WHY NOT BUILD FASTER? EXPLAINING THE SPEED AT WHICH BRITISH HOUSEBUILDERS DEVELOP NEW HOMES FOR OWNER OCCUPATION

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Abstract

This paper investigates how speculative housebuilders determine the speed at which approved housing sites are developed. It finds that where competition for land is intense, housebuilders must assume the highest possible sale prices to make winning bids for sites. Such bids are viable only because the release of land is restricted by the planning system, while the release of homes is managed on a site-by-site basis by builders to achieve the target sales rates underpinning earlier land bids. These factors have combined to encourage caution about the capacity of local housing markets to 'absorb' new-build supply. Even if the planning system released substantially more land, it may take some time before housebuilders responded by building out faster. While the research predates the recent collapse in speculative housebuilding, it is argued that these findings are likely still to be valid once the development of homes for owner-occupation recovers from the current recession.

1. INTRODUCTION

What determines the speed at which approved housing sites are developed? In a market economy, the temptation to see this as an issue of construction efficiency must be avoided. Instead, it is essentially an economic issue since housebuilders will not wish to produce new homes faster than they can be sold. Conventional wisdom among housebuilders emphasises that the finite annual capacity of local housing markets to absorb newly built homes determines the speed of construction. As a rule of thumb, a common target within the industry is to aim to sell an average of roughly one unit a week from each sales outlet and thus to programme construction to deliver the necessary flow of newly built homes.

Such conventional wisdom can become embedded in the culture of an industry and transmitted into the decision-making processes of the planning system. It demands critical challenge on two grounds. First, by drawing attention primarily to the quantity of new build supply, it masks important questions around the price of that supply. Since quantity and price are interrelated, it is important to ask whether local housing markets could achieve higher new-build sales rates and thus faster construction, if new-build prices were lower than those of second hand property. Secondly, 'market capacity' needs to be viewed as essentially a 'commercial construct' contingent on the particular set of relationships between the state and the market that currently delineate speculative housebuilding provision. This raises the issue of how far the concept of market capacity is open to influence from the planning system.

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These matters form the focus of the paper. In the next section, we review the research context before explaining our method in Section 3. We present the findings of our empirical research in Section 4, and set out the conclusions and implications of the paper in Section 5.

2. THE RESEARCH CONTEXT

2.1 The speculative housebuilding industry

The vast majority of new homes completed in Britain since the early 1980s have been built by the speculative housebuilding industry. In the decade to 2007/08, it was responsible for 88% of all housing completions (DCLG, 2009). The industry is dominated by a small number of very large firms, with 83% of its 2006 output produced by only 30 companies and 58% by the ten largest (Calcutt, 2007). Despite this, after a detailed market study, the Office of Fair Trading (2008) controversially concluded that there was little evidence of competition problems in the delivery of new homes. Yet, only four of the top ten companies listed by Calcutt for 2000 remain in existence as separate companies in 2008 – a reflection of the takeovers and mergers that continue to characterise the industry.

Speculative housebuilders are geared to mass production, with widespread use made of standard house types (Hooper and Nicol, 1999) and only limited 'opportunity space' conceded to architects and urban designers (Tiesdell and Adams, 2004). The industry has been variously accused of lack of innovation (Ball, 1999; Barlow, 1999) poor customer focus (Barker, 2004) and scant interest in environmental sustainability (Barlow and Bhatti, 1997). More recent evidence suggests improved customer satisfaction (Calcutt, 2007) and much greater engagement with the broader sustainability and climate change agenda, especially among the most pro-active companies (WWW *et al.*, 2008). In the past ten years, following the Government's 1998 adoption of a 60% brownfield target for England, most major housebuilders have also switched the focus of their activities from greenfield to brownfield sites, with some of the leading housebuilders becoming urban regeneration specialists (Karadimitriou, 2005). However, significant concerns remain, such as those around the industry's commitment to energy efficiency (House of Commons Environmental Audit Committee, 2005) and design quality (CABE, 2007).

Ball (2006), who compared the housebuilding industries of seven leading industrialised countries, found that the UK is exceptional because of restricted land supply in growth areas and the consequent greater emphasis given to the repair and upgrade of existing homes. Golland and Boelhouwer (2002), who contrasted housing market systems in the Netherlands and UK from 1975 to 1997, also emphasised the importance of land supply in explaining why the industry's structure and organisation differ significantly between the two countries. Whereas the public sector played the major role in land supply in the Netherlands, the UK speculative housebuilding industry has long depended on securing its own access to land.

It should therefore be emphasised that the UK speculative housebuilding industry has a distinctive structure of building provision, a term coined by Ball (1998, 1513) to refer "to the contemporary network of relationships associated with the provision of particular types of building at specific points in time. Those relationships are embodied within the organisations associated with that type of building provision, and they may take a market or a non-market form. `Provision' encompasses the whole gamut of development, construction, ownership and use." Our argument in this paper is that the speed at which approved housing sites can be developed and more specifically, the notion of finite market capacity in any area, are context-specific matters rather than ones of general principle. Since they reflect the particular structure of British housebuilding provision, they demand critical appraisal rather than mere acceptance.

2.2 State-market relations in housebuilding

One important feature of the British structure of housebuilding provision is the tight control exercised by the planning system on access to building land. Unlike commercial and industrial developers, housebuilders use land extensively and devote much of their energies to capturing this essential raw material well in advance. While some have suggested that land banking by housebuilders can sometimes amount to land hoarding (RTPI, 2007), others have linked the scale of financial resources needed to capture extensive supplies of land to the increased concentration of capital within the British industry (Ball, 1983). There has also been much debate on the extent to which planning restrictions on land supply lead to higher house prices, with the recent work of Bramley (2007), CPRE (2007) and Cheshire (2008) providing contrasting contributions on whether, and to what extent, house price inflation would weaken and affordability improve, if much higher levels of housing development were to be permitted.

One particularly controversial aspect of relations between planning and housebuilders is the extent to which market-based information should inform, and in the view of some critics (see, for example, Cheshire and Sheppard, 2005) even drive planning policies. The concept of a readily available five-year housing land supply and the introduction of joint land availability studies undertaken by planners and housebuilders can be traced back to Michael Heseltine's time as Secretary of State for the Environment in the early 1980s. One relevant consideration introduced by government policy in England at that time was "authorities' views of the likely number of completions on the site in each year of the study period" (DOE, 1984, Annex A, para 6065). This has evolved over the years to the statement in the latest English good practice guidance (DCLG, 2007, para 40) that: "A site is considered achievable for development where there is a reasonable prospect that housing will be developed on the site at a particular point in time. This is essentially a judgement about the economic viability of a site, and the capacity of the developer to complete and sell the housing over a certain period."

The speed at which approved housing sites are developed has become an important policy issue, nationally and locally. At the national level, the Government's ambition to see 3 million new homes built in England by 2020 requires the private sector to produce and sell its output at a certain speed[2]. If sites are developed more slowly than this, the Government's target will not be met. At the local level, planning authorities are expected to allocate enough land to enable houses to be built within the required timescale. But if each allocated site is developed more slowly than the planning authority had assumed, more housing sites may need to be allocated to achieve the required level of development within that timescale.

