

The Deliverability and Affordability of Housing in the South West of England

*Professor Glen Bramley,
James Morgan
Heriot Watt University*

*Sarah Ballantyne Way,
Lin Cousins,
Dominic Houston
Three Dragons*

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Executive Summary

Introduction

1. To investigate the impact of large-scale housing developments, the Royal Town Planning Institute (RTPI) South West region commissioned research designed to:
 - increase understanding of the ways in which the housing market has and is changing; and as a consequence;
 - assist with the adoption of more appropriate approaches to the delivery of housing that is genuinely more affordable.
2. The research, undertaken by Heriot Watt University and Three Dragons, combined analysis of data about the housing market and housing supply in the South West with an investigation of six case studies of large-scale developments in the region. The case studies were chosen to represent a range of locations, values, site types and scales and stages of development. The case studies range from 650 dwellings to around 8,000 and are predominately residential developments, although in the larger schemes there is also the provision of a mix of non-residential uses including retail and community uses (for example, schools) and employment.
3. The case studies are:
 - Bath Western Riverside (Bath)
 - Charlton Hayes (South Gloucestershire)
 - Cranbrook (East Devon)
 - Monkton Heathfield (Taunton)
 - Sherford (Devon)
 - Tolgus (Redruth)

Key findings

House prices and affordability in the South West

4. Affordability is a problem across the region and the South West is one of the least affordable regions in England, with affordability levels close to those of the South East. Adjusted for inflation to 2016 values, the average house price in the South West in 1983-89 was £89,950; and in 2010-15 it was £238,650, a rise of almost 2.6 times over 30 years. This increase far outstrips income growth.
5. In terms of both sale prices and market rents, highest values are found in the larger urban areas that are closer to London and the South East, such as Bath, Bristol and Bournemouth. Bristol proves to be the most unaffordable area for both buying and renting and is also one of the five areas in the South West which have experienced the sharpest house price inflation in recent years – the other four are Bath, Swindon-Cotswold-Downland, Salisbury and Bournemouth. This pattern reinforces the picture of greatest pressure on the housing market of the major urban areas in the South West that are closer to London and the South East.

6. Many younger households who would previously have bought are currently renting (so-called 'generation rent'), because of difficulties in accessing home-ownership. The share of under-40 year old households who own a house across England has fallen from 69% in 2001 to 49% in 2011 with an even steeper fall, in areas like Bristol and Bath, and a model forecast of further falls to around 35%.
7. It should be noted that while this study is specifically about supply it is acknowledged that house prices/affordability are strongly driven by demand factors, interacting with sticky/inelastic supply, and that this excess demand is reflected in both house prices and land values. Demand can be stoked-up by easy credit, tax concessions, including by investors as well as would-be owner-occupiers, as well as by the traditional factors of incomes and demographic growth.

Need and housing supply

8. New housing supply, through housebuilding completions, has been in serious decline over quite a long period and the trend in the South West has mirrored that of England as a whole. This is well illustrated by the rate of housing completions per 100 households. In the South West, the rate was around 1.75 in the late 1980s and is currently running at around 0.75. As the RTPI has argued, the causes of the housing affordability crisis in many parts of the UK are complex and multi-faceted, but a decline in supply coinciding with a period of unprecedented population growth has undoubtedly contributed to the affordability problem in the region.
9. Reflecting this, there is a considerable net need for additional affordable housing across the region but again the pressure is greatest in some of the region's main urban areas – in Bath, Greater Bristol and Greater Exeter.

Scale and impact of the case study schemes

10. Large-scale developments, such as the case study sites, do not immediately lead to lower house prices, and new build sales in the case study sites tended to be priced somewhat above the median level for the housing market area in which they are found.
11. Nevertheless, because of the increase in supply these strategic sites deliver, over the longer term (modelled to 2031) house price increases are slowed and affordability is improved. Our modelling indicates that house prices would be lower in the housing markets where the case studies sit by between 1% and 8% by 2021 and by between 2% and 15% by 2031 than they would be if the schemes were not built. The ability of younger households (aged up to 40) to buy, given normal mortgage lending criteria and taking account of estimated income distributions, is improved by 5-8% by 2031. Inevitably, the impact on prices and affordability depends on the scale of the new developments in relation to the scale of the housing market area in which they sit.
12. At the same time as the increase in supply has a positive impact on affordability, large-scale schemes also provide opportunities to deliver a steady flow of a relatively large amounts of affordable housing (of around 25-30% of the total dwellings).
13. Although these improvements in general housing market affordability could also be achieved if a similar number of new homes were provided at the same pace across a number of smaller sites, it is not clear that a multiplicity of smaller sites would be built-out any faster than or be subject to the same S106 obligations as the type of large-scale development reviewed in this research.

