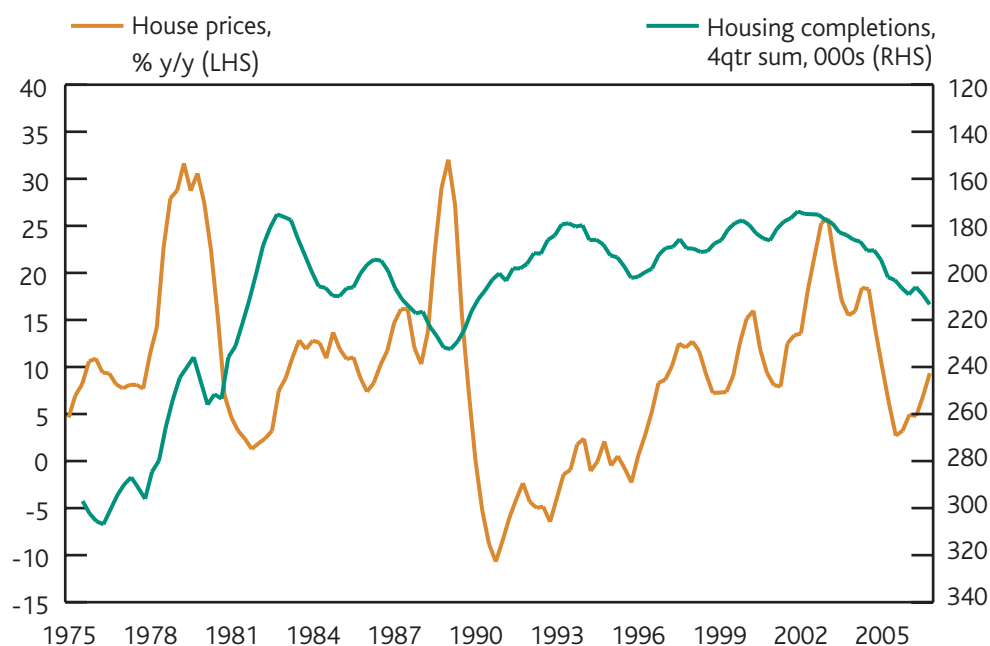
Between 1975 and 1990, changes in official interest rates were reflected in annual house price inflation with a lag of around 18 months. Although the shift to lower interest rates makes it harder to detect, over the past decade, a similar relationship can be found.

In the early 1990s, however, the relationship between house prices and interest rates broke down. After a period in which average house prices had risen to record levels, both in real terms and relative to income, substantial cuts in interest rates in the early 1990s did not help to stabilise falling house prices.

Supply and demand

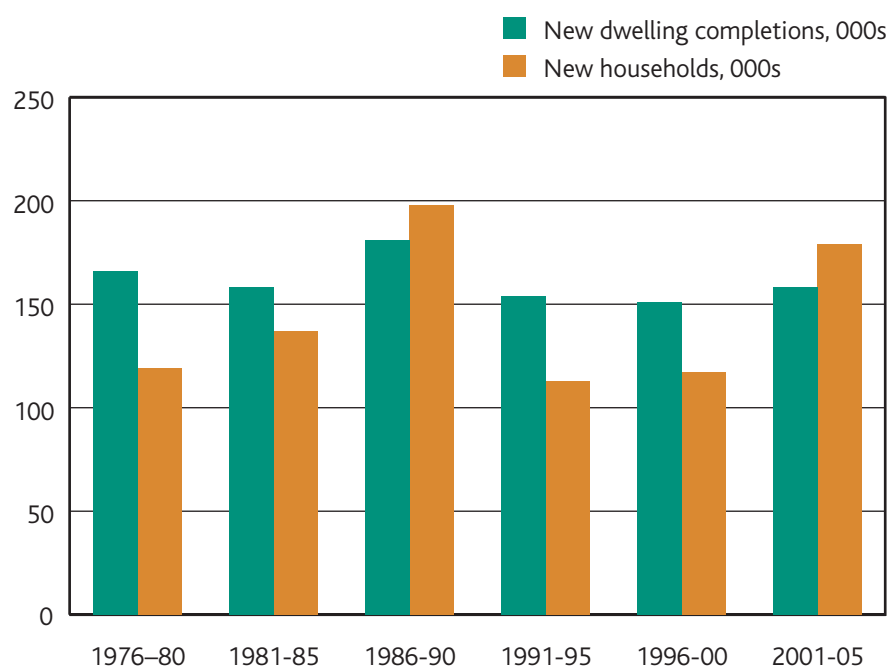
According to economic theory, where there is an imbalance between supply and demand, prices will adjust until either supply increases or demand is choked off. Over recent years, as the scale and duration of the house price boom has continued to defy all predictions, much has been made of the current relatively low levels of housing completions and its upward influence on house prices. Yet the relationship between new dwelling completions and house prices is loose to say the least (see Figure 13).