Recent controversy generated by the Middlesbrough Core Strategy Development Plan Document illustrates this well and demonstrates the importance of 'build-out' rates and notions of market capacity to planning policy. The local planning authority had presumed high annual rates of completion from allocated sites and had therefore limited the number of sites allocated for housing development. This was challenged by the planning consultant for one of Britain's top housebuilders, who argued that "the projections, especially in the light of the current market, are unduly optimistic. As an example in urban areas Barratt Newcastle usually work on the basis of

[2] Despite the recession, Margaret Beckett, the Minister of State for Housing and Planning, when giving evidence to the House of Commons Communities and Local Government Committee in October 2008 reiterated the Government "target" set in 2007 to see two million new homes built in England by 2016 although referred to the figure of three million by 2020 only as an "ambition" (House of Commons Communities and Local Government Committee, 2009).

completing 30 to 50 dwellings annually per site depending amongst other things on the nature of a development, its location and the market conditions which at the current time are not easy" (Moss, 2007, para 2.14). The planning consultant then went on to challenge the local authority planning assumptions site by site, with the extreme example being that one large site that the planning authority considered would be built out over five years at the rate of 150, 175, 175, 215 and 51 per year, which Barratt considered "most unlikely".

Although the Barker Review of Housing Supply (2004) was primarily concerned to increase the overall quantity of new housing development, it considered the pace at which development takes place an important associated issue. According to Barker (2004, 109) "While the Review has found no compelling evidence of anti-competitive behaviour associated with build-out rates for large sites, it considers that it is desirable to ensure that sites are built out at a rate that is socially optimal as well as privately optimal for housebuilders." This theme was taken up in the subsequent Calcutt Review of Housebuilding Delivery. Calcutt (2007, 41) commented that "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. . . 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." Calcutt produced no detailed evidence to support this assertion, but recommended that the Government should commission research on the issue, especially in relation to large sites. Calcutt (2007, 41) also repeated the commonly held perception that "capacity of local housing market to absorb new supply" is limited, an issue integrally bound with the build-out rate, to which we now turn.

2.3 The concept of market capacity

It is tempting to think of market capacity simply in volume terms in the sense of a finite number of new homes that can be absorbed annually in each housing market area. While most debate about market capacity at planning inquiries takes place at this level, it ignores the crucial impact of price on capacity. Since speculative housebuilders operate simultaneously in the housing and land markets, the way in which housing prices and land prices interrelate is central to unpacking the concept of market capacity.

In development appraisal, land prices are considered a residual having deducted predicted development costs and desired profit from predicted development revenues (Leishman *et al.*, 2000). Housebuilders thus start the process of development appraisal by taking a view of the likely selling prices of the homes once completed. Since the supply of homes for sale in any area is usually dominated (generally around 90%, although this varies over time and by location) by those available in the second hand market, it is usually argued that speculative housebuilders are price-takers in the sense that the price levels in the second hand market determine the maximum price at which new houses can be sold (Oxley, 2004). What is not well explored in the literature, and here we present new evidence later in the paper, is the precise type of information housebuilders seek about the second hand market and the way in which this is balanced against their better knowledge of the prices that have been obtained for newly-developed homes by both themselves and their competitors. Trading off all this information helps a housebuilder undertaking a development appraisal to predict whether eventual selling prices for the newly-completed homes will be above, at, or below prevailing prices levels in the second hand market[3].

[3] From a consumer perspective, it can be argued that newly-built homes might command a premium over similar sized properties available in the second hand market as a result of their very newness and expected low maintenance. However, taking account of likely snagging, continued nearby construction activity and the very real possibility of disruptive delays in completion, the reverse might equally be true.

This price prediction is critical to any notion of market capacity. At least at the margin, the attraction of newly completed homes to potential purchasers will differ dependent on whether they are sold at a premium or discount to second-hand homes. This is not simply a matter of the extent to which purchasers already in the market can be persuaded to choose newly-built rather than second-hand homes. Instead of such a static view of market capacity, we need to think what might happen if newly-built homes were discounted or even heavily discounted compared to second-hand homes, and then ask why this does not occur.

In theory, we might expect the sale of newly-built homes at a discount to second-hand prices to increase the demand both for newly-built homes and for owner-occupied housing as a whole, since it would not simply encourage purchasers already in the market to switch to newly-built homes but crucially might enable first-time buyers to enter the market earlier (both directly and as its impact permeated down the housing ladder). Thus, as far as the housing market is concerned, a prima facie case exists to suggest that housebuilders who 'pitch in' below rather than at or above the price of second-hand homes might gain a competitive advantage in the housing market and, in the short term at least, be able to expand their market share. If this strategy was followed by all housebuilders, the market share of each individual builder may not change, but crucially, there would be some increase in the overall size of the market, dependent on the extent of the discount.

Why does this not happen? Why do speculative housebuilders generally take such a static view of overall market capacity and not seek to steal a competitive advantage, at least in the short term, by selling their newly-build products at a discount to second hand products? The answer lies in the relationship between the housing and land markets and in knowledge that housebuilders who sought competitive advantage from adopting a discount strategy in the housing market would soon find themselves at a significant competitive disadvantage in the land market, to the extent that it would inhibit their ability to acquire land and, in due course, lead them to lose their share of the market for newly-built homes. As Oxley (2004, 31) commented "Housebuilders' expectations about the prices at which they can sell houses and the costs of building those houses (not including the costs of land) will influence the amount they bid for land. Expectations of higher house prices will, other things being equal, increase housebuilders' bids for land." The extent to which housebuilders are able to maintain or expand their share of the new housing market is thus critically dependent on their success in the land market, and not vice-versa.

Where the supply of housebuilding land is limited, either by the planning restrictions or for other reasons, but housing demand is strong, the fiercest competition between housebuilders is to gain access to land (Adams and Watkins, 2002), safe in the knowledge that once on-site, what is eventually built will face only limited competition from other development sites and will not need to be discounted substantially below the level of second hand prices to achieve the desired rate of sales. Other consequences flow from the fact that the main focus of competition between housebuilders, at least in the areas of high housing demand and restricted land supply, is on access to land rather than on the sale of homes[4]. As Barker (2004, 106) remarked: "When land is in relatively scarce supply, fewer permissioned sites mean that there will be fewer competing housebuilders in any one area. This can reduce consumer choice. In such situations, competition focuses on land. Once land is secured, competitive pressures are reduced: to a large extent

[4] If housebuilders considered themselves to be in strong competition with each other in the housing market, one might expect to see attempts to build a brand identity through national marketing campaigns and television commercials. However, despite the importance of housing expenditure to consumers, newly-built housing is astoundingly under-represented within the constant stream of television commercial and other national forms of advertising. This highlights the importance of competing with the local second-hand market rather than necessarily with other housebuilders.

housebuilders can "sell anything". There is therefore less need to compete on output, by offering a higher quality product or innovative design features, except in niche markets."

Although individual housebuilders see bidding prices for land as a residual having deducted predicted development costs and desired profit from predicted development revenues, they remain acutely conscious that taking too conservative a view of future development revenues would be likely to undermine their chances of success in the land market. Indeed, at the outset, successful speculative housebuilders need to be bullish enough in their predictions of future revenues to enable them to offer more than their competitors for available development sites, although not so bullish that their predictions turn out to be unachievable, making completed units saleable only at a loss[5]. This is far from an exact science. While Ball (1999), for example, argued that too much optimism in land purchase has historically been a prime cause of company failure in housebuilding, Leishman *et al* (2000), from empirical work on 16 Scottish housing developments, suggested that uncertainty about future costs and returns caused housebuilders to pay about 20% less for land than might have been the case if they had had perfect foresight.