Timescale for strategic sites to development beginning

14. Large-scale strategic developments take time to start to produce housing completions. For the case studies, on average it is 10 years from the time the schemes were first identified in a (regional) plan until development began.
15. There is no single reason for the time taken with issues around land ownership, funding availability, working relationships and guidance all playing a part. The market down turn of the late 2000s also held back development in most of the case studies.
16. Once the schemes are started, they can deliver up to 250-350 dwellings per annum. However, the flow of completions can be erratic year-on-year and will depend on a number of factors including the pipeline of full permissions, the strength of the local market and the perceived attractiveness of the scheme to draw in purchasers.

Role of design and master planning

17. Design has an impact on deliverability of schemes. Some of the case studies have had particularly design-led approaches and these are expected to have longer-term commercial gains. However, they may also have short-term tensions with more standard approaches to delivery and if misjudged, may constrain market and affordable housing delivery.
18. Both the private sector and the public sector have a role in the masterplanning and design guides. While the original masterplanning will be undertaken to support the promotion of the site, there is also a role for the local planning authority to maintain oversight of the design process to ensure the desired quality is safeguarded and for the officers and committee members to uphold the principles set out.
19. Over time, there will be occasions where masterplanning will need to be revised (for example in response to changes in national standards) and therefore some flexibility is important. But this has to be weighed against the commercial need to understand long-term requirements.

Local authority approaches to strategic sites

20. Delivering large-scale development requires a range of skills and approaches that may be unfamiliar and authorities have responded in different ways to the challenge. This includes setting up bespoke and dedicated in-house local authority teams through to bespoke structures that combine multi-authority input along with the developers/land owners. These organisations (perhaps labelled as projects or delivery boards) may be set up and have oversight for one scheme or for the growth of a wider area and they typically include the local authorities and the developers/landowners involved as well as the major potential funders (the Homes and Communities Agency and the Local Enterprise Partnership).
21. However established, increasingly the teams bring together a range of traditional planning skills, alongside development and funding knowhow with senior level involvement. It is now unusual for an authority to deal with this scale of development through its standard development management route.

Types of housing provided

22. The case studies include different development types and the development characteristics reflect this – with flats provided in higher density regeneration sites and in the parts of the town centres for new settlements and predominantly houses in the more suburban settings.
23. Delivery of affordable housing is guided by local targets, but varied due to scheme specific factors. Large schemes can have a major impact on whether a local authority meets its affordable housing targets. However, the proportions and type of affordable housing achieved often differed from plan targets, usually because of changed grant funding priorities and emerging scheme viability issues which meant less affordable housing can be delivered and/or the tenure mix changes. Some of the affordable housing built-out was grant funded and some not, and there is not always a clear link between amounts of affordable housing achieved and grant available.
24. Schemes were able to deliver accessible housing for affordable homes and improved building regulations is making accessibility in the private sector more widespread. Wheelchair accessible housing has been provided in affordable housing in response to identified need.

Viability issues

25. Viability issues emerged as a common theme across all the case studies. These issues can affect a scheme across its life. While the main viability discussion takes place as part of the outline planning permission process, external events later on (for example the property market downturn of 2007-08) can result in changes in the scheme's circumstances and renegotiations. New phases of development and new (outline) planning applications also tend to lead to renewed viability discussions.
26. Viability issues differed subtly between the case studies, depending on, amongst other factors, affordable housing requirements, public funding availability and infrastructure needs. While different solutions were identified for each case study, they usually involved compromises between the amount and type of affordable housing secured and other infrastructure provided.
27. Where the site is required to provide substantial infrastructure (for example, off-site transport, schools, town centre facilities), the viability issues that arise can be sufficient to halt progress until some solution such as funding support or reduced planning obligations can be arranged. Viability issues are exacerbated where the infrastructure is required early in the development, with an adverse impact on cash flow.
28. The type of housebuilder involved in large-scale developments is currently limited to the major national developers (as well as to the major housing associations). Proactive planning is required to broaden the range of businesses involved.