Figure 13: House prices and new dwelling completions in the United Kingdom



For example, the late 1980s house price boom took place against a background of rising supply. The decline in completions in the late 1990s also appears far too small to explain the pace of house price growth.

The real issue is not simply the number of new households or the number of new dwelling completions that will affect house prices, but the balance between the two. As Figure 14 shows, since 2001 the rate of household formation has outstripped the rate of new supply, as it did in the mid to late 1980s.

Figure 14: New dwelling completions and new household

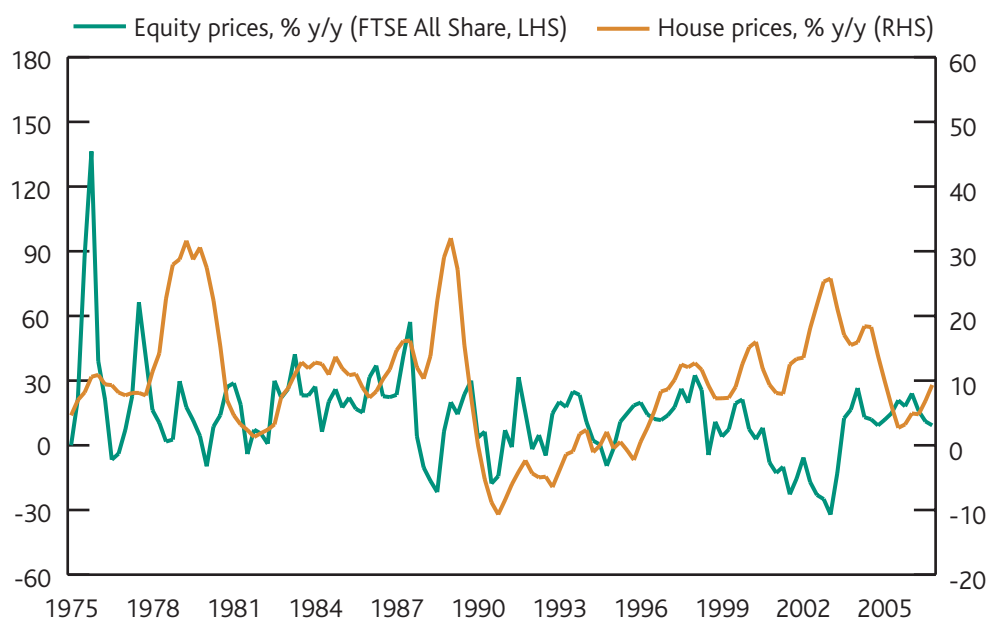
But the rise in house prices cannot be attributed solely to this factor, as supply and demand imbalances do not explain either the late 1970s house price boom or the first half of the present boom.

Nevertheless, supply and demand are important considerations; but changes in the aggregate supply and demand balance occur only slowly. Thus they are likely to affect medium- to long-run trends in house prices, but have little impact on house prices in the short run. Indeed, few economic models find a role for supply and demand factors in explaining short run moves in house prices.

Where the supply and demand argument is likely to be important in the short run is in its effect on expectations. If expectations of future rises in house price growth are widespread, they can become self-fulfilling, at least for a time. Indeed, a number of prominent commentators believe that the recent strength of house price inflation can only be fully rationalised if households believe that it is likely to be sustained for many years to come.