Two mitigating factors, however, can make this judgement call less difficult than it might otherwise appear. The first is a rising housing market, which provides housebuilders with some degree of comfort that sales prices when dwellings are completed in two or three years' time can be expected to be above those prevailing at the time of the original development appraisal, and sometimes significantly above[6]. Between the early 1990s and 2007, the UK experienced a continuously rising housing market, which led many housebuilders to feel ever more comfortable in their bullish predictions of future sales revenues. The subsequent downturn caused a severe reality check for the speculative housebuilding industry, with decisions taken to 'mothball' development sites, where likely sales revenues had fallen so much below the initial predictions that even marginal costs could no longer be covered.

State intervention in the supply of land is ironically the second mitigating factor that has made housebuilders less worried than they might otherwise have been about bullish predictions of future revenues and hence bullish bids for land. When the supply of potential development land is restricted by the planning system, housebuilders who capture approved development sites are privileged by the limit set by the planning system on potential competition from other sites. Indeed, it then becomes easier to programme the housing development process to achieve optimistic revenue predictions, once the threat of competition is reduced, by limiting the number of units for sale at any one time. In short, our argument is that the concept of market capacity needs to be viewed essentially as a 'commercial construct' contingent on that particular set of relationships between the state and the market which delineate the present structure of speculative housebuilding provision. Failure to recognise this helps ensure this construct is embedded within the culture of the industry and then transmitted into, and reinforced by, the decision-making processes of a planning system, which sees supply in quantitative terms, but not does readily connect quantity to price.

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[5] This principle applies even if land is acquired by private treaty and is never competitively available in the open market. This is because most landowners these days tend to well advised by professional consultants who know the 'going rate' for development land. Housebuilders normally succeed in private treaty acquisitions only if their bids are known to be competitive in market terms.

[6] Housebuilders will, of course, seek to take some account of expected market trends in preparing development appraisals for sites they are thinking of purchasing. Those that take the most optimistic view of a rising market may well outbid their competitors in land purchase, but will subsequently be more exposed by their optimism to any market weakness.

If we are to challenge the view that local housing markets have an absolute or finite capacity to absorb new development, it is thus essential to know more about the construction, sales and pricing strategies of the major housebuilders. The above review suggests the need to address four main research questions, which we consider in the Section 4, having first explained our research method. These questions are:

1. When housebuilders estimate gross development value, and hence decide how much to bid for land, how do they determine eventual selling prices for completed units?
2. What is the relationship between predicted sales prices, sales rates, market capacity and construction rates?
3. How do housebuilders react to change in market demand once construction has begun?
4. Do planners have any influence over the speed at which housebuilders develop approved sites?

3. RESEARCH METHOD

The research for this paper was undertaken in early 2008 for the UK Government (Adams and Leishman, 2008). At that time, early signs of a slowdown in housebuilding were already evident but almost no-one we interviewed anticipated the scale of the downturn experienced later that year. Our findings reflect what we can now recognise as the prevailing industry wisdom at the end of a long upward period in the fortunes of the housing market rather than the turbulence of the severe recession that followed. We would argue, however, that this proviso does not invalidate our results, even though their applicability may have been put on temporary hold. Unless a fundamentally different structure of housebuilding provision emerges out of the recession (and there is yet little <u>hard</u> evidence that it will), our main findings are likely to be just as relevant when and if the fortunes of the speculative housebuilding industry begin to recover.

Although there are over 20,000 housebuilders registered with the National House Building Council (NHBC), our research concentrated on housebuilders producing 250 or more units per annum, of which there were 45 operating in England in 2005 as listed in the industry league tables compiled by Wellings (2005). As previously indicated, such firms build the vast majority of new British homes. To obtain both comparative data across the industry as well as more in-depth information on individual housebuilders, we first asked all companies to complete a standard structured questionnaire and followed this up with semi-structured interviews among a smaller number. Almost all the respondents to both the questionnaire and interview were at least at Director level in their respective companies, with occasional responses received at Chief Executive level.

Some 18 replies were received to the standard questionnaire sent by email to the 45 target companies - a 40% response rate. Bearing in mind the much greater difficulties of undertaking research on the private development industry in comparison with the public sector, this was certainly a good response. The 18 housebuilders who responded to our survey built 52,290 new dwellings in 2005 (according to Wellings' figures) equivalent to almost a third of the 159,480 new dwellings completed in England that year. The respondents were also broadly representative of the structure of the industry as a whole since they comprised six volume builders (each with an annual output in excess of 2,000 units) seven medium-sized builders (each with an annual output between 501 and 2,000 units) and five smaller builders (each with an annual output between 250 and 500 units). Respondents therefore ranged from, at the top end, two out of the UK's three 'super-builders' (those producing in excess of 10,000 units annually) down to a small private company producing a little over 250 units annually.

The questionnaires were followed up by detailed telephone interviews with eight of the respondents as well as a face-to-face interview with representatives of the Home Builders Federation in London. The telephone interviewees were again evenly spread by size to provide representation reflecting the 45 housebuilders operating in England.

4. RESEARCH FINDINGS

In this section, we seek to address the four research questions specified at the end of Section 2. These concerned the way in which housebuilders determine selling prices, the influence of these on sales rates, market capacity and construction rates, the reaction of housebuilders to subsequent changes in market demand and whether planners can influence production rates.