Funding

29. Some of the case studies have been in receipt of substantial amounts of public funding either in support of affordable housing delivery and/or infrastructure needed to bring forward the development. Others though have had little if any public funding and there is not a clearly defined relationship between identified need for funding and its availability.

30. Obtaining external funding to support the development depends on a number of factors and simply identifying a general need for funding is unlikely to be sufficient. The research identified five factors that seem to be important in securing public sector funding:

- i) a clear development strategy shared across all relevant authorities;
- ii) high level political agreement on what is required and priorities for funding;
- iii) 'ready-to-go' schemes that can pick up short term funding opportunities;
- iv) a clear 'single voice' to funders so it is apparent what is required; and
- v) lobbying to ensure the value of the scheme is understood by funding decision takers and local and national politicians.

Key messages for policy and practice

31. Steps within the control of the local authority which could form part of good practice in delivering large-scale developments include:

- Early identification of potential schemes including analysis of key challenges such as land ownership consolidation and infrastructure constraints;
- Once scheme promoters and developers have emerged or been identified, a partnering relationship with these stakeholders is established as soon as possible – this may be best as a bespoke single-purpose group;
- Giving consideration to development corporation approaches (either private or public sector-led) as well as joint venture models;
- Leadership within the local authority, including member support, which establishes the importance of the scheme to the authority and how it fits with the authority's objectives and plans;
- Robust design guides and masterplans that can support and potentially streamline the planning process, and assist both the local authority in meeting its objectives and developers in providing a level playing field;
- Local authorities and their partners need to have good intelligence of potential sources of funding and senior figures should be proactive in promoting the scheme in terms of the objectives of funders;
- Ensuring that there is adequate capacity within the authority with the right skills, including expertise in viability so can act as an 'intelligent client' (even if external organisations undertake specific assessments);
- Building in flexibility and review in major projects going over many years to take account of changing markets and impacts on viability;
- Sharing knowledge and experience with other local authorities working on similar schemes to strengthen good practice.

32. Central government, local government associations and organisations such as the RTPi itself could play a significant role in providing practical guidance for local authorities on good practice in delivery of large-scale development. This could include establishing networks to share knowledge between a peer group of local authorities with experience of large-scale developments.

