

**INCREASING HOUSING SUPPLY:
ACHIEVING INCREASES AND ESTIMATING THEIR IMPACT ON PRICE,
AFFORDABILITY AND NEED**

Draft Paper for Barker Inquiry on Housing Supply (Phase 2)

Prof Glen Bramley
Heriot-Watt University, Edinburgh.

1 February 2004.

A. Introduction

This paper builds on contributions made to the first phase of the Inquiry, particularly some work on affordability, housing need, and the intermediate market which looked back retrospectively and changes since the 1980s. At the request of the Review Team, I have adapted my affordability model to undertake some forward projections under a range of assumptions about real house price growth. This entails examining a range of other assumptions and doing this raises issues which require consideration and are therefore discussed in the paper. But possibly the biggest issue posed is the question of what scale of additional housing supply is (a) feasible and (b) ideally required to attain desirable housing outcome targets. Since I have undertaken other research which is relevant to this question, particularly work on the impact of planning on the housing market, I have taken the liberty of having a quick look at this issue as well. This is discussed first.

2. How Much Extra Supply?

The key starting point is the previous commissioned work by Geoff Meen on 'Regional Housing Supply Elasticities in England' (October 2003), which built on some earlier work of his. This reached the rather striking conclusion that supply would have to increase very substantially (e.g. doubling or trebling) to reduce real house price growth to zero. Admittedly, this conclusion was based on a fairly simple macro house price model, with the implied supply requirement derived from the coefficient on housing stock. The author recognised that there was considerable uncertainty around this parameter, however. The paper presented a range of other evidence concerning low and falling supply elasticities and, perhaps particularly relevant in this context, the observation that in most other countries (even in the USA) there is a positive upward movement in real house prices.

I want to provide, by way of complement or contrast to Geoff's work, some evidence from my own modelling of local housing markets as a function of planning and other factors. There are two relevant models/sets of results.

- A. The work done for Rowntree with Craig Watkins as reported in *Steering the Housing Market* (Policy Press 1996) and refined a bit further in Bramley (1999) 'Housing market adjustment and land supply constraints', *Environment & Planning A*. This work was based on primarily cross-sectional analysis at

district level with explicit planning/land supply elements modelled (i.e. including the transmission mechanisms from policy to land allocated to output). Supply-Price feedback effects within this approach were obtained from simulations which varied in sophistication but were not directly derived from econometric estimates (for reasons which can be explained).

- B. Work done recently with Chris Leishman, also partly supported by Rowntree, and not as yet published, but covered by a paper which the Team have seen. This is based on panel estimation at a slightly larger spatial scale (c.90 former health authority areas in England). The model is a five-equation simultaneous system and supply-price feedback effects are derived from estimated relationships (the five endogenous variables are price, private completions, in-migration, out-migration and vacancies). Simulations are used to trace the medium term impact of changes in key policy-influenceable variables, including land availability. However, it should be noted that this is represented simply by the stock and flow of planning permissions, without more elaborate modelling of the transmission route from policy measures such as RPG.

I have conducted some simulations using model B, looking at policy changes implemented over 4 years and their impacts up to year 7. Ideally the base scenario would combine realistic economic trends and would produce housing market scenarios. It is actually difficult to generate 2.4% real price growth without quite high levels of income growth and/or quite significant squeezing of land supply (there is some evidence that this has been happening, of course). Therefore the base scenario is a bit of a compromise. I then look for a possible set of policy changes which would reduce real house price growth by the end of 4 years to x% less than the baseline figure, where for 'zero house price growth' x is -2.4% pa (i.e. around 10% lower after 4 years). Scenarios are varied between high, medium and low demand areas, so as to try to achieve equal proportionate price reductions in the first two cases whilst leaving the baseline assumptions in place in the low demand areas (to allow their markets to inflate somewhat). This model suggests that the following combination would achieve 'zero real house price growth' (defined as above):

- Increase the flow and (more progressively) the stock of planning permissions by two-and-a-quarter times in the high demand areas, with a similar increase in social housing output; this would yield a doubling of private output and a reduction of 10.3% in the price level after 4 years (-2.5% pa) in these areas
- Increase the flow and then the stock of planning permissions by about 100% in the medium demand areas, with a similar increase in social housing output; this would yield a 50% increase in private output and a 10.1% price level reduction (-2.4% pa).
- Allow these policy variables to continue to slowly decline in the low demand areas; this would yield a 10% higher level of output and 3.6% lower house price level (-0.9% pa) in these areas
- The overall weighted average (i.e. national) private supply increase would be 46% giving a price level reduction of 8.4% (-2.0% pa)

There are currently some technical limitations on the model which would ideally be overcome (although I'm not sure we have time to do this). One problem is that there is currently an inconsistency between the in- and out-migration numbers, which arises from the need to make the model converge. It would appear, from inspection of the coefficients, that if the migration numbers were more consistent, it might be necessary to have a larger supply shift to achieve this price outcome. Other problems concern the treatment of expectations in the migration model and the need to simulate policy inputs over a longer period.