In principle, there should be some relationship between the stock market and house prices as households switch their portfolios between the two assets depending on their expected relative performance; indeed over long periods, house prices and equity prices have tended to move in line.

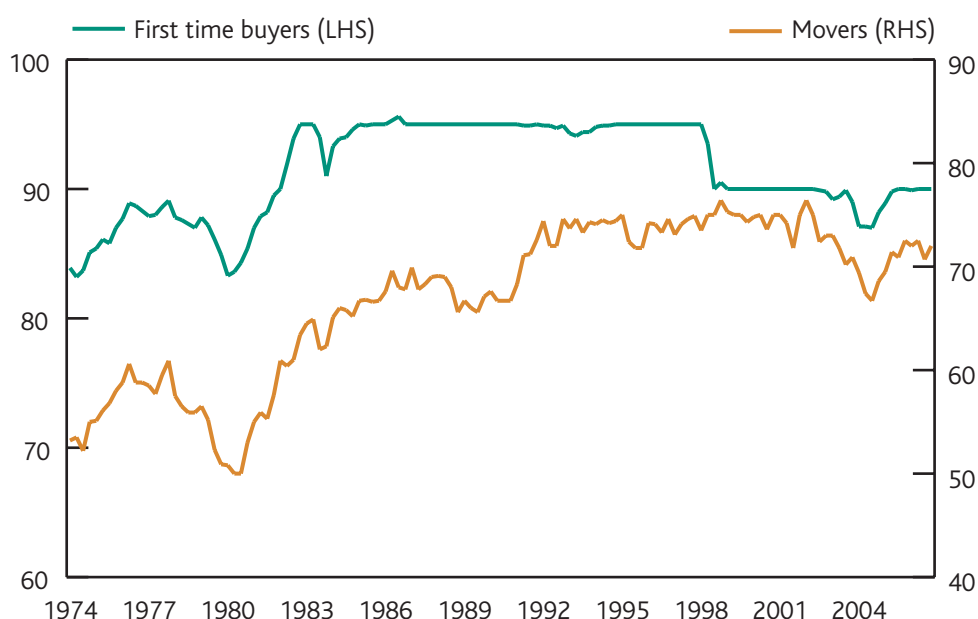
Over short periods, there is some evidence that house prices follow equity prices with a lag (see Figure 15).

Figure 15: Equity prices and house prices

In the late 1980s, for example, the house price downturn followed a major fall in the equity market; but the correlation between the two series is not particularly strong. It is likely, in any case, that such connection as there is between movements in these asset prices is mainly a shared reflection of the influence of economic factors, such as changes in inflation and interest rates.

Credit conditions

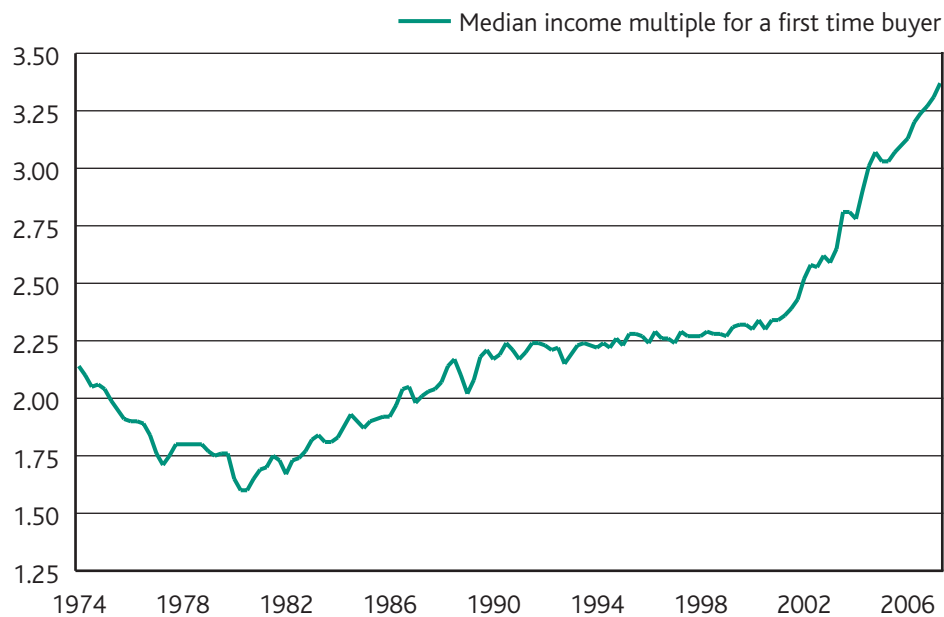
A final factor which is receiving increasing attention is the role that the relaxation of credit conditions may have played in boosting house prices over recent years. Figure 16 shows the median loan-to-value ratio of mortgages taken out by movers and first time buyers over the past 30 years or so.