4.1 Determining selling prices

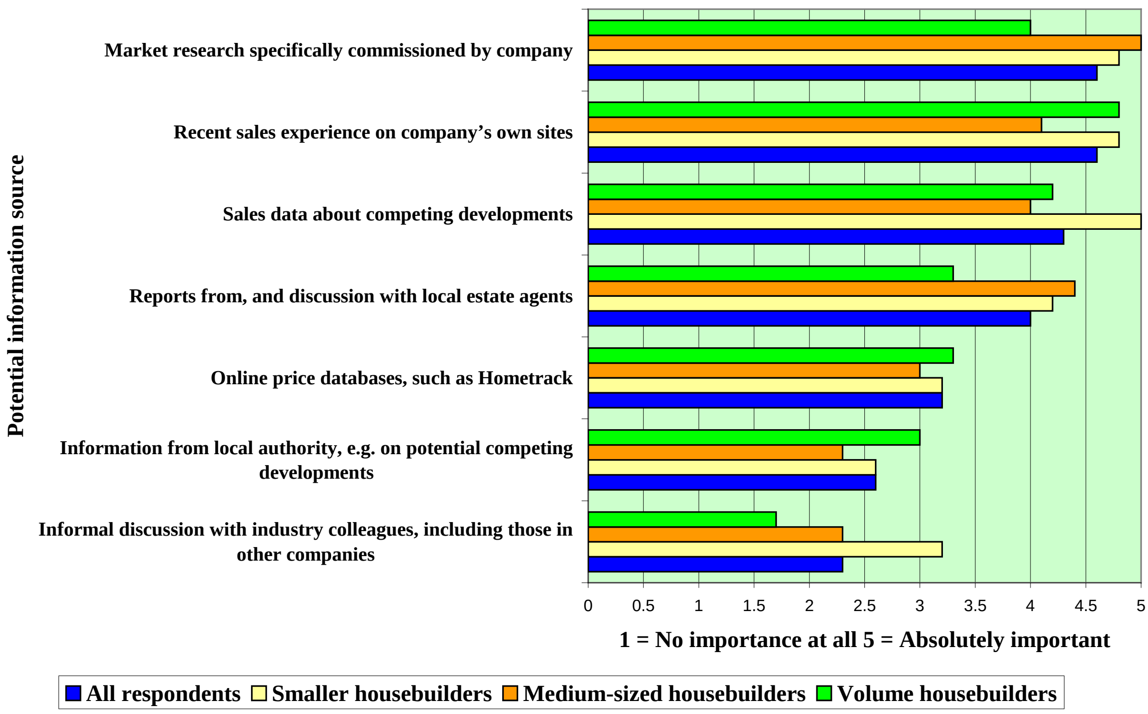
The second-hand market is often portrayed as providing a benchmark for pricing newly built homes. But in interpreting this benchmark, do housebuilders 'pitch-in' slightly above or below prevailing prices for similar second-hand homes? Golland and Boelhouwer (2002) suggest this depends on whether newly-built products are significantly better than second-hand ones. In contrast, our research indicates that this depends critically on the extent and nature of competition from other housebuilders. One company interviewed highlighted a major urban expansion in the south-west of England, where 35 builders were in competition within a single housing market area. This resulted in prices pitched below the second hand market. Another believed that increased competition between builders in a 'finite market' induces price caution. A third interviewee drew attention to a 1,200-unit scheme in southern England, where several developers all built similar family-type housing, arguing that *"The market was swamped and sales virtually ground to a halt. To gain maximum advantage from splitting* (large sites among several builders)*, products on adjacent sites should be quite distinct."* But a fourth suggested that even with different products on offer at nearby sites *"there is a limit to the likely numbers of purchasers in any location."*

In contrast, as one interviewee pointed out "Sites without immediate competition have a distinct advantage and compete only with second hand market." This seems to encourage builders to form more optimistic price expectations, for, as another interviewee put it: *"Second hand housing in the market is a minimal factor. If you were in good area with strong market you would set the bar a bit higher in terms of your own expectations."* In the UK, the planning system has a crucial impact on the extent of competition that housebuilders face from each other in any locality. Where land release and potential competition is restricted, builders become more bullish in the prices they think they can achieve for completed homes in the housing market. This produces the higher gross development values essential to winning land where intense competition for the limited supply creates a tight land market.

When this happens, the planning system acts a gatekeeper to success in the housebuilding industry. Those builders who succeed in the competitive land market can then move on to the housing market, knowing that potential competition there has been much reduced by the restricted availability of land. In such circumstances, builders will 'pitch-in' above prevailing prices for similar second-hand homes and crucially, as we shall see later, will then manage the release of completed units, in the face of limited competition from other development sites, to achieve their own optimistic price expectations. In short, where a restrictive planning system makes access to land the main focus of competition between housebuilders, it creates a less competitive market for newly-built homes.

This would not happen if newly-built and second-hand homes were seen as homogeneous products. But the housebuilders we interviewed believed in the distinctiveness of newly-built homes and concentrated their market research on the new-build sector. One commented that *"Our attention is focused on recently completed properties and those known to be in the pipeline, rather than on the second hand market as a whole."* Another took the view that *"Only if there are no prospective new build schemes will the company pay full attention to the second hand market. This is because buyers looking for new build form a distinct component of demand. Alongside them 'convenience converts' can be persuaded to buy new if there is not enough decent second hand property available."* A third stated explicitly that their *"target sales rate does not account for amount of second hand housing on the market, we only tend to look at the new build sector in terms of establishing a sales rate – what are competitors selling, what rate are they selling."* So, although the second hand market provides housebuilders with a general benchmark, our research suggests that evidence from other new-build or recently completed developments are more important to the precision of housebuilders' price-setting strategies. From a planning perspective, this would suggest that the extent of land released is probably a more significant consideration to housebuilders in setting new-build prices than previously acknowledged and the second-hand market as a whole (as opposed to the more recently completed component of the second hand market) probably less significant. Of course, this does not preclude the broader influence of the second-hand market on new supply – it simply indicates that housebuilders appear less directly influenced by the second hand market than one might well expect.

Figure 1: Housebuilders' mean ratings of information sources used to set selling prices



This view is confirmed when we look at the questionnaire results from the 18 housebuilders surveyed nationally when asked to specify the importance they attached to seven potential sources of information in setting sale prices, on the scale from 1 for 'no importance at all' to 5 for 'absolutely important'. As Figure 1 shows, housebuilders paid most regard to commissioned market research and to sales experience from their own and their competitors' developments. More general information, such as online price databases were less important. In short, housebuilders seem not to regard second-hand homes as direct substitutes for their own products and consider that this provides some room for manoeuvre in how they price and market newly-built homes. Yet, although as one interviewee claimed *"Each housebuilder tends to think their products are better than the competition"*, there is no independent evidence to support this optimistic view of the high brand status of newly-built output, especially relative to comparative products in the second-hand market.

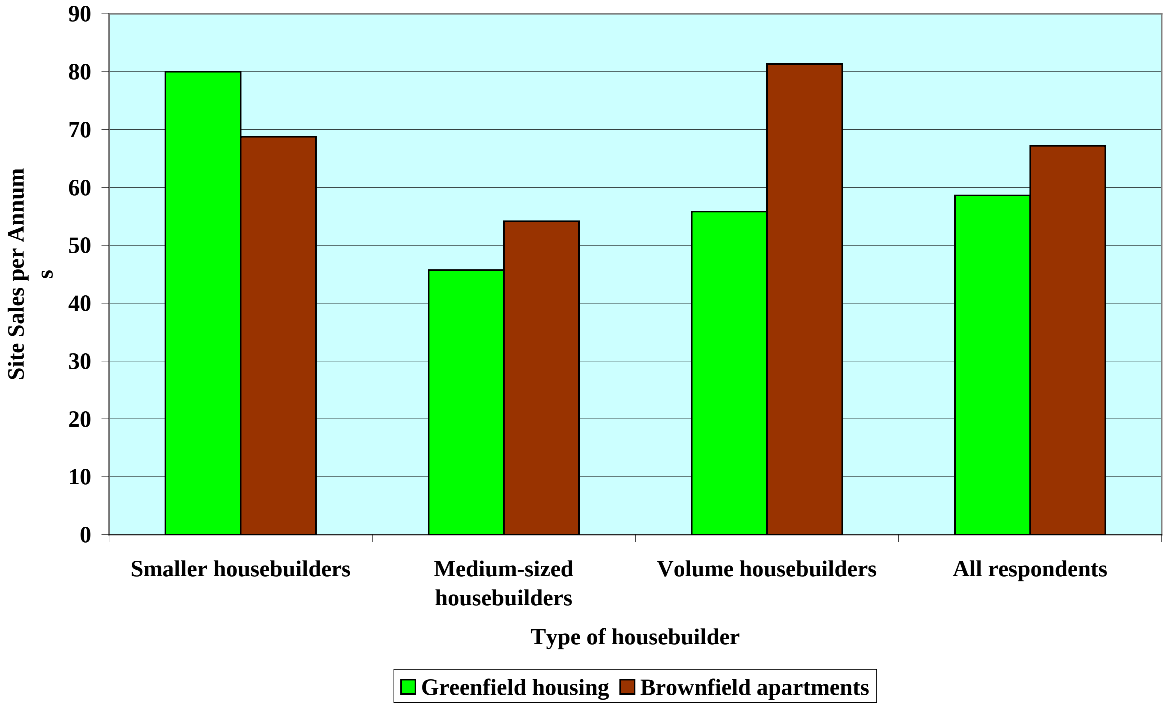
4.2 The relationship between predicted sales prices, sales rates, market capacity and construction rates