There are some broader reasons for thinking that this model in its current form does not fully capture the price feedback effects from planning-induced supply changes, reasons to do with intra- and inter-regional interactions. It certainly suggests a lower impact (thus requiring a bigger supply change to achieve a given price objective) than my earlier models.

With these qualifications in mind we cannot say for certain that the supply increase required to generate the desired level of price reduction is exactly this much. These results give some indication of the order of magnitude. As such, they suggest that Geoff Meen's estimates are rather on the high side. The simulation described above emphasises the importance, also, of differentiating policy between regions. It suggests something like a doubling in the high demand areas, but much less elsewhere. This of course leads into another matter, that of practical feasibility. It may be particularly difficult to increase supply by this much in the high demand region (which includes most of London and its immediate surroundings). The large level of extra planning permissions needed to achieve this is particularly striking, and also raises issues about delivery mechanisms.

The earlier model (A) sheds some light on the transmission mechanisms from planning policy. The article in E&PA 1999 suggests that you would have to increase Structure Plan provision levels by 81% in those areas where this is possible (52% on average, allowing for the fact that some districts are constrained) to achieve the desired price impact. This assumes that Structure Plan provision is translated into Local Plan allocations (a fully functioning plan-led system). This model gives a lower increase in output itself (around 33%), so it is not fully consistent. This model errs on the side of assuming more price adjustment to a given supply change.

3. How to Achieve Extra Supply

All of the previous models which I have worked with concur that the supply function for new private completions contains an important term for the stock (and in some cases also the flow) of planning permissions for housing. In general, the effect of this term is less than proportionate; in other words you have to increase planning permissions by more than the amount of extra supply you are trying to achieve. In round terms, the impact of a larger stock of permissions at the margin is about a half. Increasing the flow may have an additional positive effect.

The logic of what I am saying in this section and the previous one is that we need a large quantitative increase in the amount of land released for housing, particularly in higher demand areas. This fairly directly contradicts the strictures of PPG3 (2000), which emphasizes maintaining a tight control over greenfield releases in order to boost urban brownfield output. I think that this may still be an appropriate policy in

low demand areas but I think it will have to be abandoned in high demand areas. This of course is very politically unpopular. While I support large-scale planned development in designated growth areas, I am concerned that this will not of itself be sufficient. There is a large swathe of southern England, particularly around the west side of London, which this policy will not affect.

There is a related issue here, concerning planning and land for business/economic development. The 1999 South East Panel report debated this, and reflected the current orthodoxy that it is not possible/desirable to try to direct commerce/industry away from the areas where it is seeking to develop. Whatever the merits of this position, it gives rise to a systematic inconsistency between planning for business (foot on the accelerator) and planning for housing (foot on the brake). The reason I would suggest 'local linkage' of planning allocations for housing and jobs is that this could act as a lever to motivate more land release for housing, as well as conversely acting as something of a mechanism to point some business development elsewhere.

Like Geoff Meen and others, we have found that the elasticity with respect to price is low and probably declining over time. In the recent model (B), the preferred supply equation has lagged price change rather than price level as the significant variable.

The work on Model A suggested that Structure Plan provision numbers were more likely to be translated into a flow of new permissions and additional completions if those numbers were actually allocated in operative Local Plans (the so-called plan-led system). That means the zoning of actual sites. This may have implications for the implementation of planning reforms. While the local plan approval process has clearly been somewhat sticky in the procedural sense, there is a danger of throwing the baby out with the bathwater if the new Local Development Frameworks do not actually allocate specific sites.

It is a fundamental feature of the system that most private housebuilding takes place at the initiative of developers and with the agreement of landowners. The planning authorities have negative power over this process, but do not have the positive power to make development happen in a particular time period. This suggests that, in a context of trying to achieve a step change in the level of housing output, there may be a role for more of what we used to call 'positive planning', i.e. publicly-sponsored agencies bringing land forward for development, with appropriate infrastructure, masterplanning, etc., and auctioning building licenses on this land. This might be done by special purpose vehicles such as development corporations, joint venture companies, URCs, or English Partnerships. In some instances CPO powers might be needed to expedite the process of assembling suitable sites and bringing them forward.

Some of the evidence presented in the Interim Report supported the contentions of much of the housing lobby that there was a substantial level of unmet need for affordable/social housing. The historical record indicates that Britain has only attained the kind of high levels of housing output now being considered by virtue of having a large volume of public sector building, directly by LAs or through NTDCs etc. The simulations I reported above using model B entailed a substantial increase in social housing output, and this appeared to make a significant difference. Taking these three points together, it can therefore be argued that there is a strong case for part of the strategy involving a substantial increase in the affordable/social housing provision,

particularly in high demand areas. Part of this could be targeted at the ‘intermediate sector’ and could be expected to translate mainly into owner occupation in the longer term.