Figure 16: Median loan-to-value ratios by type of buyer

What seems clear is that credit conditions have not been loosened via borrowers borrowing a higher proportion of the value of their home than in the past. If anything the opposite is true, at least compared to much of the 1980s and 1990s.

Whilst this may simply be a side-effect of the current house price boom rather than a lasting structural shift, rapid house price inflation has allowed households to build up equity, thus enabling them to reduce loan-to-value ratios when they move or remortgage.

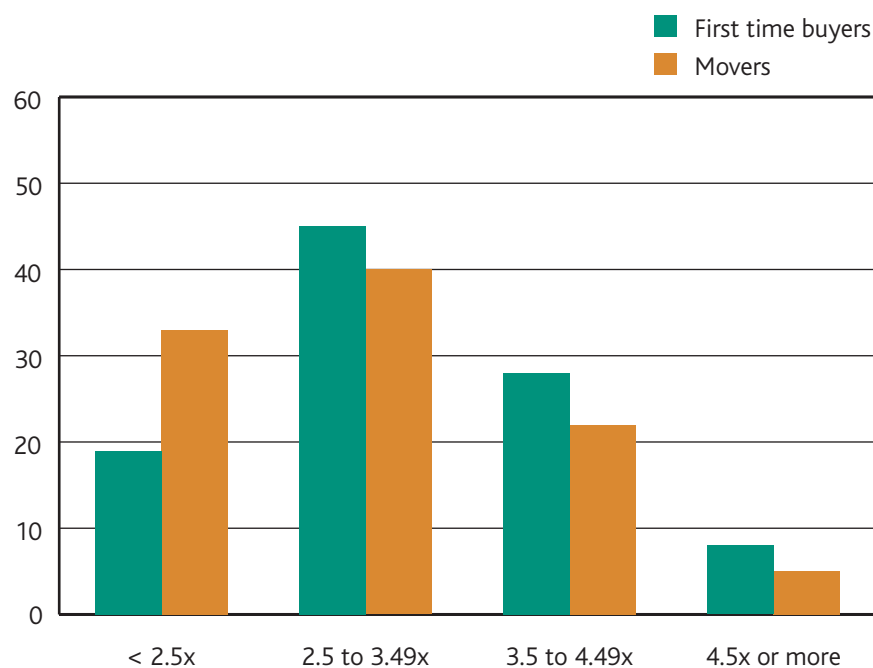
Instead, the area where credit conditions have been relaxed is in terms of the rise in loans relative to borrowers' incomes (see Figure 17).

Figure 17: Median mortgage advance relative to income for a first time buyer

Since 2001, the average size of loans taken by first time buyers has increase by a full multiple of the average borrower's income, rising from 2.3 times income to 3.3 times at the end of 2006.