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1. BACKGROUND TO THE STUDY

Study purpose

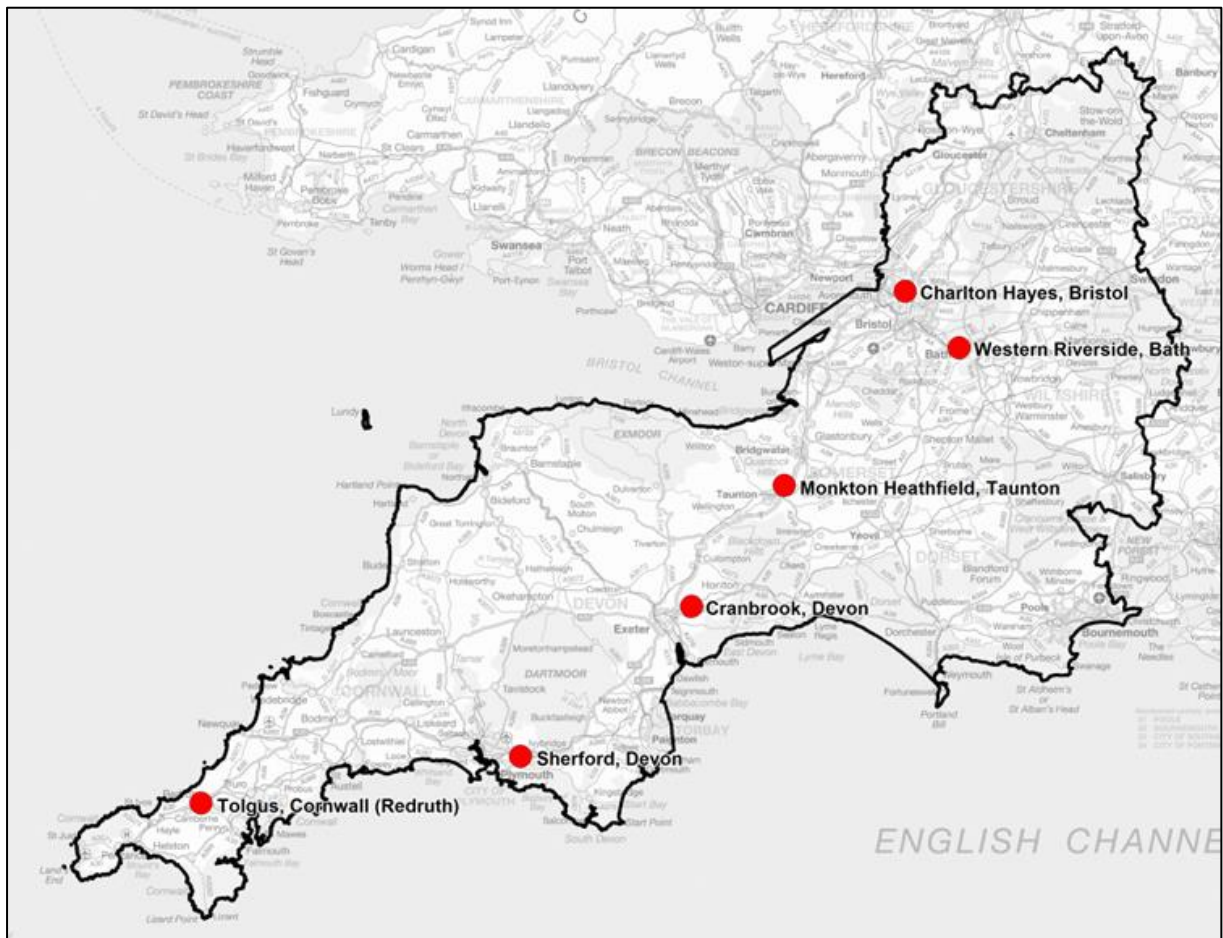
- 1.1 The core purpose of the study, as set out by the RTPI South West Region, is to “...enable planners and others to get a better idea of what has been happening to housing delivery and house prices” with the aim of increasing “...understanding about the ways in which the housing market has and is changing and, as a consequence, to assist in the adoption of more appropriate approaches in the delivery of housing that is genuinely more affordable.” Annex A replicates the study objectives in full (drawn from the study specification).

Research approach

- 1.2 Two main types of research have been undertaken to inform the study. The first is an analysis of a range of data sources to track issues of affordability and housing supply in the South West, in comparison with other parts of England and the country as a whole. The results of this analysis are set out in section 2.
- 1.3 The second research strand is an investigation of six case studies of large-scale developments in the South West. The case study schemes were chosen to represent a range of locations within the South West; in locations with different market values, different site types (greenfield and brownfield, urban extension or freestanding) and scale of development – with a minimum site size of 500 dwellings and including sites with over 2,000 dwellings. The case studies are at different stages in the planning/development pipeline and are all predominately residential.
- 1.4 The case studies selected were:
- Bath Western Riverside – Bath
 - Charlton Hayes – South Gloucestershire
 - Cranbrook – East Devon
 - Monkton Heathfield – Taunton
 - Sherford – Devon
 - Tolgus – (Redruth) Cornwall

The location of the case study schemes is shown in the map below.

Figure 1.1: Location of Case Studies



1.5 The research for each case study included a mix of desk based analysis of their planning history alongside a series of confidential telephone interviews, typically lasting between 30 and 45 minutes. Interviews were guided by a series of discussion agendas agreed with the project steering group and were undertaken with local authority officers (planning and housing in all cases, highways where relevant), developers/housebuilders, housing associations active in developing the scheme, other organisations involved in their development – typically in a funding role (including the Homes and Communities Agency (HCA), Environment Agency (EA), relevant Local Enterprise Partnership (LEP)). In total, over 30 interviews were undertaken across the six case studies. We also attempted to identify and interview the original land owners of the case study sites but this did not prove possible.

Key characteristics of the case studies

1.6 The case studies range from 650 dwellings to c.8,000. Three of the six have more than 4,000 dwellings. Only one case study has yet to have any housing starts (Tolgus) while Charlton Hayes is almost complete. The table below gives the key facts about the case studies.