Affordable/social housing output can be increased through more effective use of s.106 type planning powers. There is a lot more development value in new housing sites in high demand areas which has not yet been adequately tapped. However, these procedures need to be streamlined to avoid negotiations further gumming up the system. It is also essential that these measures are combined with a large scale increase in the total quantum of land being allocated through the planning system.

In the long run, affordable housing supply, particularly in the intermediate sector, can be envisaged as funding itself through a revolving fund mechanism, as occupiers ‘staircase’ or move on. However, to reach this position, it is necessary to make an initial injection of resources to get the sector up to the requisite scale. The same principle applies with special purpose land development vehicles. One of the fundamental reasons why we have got into a mess on affordable housing supply is that the Government (Treasury) has pocketed the proceeds of RTB and other asset sales, rather than reinvesting them in re-provision. I don’t know whether reforms in the way we account for public sector assets could help to overcome this problem. The ‘private finance’ RSL model works better in the sense that gradually, over time, RSL reserves build up and can be reinvested in new provision. However, this process is not very transparent and is vulnerable to the resources being squandered in organisational slack.

To sum up, my supply policy package would include the following:

- Large scale increase in RPG planning numbers for housing in the high and medium demand areas, not confined to 4 designated growth areas
- Commensurate allocation of specific sites in Local Development Frameworks
- Modification of recent obsession with not releasing greenfield sites other than in exceptional circumstances (in higher demand areas)
- Reinstitution of housing land availability registers and monitoring
- Rule linking housing land provision in LDFs to economic land provision
- Use of special purpose land development vehicles in major growth locations, taking on site assembly, infrastructure provision, masterplanning, and auctioning building licenses for early development
- Larger programme of new social and affordable housing provision in high demand areas, including a substantial element of intermediate sector (e.g. LCHO) provision
- More streamlined and intelligent use of planning agreement powers to deliver most of this new affordable housing in mixed schemes
- Commitment to recycle future public and RSL receipts from asset sales into future affordable housing provision

4. Modelling Affordability Impact

I turn now to the specific task I was set, of estimating the impact of different house price scenarios on affordability and need. The intention here is to build on the estimates previously made for the Inquiry in its first phase, by projecting them forward into the future under various different scenarios. This continues to use my local 'affordability-based housing needs model'. The details of this model have been explained to members of the Inquiry team and a further technical background annex could be provided if desired. The basic model has been described in various publications, including most recently my work for the Home Ownership Task Force. I have also compared its estimates with those derived from a different method, utilising a subregional analysis of Family Resources Survey data, in the course of developing an affordability index for the IMD (commissioned by NRU).

Very briefly, the model estimates local authority level income distribution patterns for the target group of households (those with a head aged under 35), broken down by household type/size. These are then confronted with threshold price levels for accessing the owner occupier sector, derived from SML and Land Registry datasets, again at local authority level. The key affordability number resulting is the proportion of the target household group who can (or conversely, cannot) afford to buy in the market. The remainder are assumed to be potential candidates for the affordable (social and intermediate) sectors. These proportions are converted into numbers by estimating the annual flow of new households forming, based on demographic data (primarily population in key age groups). Additional allowances are made for existing owners needing affordable housing, and (in other versions of the model) for migrants and backlogs of existing unmet need. These numbers on the demand/need side are then confronted with the annual number of net relets of social rented accommodation in each local area. Where demand/need exceeds supply, this scores as a positive need. In areas with lower demand or large existing supply, this methodology generates a surplus – however, these are not offset against the shortfalls, as it is assumed that needs should be met in the area in which they originate (most of the surpluses are in different regions from where the shortages are).

The model has mainly been used to provide snapshots for a particular year in the recent past. In the Barker interim report results were referred to for 2002 and for certain years earlier on in the decade, as well as previously published results from the 1980s. In order to undertake a forward projection, it is clearly necessary to roll forward the input data wherever possible to take account of predictable changes or reasonable assumptions of changes over the relevant period. This section describes the way that this has been done for different elements.

Broadly speaking, only some elements can be rolled forward explicitly, and even there the rolling forward often involves either a smoothly continuing trend or an assumption of constancy. A number of elements are projected on a common basis nationally, while some are projected differentially at regional level. Few if any are projected separately for each individual authority. Thus, although the model continues to operate at local authority level, it does so on the basis that most of the main patterns within each area remain as in the base period. Insofar as differential trends are introduced, this only really applies between regions.