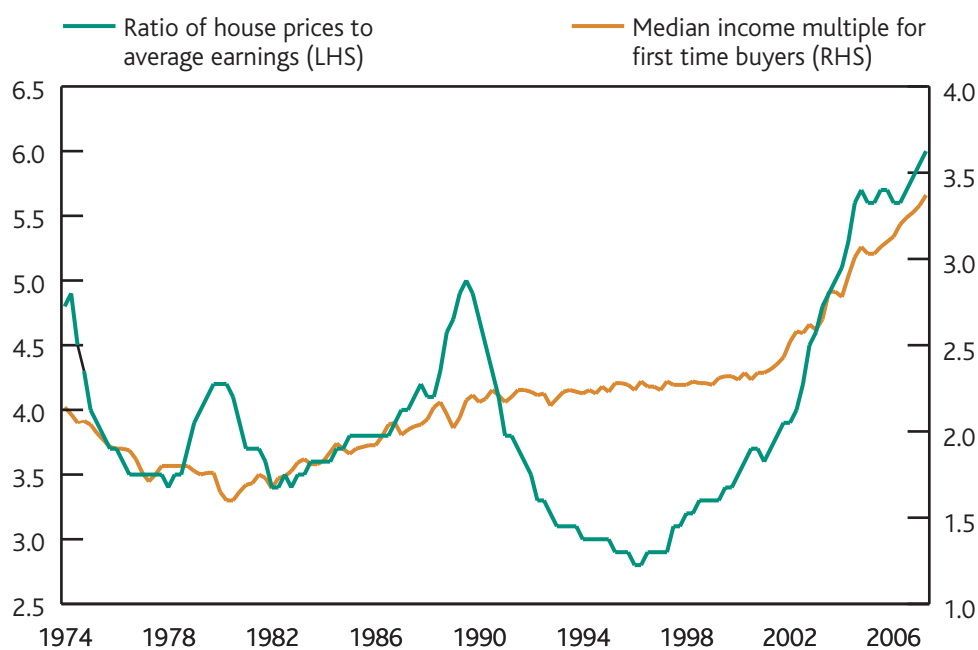
Data from the Financial Services Authority (FSA) show that over the past two years, roughly 40% of first time buyers have borrowed more than 3.5 times their income and around 30% of movers. Around 8% of first time buyers and 5% of movers have taken loans of at least 4.5 times income (see Figure 18).

Figure 18: Distribution of mortgage income multiples by type of buyer, 2005Q2 to 2007Q1



As Figure 19 shows, the sharp rise in income multiples coincides with the sharp rise in average house prices relative to average earnings.

Figure 19: First time buyer income multiple and the ratio of house prices to average earnings



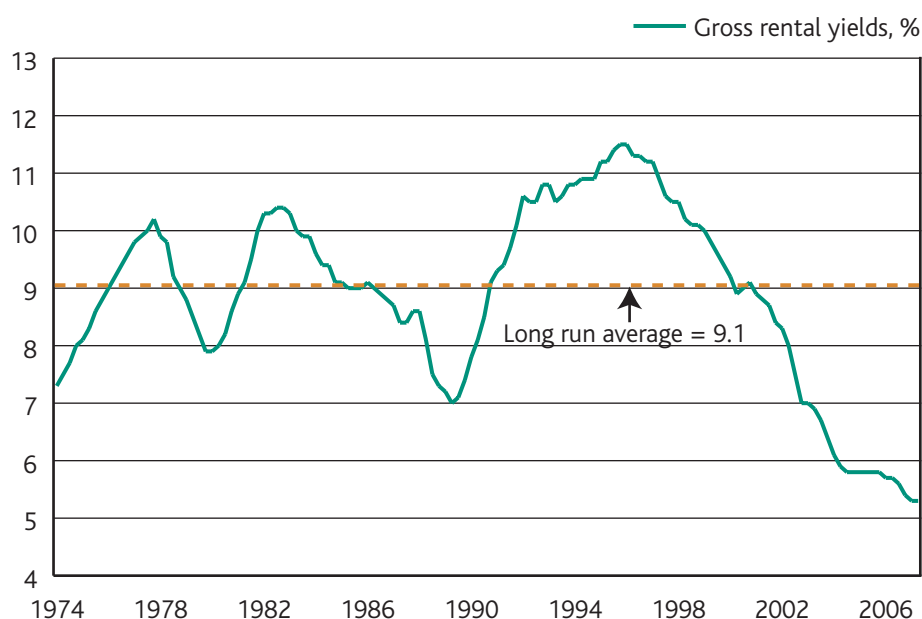
The willingness of both borrowers and lenders to contemplate loans that are much larger than were typical in the past, has clearly been an important factor in driving house prices to their current high levels.