A thorough development appraisal undertaken on a cashflow basis will match estimated selling prices to a target sales rate. This involves trading off price against sales speed. To sell new homes faster, prices must be more competitive. Conversely, to achieve maximum possible prices, more time must be allowed to attract purchasers, and crucially, the threat that competitors will enter the market and undercut price levels, must be limited. At particular times or locations, making a 'fast sales' assumption can produce the highest gross development value. One interviewee suggested this had happened during the recent apartment building boom, commenting that *"if you go into an area with a big demand for apartments then you would put a very fast rate of sale on them."* But it appears that the usual practice in the industry is to aim for the maximum possible price and accept a slower rate of sales. As a different interviewee remarked, *"In a buoyant market, developers are willing to put the prices up as far as they possibly can.*" Another aimed *"to pitch at maximum price at the start and then use incentives (carpets, white goods etc) if prices need to be reduced."* And yet another directly linked land shortages to price maximisation, commenting *"that if you're in an area with little or no new housing so you have a throttle on new product."*

If, in constructing their development appraisals, housebuilders push estimated selling prices to their maximum in order win the competition for land, then the pace at which a local housing market can absorb that new supply will be slower than if more moderate prices had been assumed in the development appraisals. For as one interviewee candidly pointed out *"Once you have bought the site, that rate of sale is set in stone."* What appears to have been common practice in the housebuilding industry has been the readiness to take the most optimistic view of price in development appraisal so as to enable successful land bids to be made, while remaining much more cautious on sales rates.

In the questionnaire, we asked respondents to tell us the optimal average sales rates for two typical 200 unit developments, one greenfield and one brownfield, comprising mainly 2, 3 & 4 bedroom houses or apartments. The results, shown in Figure 2, suggest an average optimal sales rate of about 59 units per annum for greenfield houses and 67 for brownfield apartments. There was limited variation around this mean, with most housebuilders setting a target of between 40 and 80 units built and sold from each outlet annually. Brownfield apartments are usually developed more rapidly than greenfield housing because the practicality of apartment construction normally makes it impossible to 'drip feed' the market or to achieve a slow trickle of sales. With more capital employed, speedy construction and sales are essential to contain exposure to borrowing. Interestingly, volume developers seem to build apartments faster than smaller and medium-sized developers, though sample size prevented testing this for statistical significance.

Figure 2: Imputed Annual Optimal Sales Rates



These results confirm the anecdotal and literature evidence that the typical housebuilder aims to build and sell around one unit a week[7]. This common 'rule of thumb' within the industry is indeed a commercial construct, reflective of the particular institutional structure of housing provision in Britain, in which tight regulation of land release endows those who win the competition for land with the power to manage the release of newly-built homes to maximise price. One housebuilder we interviewed, who had developed 25 houses in an attractive historic town, explained how this occurred. Since *"there was a very strong market and there was no need to sell too far ahead"* only five houses were initially released to the market. As soon as these were sold *"we were then able to review the sales prices for the next five."* Another housebuilder commented with remarkable honesty that *"selling out sites in phased releases of 6 to 12 houses has its own psychology, i.e. 'buy now, because you may have to pay more for the same product on the next phase'."*

The research findings therefore reinforce and amplify the view of Calcutt (2007, 159) that "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." Crucially, once land is purchased and the target rate of sale is set, it drives the target rate of production and not vice-versa. One interviewee who explained that large development sites are split between builders primarily to improve the sales rate, rather than to make construction more efficient, made this quite clear: *"It's less about build rates and more about sales rate. By putting more than one builder on a site, you are offering more choice to the consumer, therefore opening the site up to more potential customers."* So the speed at which sites are developed is determined by target sales, not production efficiency.

Yet, it would thus be mistaken to transform whatever rate of sale is culturally embedded as a 'rule of thumb' within the industry into some abstract notion of finite market capacity capable of retaining its relevance under a different institutional structure of housing provision. Significantly

[7] Our results show a slightly faster build-out rate than Calcutt (2007) indicated but nowhere near the ambitions of the Middlesbrough planners, reported earlier.

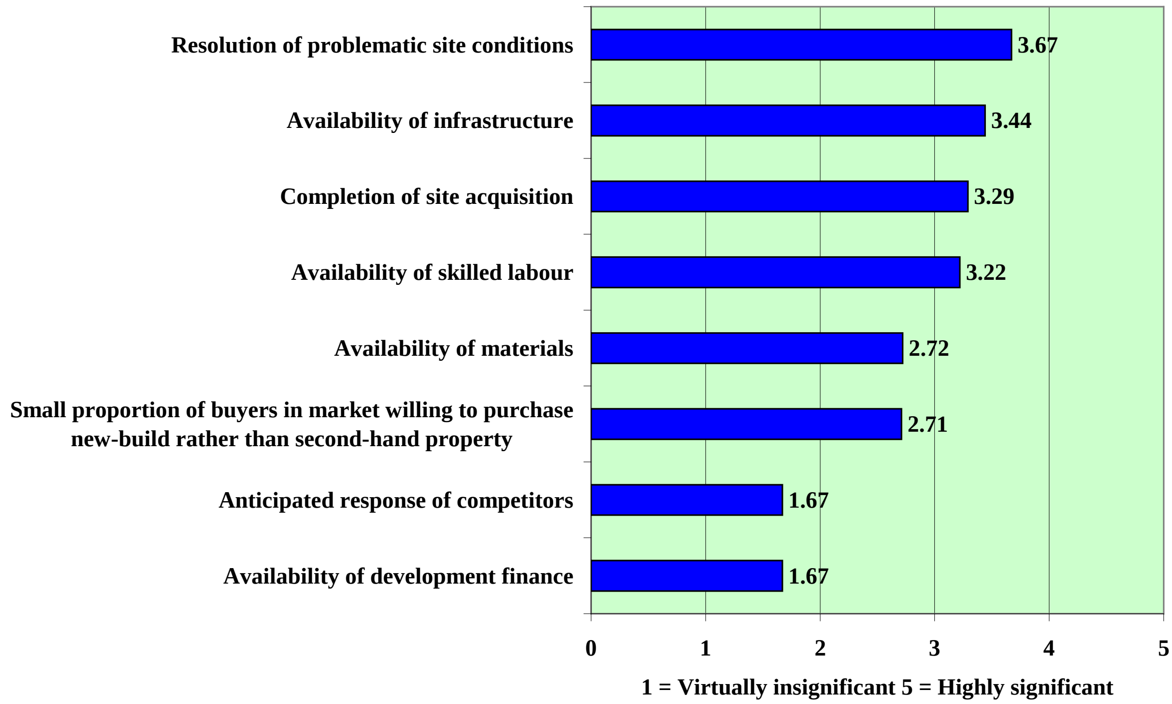
faster building rates of up to 150-200 units could still be efficient, according to one volume housebuilder we interviewed, although he considered sales at this rate could be achieved only in a well-defined urban market and by offering a range of well-differentiated products. But as this illustration confirms, market capacity is a context-specific notion that has meaning only in relation to particular set of institutional and economic circumstances.