The model starts from a base year of 2002. However, since much of the underlying data actually refer to 2001 (on slightly earlier, in the case of incomes), it is necessary to include roll forward from 2001 to 2002 in the modelling. The model is then rolled forward to four future dates (2006, 2011, 2016, 2021). All financial variables are projected in real terms, discounting general inflation.

We actually report two sets of results for 2002, the first using actual prevailing house prices, and the second using prices adjusted back to their assumed long run trend level. This is based on the findings on long term real house price growth over 30 years. My estimate, attempting to replicate this, is that prices were 24% above trend in 2002. Following discussion with the team, it was agreed that it was desirable to separate the impact of cyclical and trend factors in the affordability analysis. This is achieved currently by this simple device of estimating two sets of values for 2002. For the later years, all results assume we are still on trend; there is no attempt to simulate future cycles.

A possible refinement for this adjustment to trend might be to apply differential adjustments in different regions. It could be argued that some (southern) regions were more above trend than others. However, it could also be argued that the trends themselves are different between the regions. This would certainly make it more complicated.

I now discuss each element which is explicitly projected in turn, including some cases where it was decided that this was not feasible.

- *Incomes*: the basic assumption is that real GDP grows at 2.5% pa; this is the same as the assumption used by Geoff Meen. I don't know what the long term historic figure is, but I did check the Treasury's recent figures and medium term forecasts (average of independent organisations) and these suggested that over a seven year period 2000-2007 the average was 2.3%. I did try 2.3% but settled on 2.5% eventually for consistency with Meen. *Household income* growth is derived from this, but allowing for the projected national growth in household numbers. Since this runs at 0.6-1.0% pa over this period, the growth in household income is substantially less than the 2.5% GDP figure.
- *House price levels*: the basic trend growth rates are those prescribed by the review team, ranging from 2.4% real (the historic trend rate) down to 0.0% (the aspirational target). So far I have run these two rates, as they provide the boundaries as it were. The other proposed rates (1.8%, 1.1%) lie in the intermediate zone between these boundaries and their general implications can be inferred from initial results. As already explained, these rates are taken forward from the 'adjusted to trend' values for 2002, which are effectively 80.5% of the actual values in that year.
- *House price structures*: The model uses prices drawn from particular points in the distribution (lower quartiles, within size groups data permitting) rather than averages, although most time series simply analyse averages. In discussion the review team queried whether it would be possible to draw any conclusions from the evidence about variations in the structure of house prices. I have briefly investigated this, particularly looking at relationships between lower quartile, median and mean, over time and across regions. I

attach two tables of illustrative ratios. There are some differences between regions, and some differences in the recent trends. The ratio of LQ to mean has fallen in the northern regions and overall, but risen in London and SE recently. I attempted to fit a cross-sectional regression to district data using some relevant predictors but the overall fit was poor (r-sq about 0.2). My conclusion is that this is not a robust basis for attempting to model varying relationships over future periods. Thus the current projection assumes uniform percentage changes in threshold prices in all areas, as specified above.

- *Household numbers*: regional rates of growth for each GO region for each 5-year period are derived from the most recent (not very recent) household projections. These are assumed to apply equally to each LA within each region.
- *Population numbers*: the national average change in average household size in each five year period is applied to household numbers to generate population changes from the 2001 Census base.
- *Household composition*: this is quite important for the generation of income distributions and housing size requirements. National rates of change for the percentage shares of each of four main household types, and the ratio of children to adults, are calculated from the household projections for each five-year time period. These are then applied to the base LA household composition derived from the 2001 Census. Resulting household composition is controlled to sum to 100%. The translation from all ages to under-35 composition continues to rely on relativities derived from the base SEH data.
- *Tenure composition*: The change in the share of social rented housing between 1991 and 2001 is calculated for each region. These regional trend rates of decline in social renting share are then used to project shares from the 2001 base to each future year (common trends across all districts in each region). These trends reflect the combined impact of differential rates of RTB sales and new social renting provision. As it stands this model makes no allowance for a new, different regional pattern of new social housing provision or RTB take-up. The reduction in social renting is assumed to equate to a corresponding increase in owner occupation.
- *Unemployment*: This is of some significance for income distributions, mainly via the predicted shares of no- and two+-worker households. Changes up to 2006 are based on Treasury published average of independent medium term economic forecasts, showing a slight rise of around 5% which is applied to the 2001 Census base. It is assumed that there is a further rise to 10% above base in 2011, with a constant level thereafter.
- *Economic Activity*: This is also of significance for the same reasons. Inspection of Treasury 'Pocket Data Bank' information on the LFS employment rate (% of working age) suggested that this moved inversely with claimant unemployment, with an elasticity of just over -0.1 . The economic activity indicators are adjusted accordingly in line with the assumed unemployment change (clearly the effect is very slight).