Of course, some rise in borrowing relative to income may have been justified by the comparatively low interest rate environment that has prevailed in recent years. But the rise in multiples must now surely be approaching, if not have reached, its limit. Indeed, it is not out of the question that the rise in multiples may be partially reversed if interest rates are sustained at higher levels than have been typical over the past five or six years.

Outlook

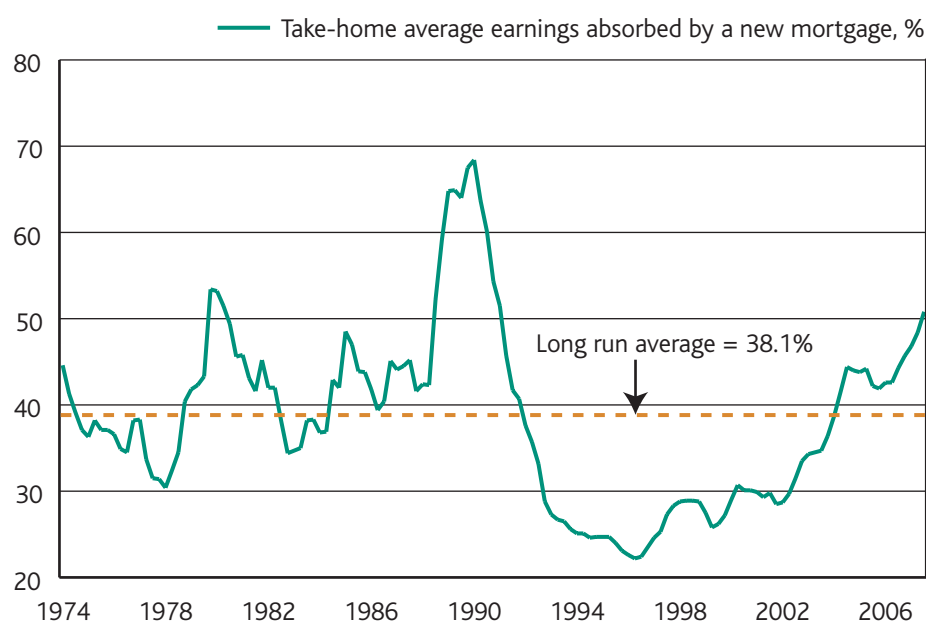
Most analytical tools show that in any historical context, house prices currently look expensive. That is certainly the message from the measures of real house prices presented in this analysis. It is also the message given by a long run analysis of the gross rental yields on residential property (see Figure 20).