Table 1.1: Key Characteristics

Case Study	Location	Development Type ¹	Dwelling nos.
1. Bath Western Riverside	Bath	Urban regeneration	2,300
2. Cranbrook	East Devon	Free-standing new settlement	c8,000
3. Charlton Hayes	South Gloucestershire	Urban regeneration/Urban extension	2,200
4. Monkton Heathfield	Taunton Deane	Urban extension	4,500
5. Sherford	South Hams/ Plymouth	Free-standing new settlement	5,500
6. Tolgus	Cornwall (Redruth)	Urban extension	650

- 1.7 The case studies also include a mix of non residential uses, typically retail and community uses (for example, schools) and employment. Depending on the scale of the development, non-residential uses may be agglomerated to provide a new ‘town centre’ or ‘local centre’ which is formed as the residential development is built out.

Planning policy context

- 1.8 The case studies have their origins in the regional planning policies of the 1990s. Their planning history is explored in detail in section 5. They were being planned at a time when provision of affordable housing had already become part of plan-making. Circular 7/91 (Planning and Affordable Housing)² established the principle of providing affordable housing in mixed tenure schemes over 25 years ago, as the following extract illustrates:

“A community's need for affordable housing is a material planning consideration which may properly be taken into account in formulating local plan policies. It may be desirable in planning terms that new housing development on a substantial scale should incorporate a reasonable mix and balance of house types and sizes to cater for a range of housing needs. Where there is a demonstrable lack of affordable housing to meet local needs, planning authorities may reasonably seek to negotiate with developers for the inclusion of an element of affordable housing in such schemes, and may include policies in local plans indicating their intention to do so.” (C7/91)

- 1.9 Since C7/91 the size of sites on which affordable housing can be sought has changed. C6/98 in 1998³ set this at 25 dwellings or 1 ha, while PPS3 in 2006 reduced this to 15 dwellings or fewer, or 0.5ha. In 2012 thresholds were abolished but reintroduced at 10 dwellings in 2016 (except for AONB and designated rural areas which can ask for an affordable housing contribution on sites of 6-10 dwellings).
- 1.10 C6/98 also introduced an important consideration for the delivery of affordable housing – that the economics of provision should be taken into account in deciding on plan policies. This has been taken forward in all subsequent guidance so that the current National Planning Practice

¹ Research team’s categorisation.

² Circular 7/91 Planning and Affordable Housing, – Department of the Environment, May 1991.

³ Circular 6/98: Planning & Affordable Housing, Department of the Environment, Transport and the Regions, April 1998.

Guidance has a whole section devoted to ‘Viability’ as this affects plan making and in dealing with individual applications. The key principles set out in NPPG are shown below.

“Understanding Local Plan viability is critical to the overall assessment of deliverability.”
Paragraph: 001 Reference ID: 10-001-20140306

And:

“Evidence based judgement: assessing viability requires judgements which are informed by the relevant available facts. It requires a realistic understanding of the costs and the value of development in the local area and an understanding of the operation of the market.”
Paragraph: 004 Reference ID: 10-004-20140306

- 1.11 Since C7/91 the definition of affordable housing has evolved. In the 1990s affordable housing could be largely characterised as either social rented housing⁴ or low-cost home ownership – with shared ownership as the most common form of this. In 2011 Affordable Rent was introduced at rents of up to 80% of market rents. Since then, government grant funding has been available for new social rented properties only in very limited circumstances but can be available for Affordable Rent. There are also a wider range of low cost home ownership and other intermediate housing tenures that fall within the current definition of affordable housing.
- 1.12 Where affordable housing is provided as part of a mixed tenure scheme the expectation now from the Homes and Communities Agency (as the main housing funding body) is: *“...that S106 schemes can be delivered at nil grant input for both affordable home ownership and for Affordable Rent.”*⁵
- 1.13 The evolution of the planning and funding regime for affordable housing has had an impact on the development of the case studies as is explored in later sections of this report.

⁴ Social housing is let at low rents on a secure basis to those who are most in need. Limits to rent increases set by law mean that rents are kept affordable.

⁵ Affordable Housing Programme, 2011-2015, HCA, Para 5.14.