- *Interest Rates:* Mortgage interest rates are shown in Treasury data to average 4.96% in 2001, while the average of independent forecasts implies a rise to 5.86% by 2006. Rates are assumed to level off at 6.0% thereafter. Interest rates are marginally significant to the secondary test of affordability, to shared ownership affordability, and to the relets prediction equation (see below).
- *Net Relets:* This variable is extremely important in the needs part of the calculation, and relets are both quite variable locally and subject to significant trends over recent years, which we have investigated in previous research. For this exercise we undertook some modelling, both using the cross-sectional LA dataset and the panel dataset underlying Model B described above. The latter was deemed more suitable for this purpose, and yielded a reasonable regression equation explaining about half of the variance. Coefficients derived for six time-varying factors (income, unemployment, employment rate, mortgage interest rate, house price level and change) were used to predict changes from the base level consequent on changes in these factors embodied in the projection. In this way, relets can be seen as modelled endogenously. Relet rate (%) derived in this way is applied to the social rented housing stock derived as described above to yield absolute number of relets.
- *New Household Formation:* This factor is also crucial to the needs calculation. The formula used is a relatively simple function of the population in two key age groups (16-29 and 30-44) and the existing number of households. Census data on the age structure of the existing population is used to ‘age’ the relevant cohorts in each locality in five-year steps, with the actual numbers derived from the new percentage shares applied to the total population calculated as above. There is clearly no allowance here for differential in and out migration by age, and no allowance for differential household formation consequent on different local market conditions. One defence of this approach is that it provides a more equitable basis for needs assessment.

Everything else in the model is assumed to remain the same. This applies for example to the wide range of factors which are used to predict relative income levels in different localities – occupational and industry mix of employment, relative earnings, part-time working, car ownership etc. It also applies to the affordability criteria, of which the key assumption is the lending multiplier of 3.5 for a single earner and 0.85 of this for two earner households. There is a secondary test of affordability based on residual income relative to 120% of the IS/HB applicable amounts. These are assumed, following recent policies, to be adjusted only with inflation, i.e. not raised in real terms. Therefore the secondary test becomes progressively less significant over time under scenarios where real house prices grow.

5. Results on Affordability and Need

The first part of our simulation measures the impact on affordability and need of house prices being significantly above trend (by about 24%) in 2002. The model suggests that this alone would alter the average affordability rate by 9.1% points. If prices in 2002 had been on trend, 46.4% of target under-35 households would have

been able to afford to buy on the basis of their income, compared with the actual estimated figure of 37.1% given actual price levels.

Translating this into numerical needs, the national total of net positive needs (flow of household units per year) would have fallen from 125,000 to 91,000, a drop of 34,000 or 27%, if prices had been on trend rather than at their cyclically high level. This gives a measure of the substantial impact of the house price cycle on housing needs. Most of this difference is due to the easier affordability and its impact on the assumed constant flow of new households. About 4,650 of the fall is attributed to the somewhat higher level of relets which the model generates, given this difference in house prices.

This 'adjustment to trend' exercise is relatively simplistic. The price reduction is applied at the same percentage rate to all regions, even though some might argue that some regions were more above trend than others. The only consequential market adjustment include in the calculation is the impact on relets mentioned above.

What then happens subsequently under the different price scenarios? If we assume that house prices then continue to grow on the historic trend path at 2.4% per year in all regions, the model suggests that affordability would gradually decline. This key indicator falls from 46.4% in 2002 to 44.9% in 2006, 43.8% in 2011, 42.5% in 2016 and 41.8% in 2021. So there is a definite trend to declining affordability, although the rate of decline diminishes somewhat over time. Why does affordability decline, despite the assumed 2.5% growth in GDP, slightly above the house price trend? The main reason is that household incomes grow significantly less than this, because of continuing growth in household numbers due to both growing population and declining household size. Secondary effects associated with household type composition (e.g. more single person households) and slightly higher unemployment play some part.

The model suggests that affordability would decline more in London and the south while remaining more static in the northern regions. This is clearly illustrated in the first of the attached figures.

Under this scenario, net housing needs would rise at first, although at a diminishing rate, with a levelling off and slight decline after 2016. This pattern of increase reflects the affordability trend described above, but the levelling off can be accounted for by the projected number of new households peaking and then falling off after 2011. Relets fall at first but then rise slightly later on. No account here is taken of possible accumulating backlogs of unmet need (see further discussion below). The rise in needs is more apparent in some regions, as illustrated in the fourth of the attached Figures. Needs rise significantly in the East and South West, whilst actually falling in London. This is partly due to demographic differences, with new households rising in the former regions whilst falling in the latter. However, this may be an artefact of the projection methodology, which ignores age-differentiated migration patterns. Relets are also projected to rise in London while remaining static in the East.