4.3 The reaction of housebuilders to subsequent changes in market demand

What happens if market conditions change once sales have started? Economic theory might predict that production rates should increase when demand rises and decrease when it falls. But how easily could housebuilders accelerate production in the short term if they wished to do so? We identified eight potential constraints that might prevent a short-term increase in production in response to improved market conditions. For each constraint, respondents were invited to select a number from 1 for 'likely to be virtually insignificant as a constraint upon increased production' to 5 for 'likely to be highly significant as a constraint upon increased production' in the case of a typical 200 unit development.

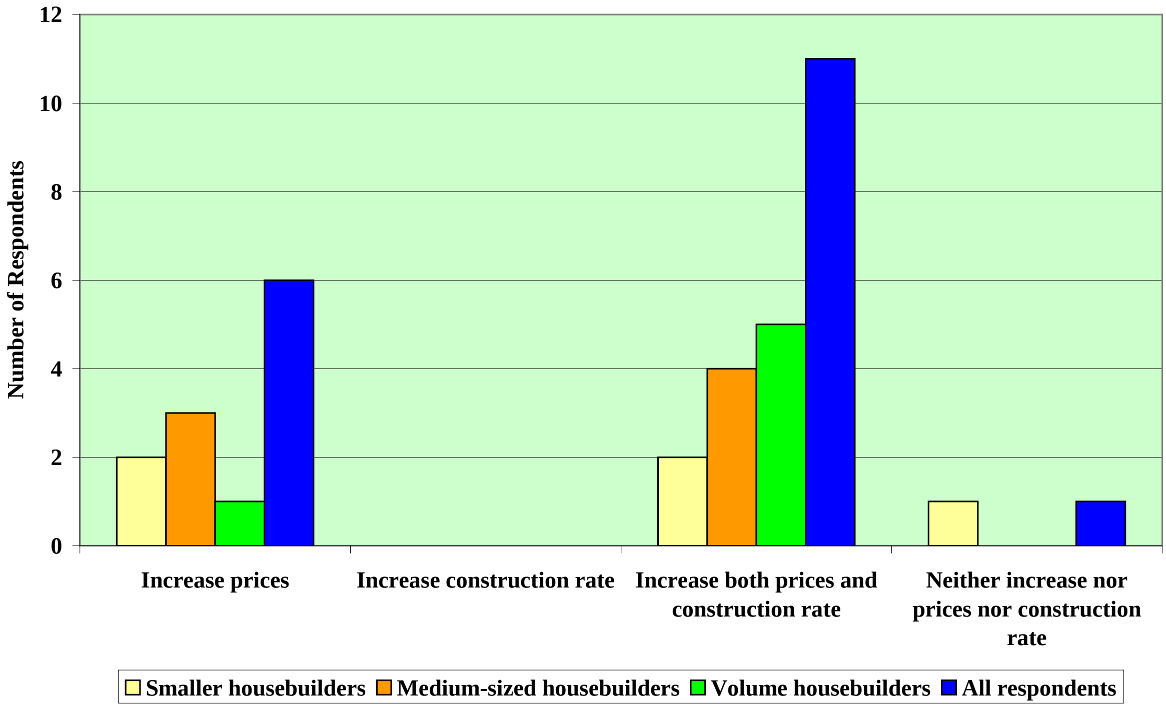
Figure 3 suggests that the four logistical factors at the top of the chart may have some impact, at least in the short term, on housebuilders' ability to increase production, but that none approached really high levels of significance. In other words, if the rate of production was determined merely by technical considerations, one might expect housebuilders to try hard to increase output when demand rises. What actually happens if market conditions improve once sales have started is shown in Figure 4.

Figure 3: Significance of Constraints to Raising Build Rates in the Short-Term



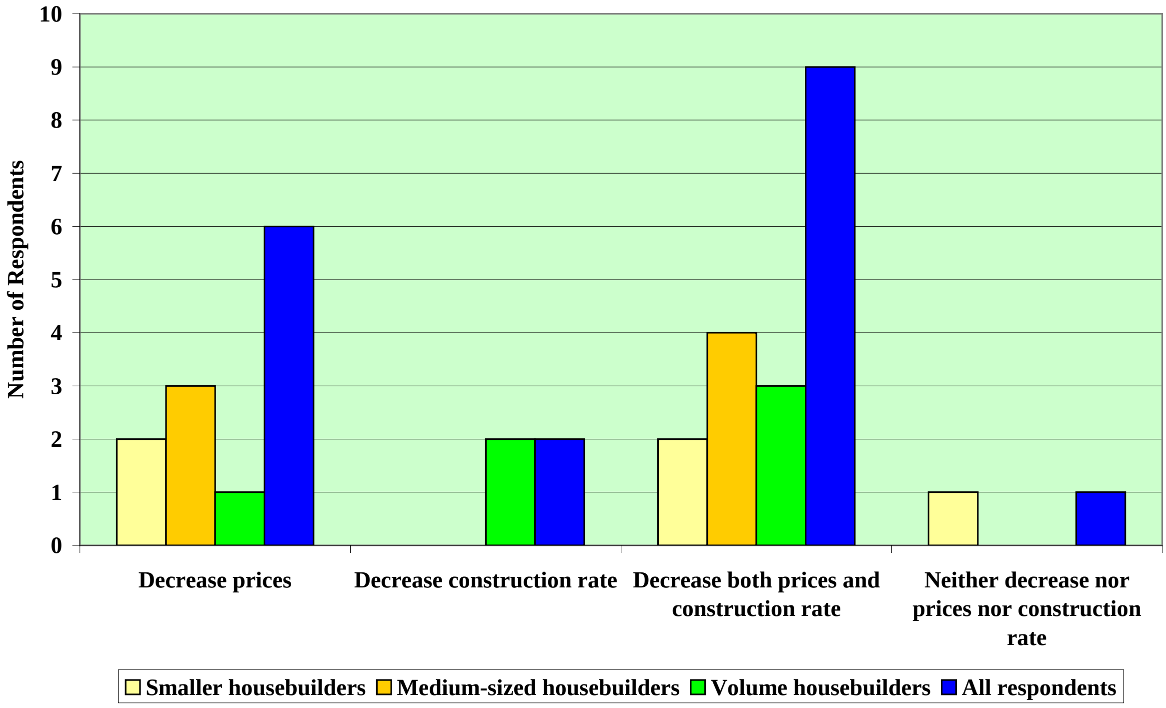
One comment typified the response of those interviewed to improved market conditions: *"If sales are going well we will look to increase the sales prices."* Significantly, none of the housebuilders questioned would simply increase the construction rate. Some raise prices alone, but most do this alongside an increase in the construction rate. The detailed interviews strongly indicated that, of these responses, price is universally seen as the more flexible. Housebuilders willing to speed up construction generally saw this as a marginal reaction and secondary to price.