Figure 20: Gross residential rental yields, %

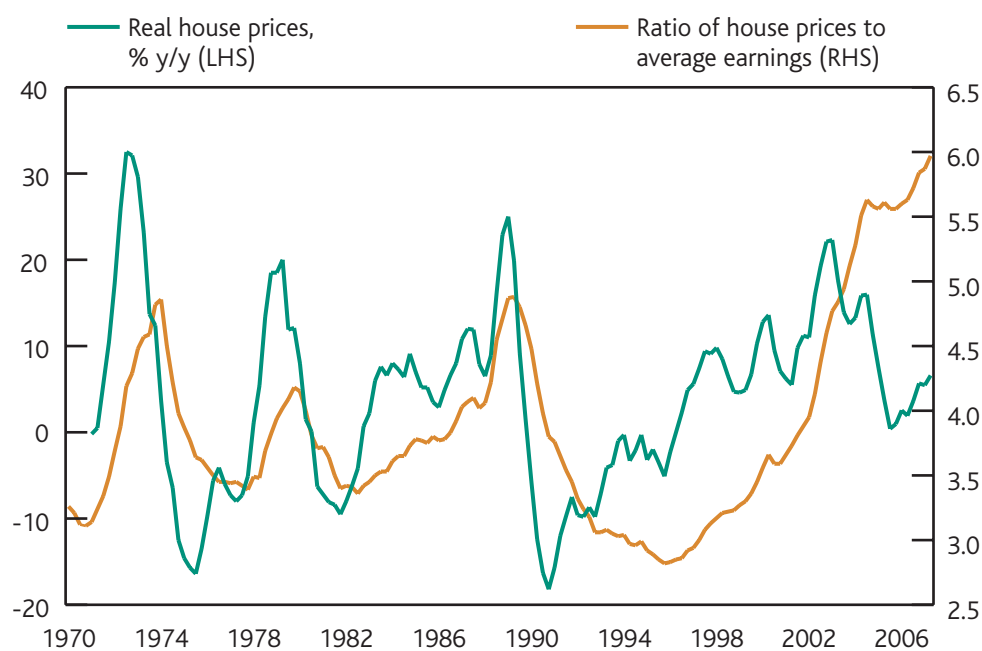


While some decline in rental yields can be justified by the lower interest rate environment, mortgaged landlords entering the market now are increasingly finding that rental income is inadequate to cover their costs.

In addition, affordability, defined as the proportion of take-home pay absorbed by a new mortgage, is also now well above its long-run average. Although the current level does not look overly alarming in relation to the peak seen in the late 1980s, that episode aside it has rarely been higher (see Figure 21).

Figure 21: Mortgage affordability for a new first time buyer

Finally, at over 6, the ratio of house prices to average earnings is at an all time high and significantly above levels which, in the past, have signalled a period of real house price falls (see Figure 22).

Figure 22: Real house prices and the house price to earnings ratio

Much of this rise can be explained by the ability and willingness of households to borrow larger multiples of income than has been typical in the past. Nevertheless, the low level of rental yields, the poor level of affordability for new buyers and the high level of house prices relative to household income, all suggest that over the next few years, the housing market is likely to be considerably weaker than it has been over the past decade.

Sources:

Figures 1–6: Nationwide, Halifax, Communities and Local Government & Thomson Datastream

Figures 7–14: Thomson Datastream, Nationwide, Communities and Local Government

Figures 15–22: Thomson Datastream, Council of Mortgage Lenders, Financial Services Authority, Savills, Royal Institution of Chartered Surveyors

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Source: CLG Housing Research and Statistics, Table 244 Housebuilding: permanent dwellings completed, by tenure, England. Online at www.communities.gov.uk/documents/housing/xls/140912

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Source: NHBC Land register, New House-Building Statistics, 2006 Quarter 4, Table 14 (Yearly) – Number of builders by size categories in Great Britain

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Source: CLG Housing Research and Statistics

- Table 104 Dwelling stock: by tenure, England (historical series), www.communities.gov.uk/documents/housing/xls/table-104
- Table 209 Housebuilding: permanent dwellings completed, by tenure and country, www.communities.gov.uk/documents/housing/xls/table-209

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Source: EMAP Glenigan collect data on residential planning permissions granted by each local authority in Great Britain. EMAP supplied data indicating, for each area listed in the table, how many planning permissions were granted for residential units to each of the largest developers in that area as well as the total number of planning permissions granted for residential units in that area.

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GLOSSARY



BERR	Department for Business, Enterprise and Regulatory Reform
CABE	Commission for Architecture and the Built Environment
CHP	Combined heat and power
CLG	Department for Communities and Local Government
CPD	Certificate of professional development
CPRE	Campaign to Protect Rural England
CSCS	Construction Skills Certification Scheme
CSN	Construction Skills Network
DCSF	Department for Children, Schools and Families
Defra	Department of the Environment, Food and Rural Affairs
DIUS	Department for Innovation, Universities and Skills
DTI	Department for Trade and Industry (now superseded by BERR)
DWP	Department for Work and Pensions
EP	English Partnerships
GLA	Greater London Authority
HBF	Home Builders Federation
LA	Local authority
LAA	Local Area Agreement
LDF	Local Development Framework
LDV	Local delivery vehicle
LSC	Learning and Skills Council
LSP	Local Strategic Partnership
MMC	Modern methods of construction
NAO	National Audit Office
NHBC	National House-Building Council
NHF	National Housing Federation
NHPAU	National Housing and Planning Advice Unit
NVQ	National Vocational Qualification(s)
ODPM	Office of the Deputy Prime Minister (now superseded by CLG)
OFT	Office of Fair Trading
OGC	Office of Government Commerce
PGS	Planning Gain Supplement
PPS	Planning Policy Statement
RDA	Regional Development Agency
REIT	Real estate investment trust
ROCE	Return on capital employed
RSL	Registered social landlord
SAP	Standard Assessment Procedure
SSA	Sector Skills Agreement
SSC	Sector Skills Council
UDC	Urban Development Corporation (or Company)
URC	Urban Regeneration Company