While house prices rising at the historic trend is treated as the 'worst case' here, the 'best case' is that of house prices being static in real terms. The model shows that this would bring about a major improvement in affordability. Affordability would climb steadily from 46.4% in 2002 (trend) to 59.1% in 2021. The rate of increase would if anything rise over this period. In other words, there would be a major turnaround in

affordability under this scenario, with a majority of target households able to buy from about 2008 onwards. By 2021, house prices would be 36% below the level of the first scenario, and affordability would be 12.7% points higher.

This impact on affordability might seem rather modest, given the scale of the cumulative house price difference. One reason is that we apply a secondary affordability test relating to residual income and the poverty line. Although we only move the poverty line with inflation, if house prices don't rise above inflation then many households in the northern regions remain constrained by this secondary test (49% of households in the North East) throughout the period, whereas in the first scenario of rising real house prices less households are constrained in this way by 2021 (only 28% in the North East).

The impacts on housing need seem rather more dramatic under this scenario. Instead of rising from 91,000 to 100,000, needs fall progressively to only 36,000 by 2021, a fall of 60% from the 2001 trend level, and even more from the cyclical high of 2002. The rate of decline is pretty much linear, and as the Figure shows affects all regions. Interestingly, however, the proportionate decline in needs is greatest in London (-73%) and least in the East of England (-36%); the South West and East Midlands also show more persistence of need. A number of factors could contribute to this outcome. About 14,000 of the overall 55,000 reduction in need may be attributed to the higher level of relets consequent upon the lower level of house prices in this scenario.

Although this is not part of the brief, the model also yields estimates of the annual surplus of social lettings in those regions characterised by lower demand. This surplus totals 64,000 in 2002, would rise to 77,500 on moving to trend, and would rise further to 85,000 under the zero price growth scenario (but would fall to 51,500 under the trend growth scenario).

This report concentrates mainly on the two boundary scenarios of house prices rising at 2.4% real and at zero % real. The implications of intermediate house price growth scenarios can be largely judged from the results reported above. However, it is worth reporting one of the proposed intermediate scenarios briefly. House price growth of 1.8% real would yield and affordability rate in 2011 of 46.0%. This is very similar to the 46.4% rate given for 2002 (trend), indicating that this level of price growth would be just about low enough to hold affordability approximately constant. This can be contrasted with the rate of 43.8% when prices grow at 2.4% real. Similarly, the level of net housing need would be 89,700 in 2011, marginally below the figure of 91,000 for 2002 (trend). So this confirms that such a price scenario would be consistent with a more or less constant level of affordability and need.

The large numbers generated by the model for net need for affordable housing, particularly in the 2002 cyclical peak and more generally under the trend house price growth scenario, do beg questions about what happens to these households. Current new provision of social and other affordable housing is only of the order of 30-40,000, so there would appear to be a large shortfall. What happens to the households apparently priced out of owner occupation? Based on general knowledge of the British housing market and past experience one can suggest a number of potential mechanisms to absorb this shortfall.

- Some households with insufficient income to buy manage to get access to some wealth (e.g. from family sources) to make significant deposits and thereby overcome the income constraint; this seems to be particularly significant at the moment.
- Some households enter house purchase with levels of borrowing above our assumed affordable/prudent levels, thereby exposing themselves to somewhat greater pressure and risk but probably, in most cases, getting away with it (at least if economic conditions remain benign and stable)
- Some households migrate to localities within the same region which offer lower house prices, possibly in exchange for longer commutes.
- Some households may migrate to lower demand regions, where they may also have the option of moving into some of the surplus social housing there.
- More households move into or remain longer in the private rented sector; this is particularly feasible when the sector is expanding, as in the early-mid 1990s.
- Others defer separate household formation and remain longer with parents or share with other adults
- For many members of the latter two groups, this effectively means deferring entry to owner occupation to a later age, when incomes are higher or more secure, although some may never enter.

Some of these cases may end up contributing to an increasing ‘backlog of need’, where need is defined in terms of some shortfall from normative housing standards (e.g. overcrowding, sharing). It is unclear exactly what is the ‘equilibrium’ balancing level of net affordable need relative to new affordable (social or intermediate) supply, but such an equilibrium may be conceived as one where backlogs of normative need were static. With new provision running at 30-40,000 per annum, one would guess that this figure is considerably larger than this, but less than the levels recorded recently (e.g. 125,000 in 2002), which clearly seem to be boosting evidence of need in the high demand regions.

Analagous questions may be asked about what happens to the surpluses being clocked up in low demand regions (as discussed in Bramley 1998), but this goes beyond the scope of this note.

The model could be adapted to some extent to take account of different scenarios for the future evolution of social rented housing stock, consequent upon new policies to promote greater supply. These would be likely to differentiate between regions, and would best be handled in a more general model of differential regional change.