Figure 4: Housebuilders' Stated Responses to Higher than Expected Sales



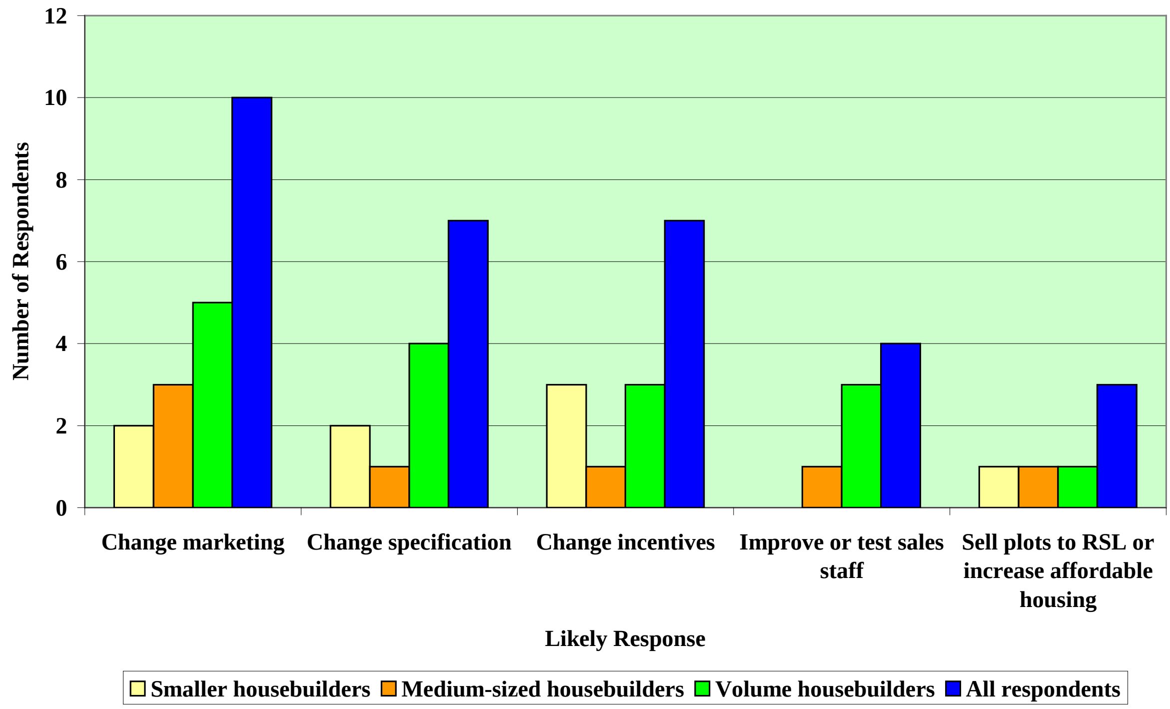
A more varied response was evident when housebuilders were asked of their likely reaction if sales turned out to be worse than expected but again, as Figure 5 shows, changing the rate of construction alone was a rare response.

Figure 5: Housebuilders' Stated Responses to Lower than Expected Sales



Further insights can be gained from an analysis of the responses to the associated open-ended part of the questionnaire (see Figure 6), in which the respondent could list several different courses of action. As this confirms, enhanced marketing effort is the most frequently cited example of other forms of action likely to be taken in response to poorer than anticipated sales rates. This is followed equally by changing the specification and incentives. One interviewee explained the thinking behind the uses of incentives (such as paying stamp duty for the buyer) to achieve target sales: *"We examine it* (the sales rate) *on a weekly basis, like keeping a train on the track and just nudging it back in-line. If a site does fall market-wide on a sustained basis, then we will look at one of these incentives, be it part exchange or whatever."* As a last resort, headline selling prices may be cut since as another interviewee put it *"No builder wants to have completed stock unsold. That would rapidly reduce return on capital."*

Figure 6: Developers' Open-Ended Responses to Lower than Expected Sales Rates



These responses very much reinforce the emphasis of interviewees on improving sales during difficult times rather than slowing down construction or adjusting target sales rates. In normal times, significant changes to the rate of construction are avoided, unless all efforts to stimulate demand fail. One smaller builder neatly summarised the importance placed by most housebuilders on cashflow, as follows:

> *"If our pricing is wrong we will adjust prices NOT reduce the rate of construction. We would only reduce the rate of construction when the market is very slow and sales incentives/price reductions will not increase the rate of sale. It's all about lock-up of capital . . . Slowing a site down in response to a weak market is a last resort because the lock-up of capital will erode the net profit."*

Since the empirical research was completed, the credit crunch and recession has created the worst crisis for the British housebuilding industry in the postwar period, with many companies dependent on lender support for survival, developments halted and extensive landholdings marketed to raise cash (Knight Frank, 2009). As Parkinson (2009, 22) explains: "The new homes market has been severely affected by the credit crunch. Both the net balance of site visits and reservations were around 80% down by mid-summer 2008 on the previous year, according to the Homebuilders Federation. Total UK housing starts in 2q, 2008 were 51% down on the previous year. Many sites have been mothballed, thousands of staff laid off and billions wiped off the value of housebuilders' shares."

The exceptional crisis now facing the industry does not invalidate the research findings, since unless a fundamentally different structure of housing provision emerges from the recession (and serious evidence of this is still awaited) it is likely that the future speed of housebuilding will continue to be driven by sales rates rather than production possibilities. Indeed, in view of the comments made in early 2008 by those interviewed for the research, the subsequent action of many housebuilders to 'mothball' developments already on site merely confirms how extreme is the crisis now facing the industry.

4.4 The extent of planners' influence on production rates

The final question that this paper seeks to address is whether planners have any influence over the speed at which housebuilders develop approved sites. Kate Barker, to whom this issue was certainly a concern, suggested that:

> *"To encourage faster build-out, planning authorities should use their discretion in setting time limits on planning permissions and seek to agree an expected build-out rate, as a condition of planning permission. If the rate of build-out has not increased appreciably by 2007, subject to conditions in the housing market, Government should review all available policy options to address this issue."* (Barker 2004: 110)

In contrast, many of the housebuilders who responded to the research took the opportunity to argue for the planning system to release substantially more land for housing development. They saw the planning system as the source of, rather than the solution to, cautious site development rates. One medium-sized builder expressed this view vociferously:

> *"Do something about the planning regime. That is the only thing! The house building industry is incredibly skilful at doing things differently and faster and well, but there is just not enough land coming from the planning system. If the Government wants to meet its targets, it's got to release enough land for that to happen, simple as that. That is the only thing. If there was enough land going through the planning system for 250,000 houses a year that is what would be getting built. So the industry will find a way of getting the labour and doing things differently, and building things quicker."*