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One of our guiding principles was that the Review should be carried out with the fullest possible consultation, debate and discussion. On 9 March 2007, therefore, we launched our Call for Evidence and directly invited 640 individuals or organisations to provide evidence. During the course of the Review we received evidence and other useful material from nearly 100 different sources and we are grateful to the following for their contributions:

Academy for Sustainable Communities	Energy Saving Trust
Advisory Team for Large Applications (ATLAS)	English Partnerships
Association for Specialist Fire Protection	Environment Agency
Association for the Conservation of Energy	Eurisol-Mineral Wool Association
Association of British Insurers	Fairgrove Homes Ltd
Association of SelfBuilders	Forestry Commission England
Audacity	Fusion Building Systems (UK) Ltd
Barratt Developments plc	Glasgow Caledonian University (School of the Built & Natural Environment)
Barton Willmore Design Limited	Greater London Authority
Berkeley Group Holdings plc	Green Issues Communications
Bespoke Property Group Ltd	Hammerson UK Properties plc
Beyond Green	Health & Safety Executive
Bovis Homes Group plc	Hemingway Design
Brick Development Association	Highways Agency
Bridging Newcastle Gateshead	Home Builders Federation Ltd
British Property Federation	House Builders Association
BuildStore and the National Self Build & Renovation Centre	ISIS Waterside Regeneration
Butler & Young Ltd.	J and K Builders Ltd
CABE	Joseph Rowntree Foundation
Campaign to Protect Rural England	Kier Group plc
Cartwright Pickard Architects Ltd	L & Q Group
Chartered Institute of Housing	Lawrence Graham LLP
Chelsfield Advisers LLP	Local Authority Building Control
Circle Anglia Ltd	Local Government Association
Constructing Excellence	London Thames Gateway Development Corporation
Construction Industry Council	Loss Prevention Certification Board
Construction Products Association	Masonry Industry Alliance
ConstructionSkills (CITB)	Modern Masonry Alliance
Council of Mortgage Lenders	National Audit Office
Crest Nicholson plc	National Federation of Roofing Contractors
Croudace Homes Group	National Grid Property Ltd
East Midlands Regional Assembly	National House Building Council
East Thames Group	National Housing Federation

Natural England	South East England Development Agency
NewHeartlands Housing Market Renewal Pathfinder	Tesco plc
North West Regional Assembly	The Concrete Centre
Northern Housing Consortium	The Electric Heating and Ventilation Association
Notting Hill Housing Group	Town & Country Planning Association
One North East	UK Climate Impacts Programme (UKCIP)
Pinnacle Regeneration Group Ltd	Union of Construction, Allied Trades and Technicians
Places for People Group	University College London (Bartlett School of Planning)
PRP Architects	Urban Splash
Redrow plc	Wates Living Space
RENEW North Staffordshire	West Midlands Regional Assembly
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Royal Town Planning Institute	Wilson Bowden plc
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Shelter	
Skanska UK plc	

We also felt that it would be vital to explore our ideas and possible policy recommendations with relevant parties. In the late summer and autumn 2007 we held a series of sounding board sessions with a distinguished group of industry leaders. We should like to thank the following who attended these meetings and offered us the benefit of their expertise:

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Michael Ankers	Construction Products Association
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Matt Bell	Alan Cufley	Peter Fletcher
Michael Blake	Huw Davies	Paul Forbes
Stephen Boniface	Ben Denton	Greg Fry
Pat Bowen	Malcolm Dodds	Patrick Gamble
Keith Bradley	Richard Donnell	Prof. David Gann
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