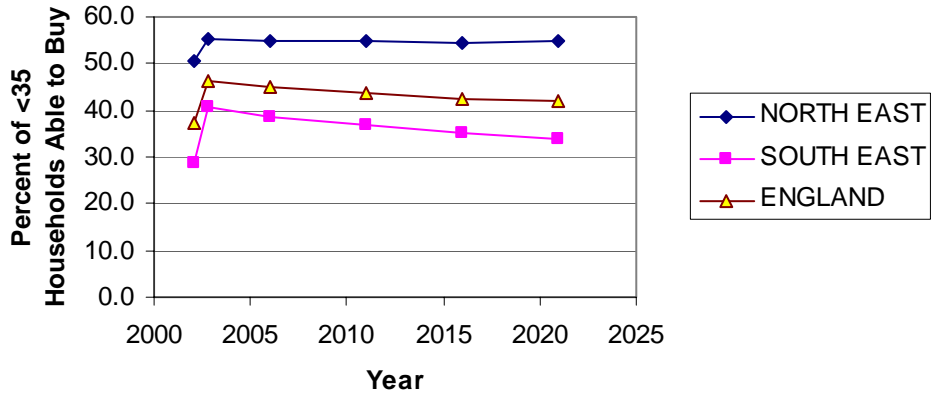
The point has already been made, by the Home Ownership Task Force and in my earlier submission to the Barker Review, that much of the ‘excess’ need for affordable housing could be met by LCHO and other forms of intermediate provision. For example, in 2002 (cyclical peak) the model suggests that 21-25,000 of new need could be met by shared ownership/Homebuy type mechanisms. This would fall a bit, to 16-20,000 under the 2002 trend price level. Shared ownership is rather sensitive to

how its financing is modelled, but the simpler Homebuy option can be shown to offer a fairly steady potential of up to 22,000 throughout the house price growth scenario. This would drop off progressively under constant real price scenario (reinforcing the view that the intermediate market is partly a function of high real house prices).

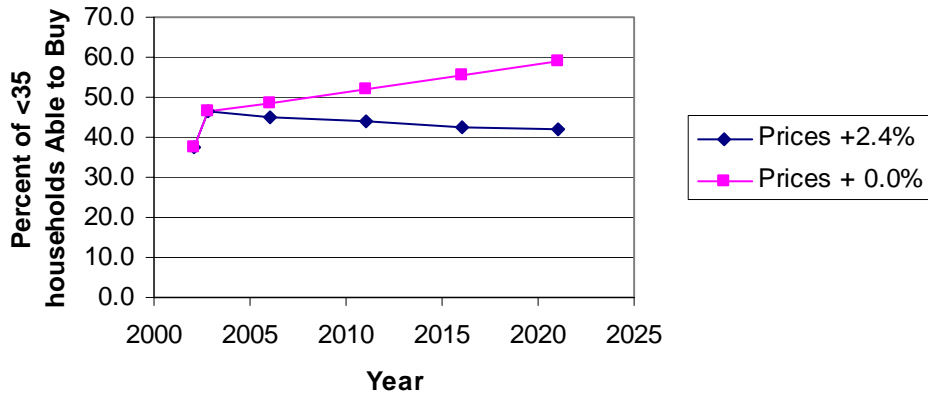
As shown in my previous submission, proactive use of LCHO and other intermediate options to tempt more existing social tenants out of the sector and release more relets could further increase the contribution. In Table 9 of my previous report, I suggested that a total programme of 48,000 LCHO/intermediate units might be justified on this basis, equating to 38% of the overall net need in 2002.

As suggested earlier in this report, LCHO is financially attractive to the public sector because it involves shallower subsidies which are more likely to be recycled in future. In addition, it fits well with the greater use of planning agreement powers to encourage mixed tenure developments.

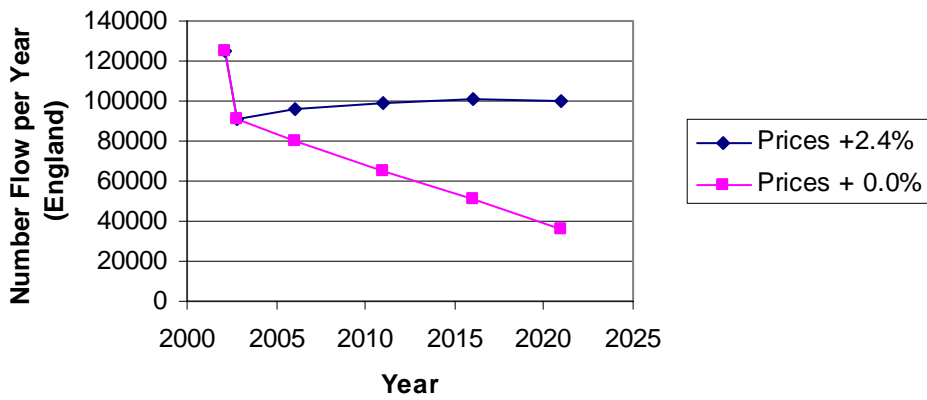
Affordability with Trend House Prices by Selected Region