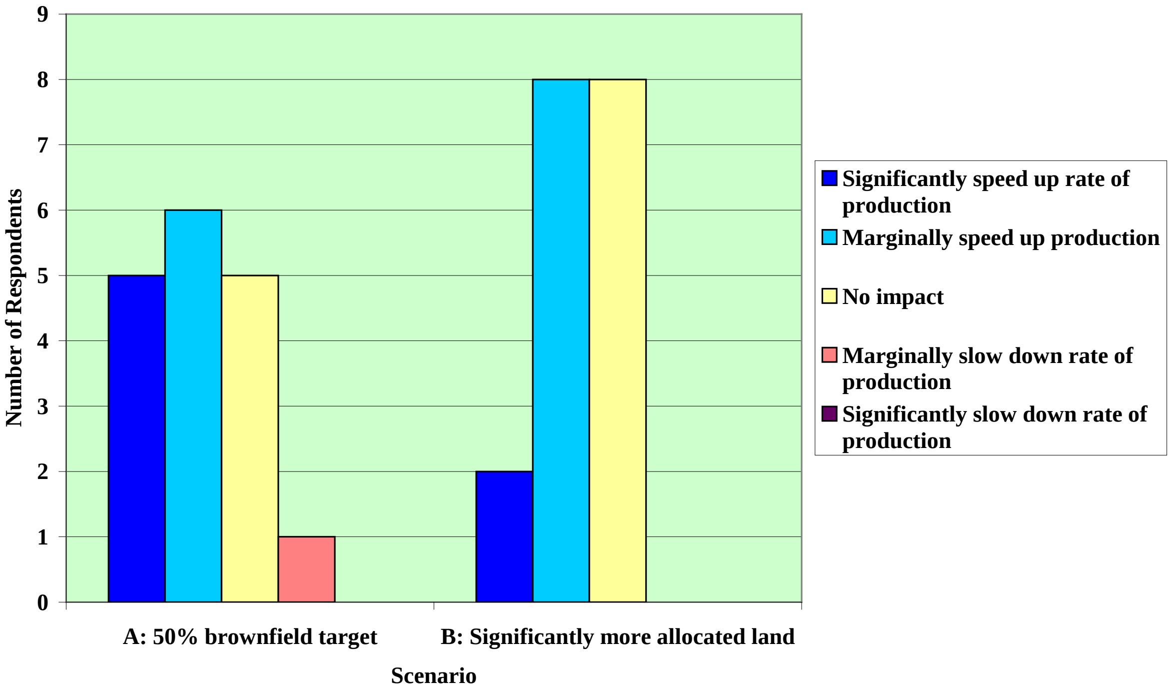
Taking this argument at face value, it is worth exploring how production rates really would respond to expected or actual shifts in land supply. Since predicting actual behaviour in the abstract is notoriously difficult, questionnaire respondents were asked to think how they might react to two specific policy scenarios. These were:

Scenario A	The Government reduces the national brownfield target from 60% to 50%. Respondents were asked what impact they thought this would have on the speed at which the 3 million new homes the Government wants to see built in England by 2020 are actually constructed.
Scenario B	It is known that a particular local planning authority intends to allocate significantly more land for housing development over the next ten years. Respondents were asked how they thought this might affect the rate of

production on those sites in its area where housing development by their company is already underway or is about to start.

Questionnaire responses to these two scenarios are shown in Figure 7. As respondents to Scenario A were asked to ignore any difference in the speed of planning decisions between brownfield and greenfield land, it is likely that the responses given to this scenario reflect the perception that development as a whole is less complex at greenfield locations.

Figure 7: Perceived Impact of Alternative Policy Scenarios on Housing Production



Although most respondents thought production rates would increase if there was significantly more land made available in a locality (Scenario B), very few felt this would be significant. This suggests a more complex relationship between overall land supply and sales rates than implied by some commentators. For example, one housebuilder interviewed for the research certainly considered that planning policies had raised landowners' expectations, to the detriment of housing quality. He thought that local planning authorities should seek to reduce landowners' expectation of value. He added: *"To boost land value we try and get as many houses on a site as possible which automatically brings us into conflict with the local planning authority. By increasing land supply, land values would drop and be able to generate layouts that were more compliant with LPA's in the first place."* However, another considered that *"If planning system were to release significantly more land in any locality, this would result in long-term price stability rather than price reductions."*

In this paper, we have argued that where land is in short supply and competition between developers is intense, housebuilders must assume the highest possible sale prices (and thus gross development value) in order to make winning bids for land. Ironically, such bids are viable only because the release of land is restricted in aggregate terms by the planning system, while the release of houses is managed on a site-by-site basis by the builders themselves to ensure the achievement of the target sales rate underpinning the earlier bid for land. Nevertheless, much caution is needed before suggesting that planners can readily reverse this linkage. Even if substantially more land were to be released, and the industry were to recover fully from the current recession, some considerable time may need to elapse before housebuilders became confident enough to bid for sites at the lower gross development values needed to sustain increased production rates over the long term.

5 CONCLUSIONS

Although speculative housebuilders have been largely responsible for the production of new homes in the UK, state regulation has played an important role in shaping the institutional structure of the industry. Alongside the well-established policy concern with the marketability of proposed housing sites, major policy reviews in recent years have placed fresh emphasis on increasing the overall supply of housing land and on seeing what can be done to accelerate production once development starts. These matters have local as well as national significance, since the view is often taken that local housing markets have only limited annual capacity to absorb new development. This view has important strategic implications for planning policy since it suggests the need to allocate more (and possibly smaller) sites for housing development and to disperse rather than concentrate that allocation.

This paper has taken a critical view of the concept of market capacity through connecting the normal speed of speculative residential development to the strategies housebuilders adopt to win the essential competition for land. The typical strategy of most companies who participated in the research was to aim for a build and sales rate of about one unit per week on greenfield sites and slightly higher than this on brownfield sites. This pace of development should be seen as a commercial construct that reflects the particular institutional structure of the British housebuilding industry and not be taken as a 'natural build-out rate'. Indeed, to achieve the ambitious development values necessary to capture land in the first place, it is essential for housebuilders to manage the pace of development and so limit the number of new homes available to be sold at any one time. Increased demand thus tends to lead to higher prices rather than increased output, while, in normal circumstances, decreased demand is addressed through incentives and increased marketing, rather than by cutting production. The more recent action of housebuilders to mothball development sites already in production demonstrates just how extreme is the current crisis for the industry.

We thus answer our first research question by highlighting how the presence or absence of local competitive pressures between housebuilders determines selling prices in relation to the second hand stock and thus the bids that can be made for land. Put simply, where builders know that the future supply of newly-built homes will be limited by restrictive planning policies, they feel both the need and the confidence to bid up the price of land. Our second research question can then be answered by pointing to the essential role that land supply plays in linking sales prices, sales rates, market capacity and construction rates. We have already suggested in answer to our third research question that the normal response of housebuilders to market changes is to use the price mechanism to manage demand or as one interviewee put it: *"Housebuilding a bit like a machine that has been set to work at a certain agreed pace – once it's in operation, you don't want to interfere with the machine.*" Finally, in answer to the fourth research question, although it is clear that the concept of market capacity reflects the particular structure of British housebuilding provision (in which the planning system plays a major part), it should not be presumed that rate of production would rapidly increase if significantly more land were to be allocated for development, since the complex institutional relations involved in the development of new homes would take some time to adjust to such altered circumstances.

We have not sought to speculate what might happen to the speculative housebuilding industry after the recession but would caution against those who rush to judgement by contending that the present structure of provision is about to give way to something quite different. There will almost certainly be a fresh round of mergers and takeovers in the industry but unless the fundamentals change quite dramatically, much of what we present here will continue to be relevant. The findings in this paper thus call for a more rounded understanding among planners and policy-makers of the economic drivers of the speculative housebuilding industry and for more thorough analysis among researchers of the relationship between alternative planning policies and those drivers.

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