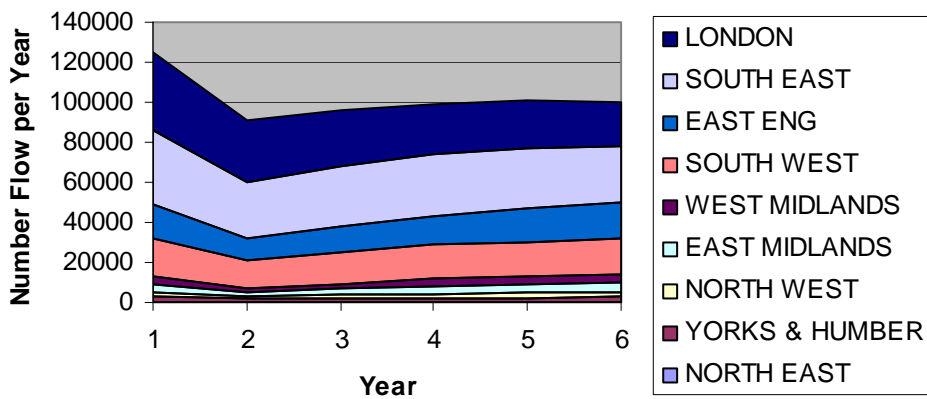
Affordability with Trend vs Static Real House Prices - England



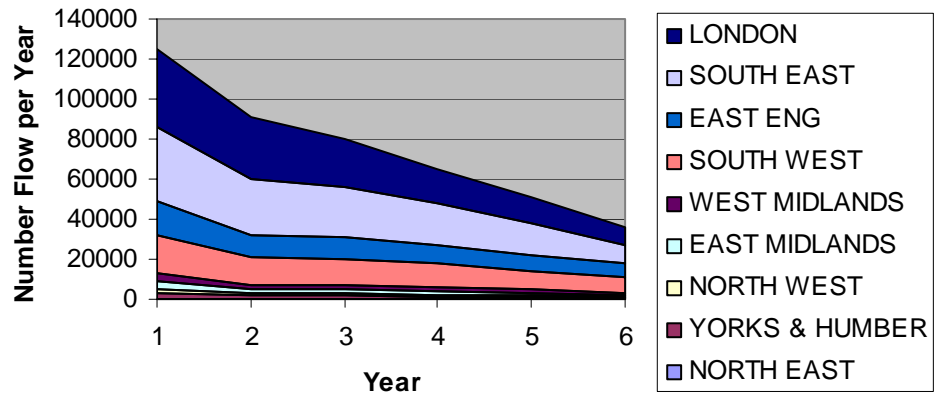
Net Positive Need for Affordable Housing with Trend and Static Real House Prices - England



Net Positive Annual Affordable Housing Need with Trend House Prices by Region



Net Positive Need for Affordable Housing by Region with Static Real House Prices



Annex: House Price Structures

Ratio of Lower Quartile to Mean by Region and Year 1996-2002
using Land Registry Data

Ratio of LQ to Mean							
	1996	1997	1998	1999	2000	2001	2002
NE	0.59	0.59	0.56	0.56	0.55	0.53	0.49
NW	0.60	0.59	0.57	0.55	0.52	0.50	0.49
YH	0.62	0.61	0.60	0.59	0.56	0.54	0.51
EM	0.62	0.62	0.59	0.59	0.57	0.57	0.59
WM	0.62	0.60	0.59	0.58	0.56	0.55	0.56
EE	0.60	0.58	0.56	0.57	0.54	0.57	0.59
GL	0.53	0.49	0.49	0.50	0.49	0.55	0.58
SE	0.57	0.57	0.55	0.55	0.54	0.56	0.60
SW	0.62	0.61	0.60	0.60	0.57	0.60	0.61
ENG	0.56	0.55	0.52	0.51	0.49	0.49	0.50

Ratios of Lower Quartile to Median within Bedroom Size Group by Region 2002
using SML data for all purchases.

Regional Ratios of LQ to Median				
Region	!B	2B	3B	
North East		0.670	0.689	0.686
Yorks and Humber		0.642	0.677	0.694
East Midlands		0.737	0.799	0.760
Eastern		0.779	0.795	0.769
London		0.800	0.812	0.817
South East		0.800	0.783	0.804
South West		0.821	0.821	0.781
West Midlands		0.755	0.764	0.773
North West		0.693	0.682	0.724
Wales		0.781	0.729	0.717
Scotland		0.697	0.733	0.679
Northern Ireland		0.543	0.794	0.800
United Kingdom		0.712	0.686	0.668
Min		0.543	0.677	0.679
Max		0.821	0.821	0.817