2. THE HOUSING MARKET

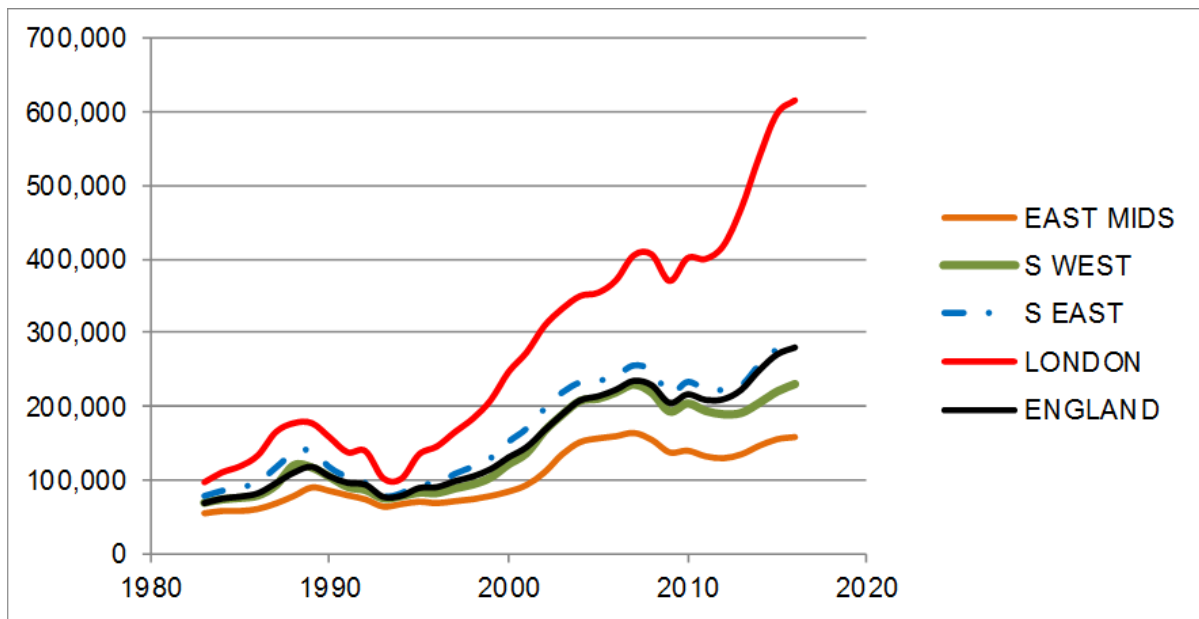
Introduction

- 2.1 This part of the report (sections 2 to 4) covers desk-based analysis of the housing market (section 2), affordability (section 3), need and housing supply (section 4). It compares the South West region with the situation across England, while within the South West it looks at trends at two levels, 'Housing Market Areas' (HMAs) and local authorities. The HMAs used here are those underpinning our Sub-Regional Housing Market Model (SRHMM, as described in Annex B), based on interim output from the study by Jones et al. (2010). These areas provide contextual background to case studies. Annex D defines these HMAs in terms of constituent districts (pre-2009).
- 2.2 In reviewing trends up to the present, we adopt two time horizons: 'recent' referring to developments over the last 3-4 years as the economy has emerged from recession; and 'longer term' referring to the period since the early 1980s. We can also look forward, using forecasts derived from the SRHMM, always remembering that all forecasts are conditional on sets of assumptions about future conditions. These forecasts can be used to explore potential trade-offs between housing supply/delivery and affordability outcomes, for individual HMAs or groups of HMAs, as reported in the last part of this section of the report.
- 2.3 'Affordability' can of course mean different things and be measured in different ways. In this exercise we present two distinct types of measure, with a couple of variations within each. The general state of market affordability is relevant to debates about whether the general level of planned housing provision, and delivery of those numbers, is sufficient. More specific measures can be developed for the need for 'affordable housing', and these can be subdivided into the potential need/demand for intermediate/low cost home ownership types of provision and the need for social rented provision. Such estimates may be compared with data on levels of provision of such housing; again, some such measures (particularly for social rented housing) can be presented over quite a long time period, whereas others may only be available for more recent years.
- 2.4 Information about new build supply (market and affordable), and about the relevant price levels, can also be estimated (approximately) for specific case study sites/locations. Market sales of new units from Land Registry can be located in such a way as to give a reasonable match to most case study sites. In this way we can say, by comparing with the wider contextual market values at HMA level, how the housing delivered on this site fits with the range of market affordability in the current market surrounding the site. Although it is possible to estimate the incomes and affordability of households living in small areas (Medium Super Output Areas, MSOA), it would not be meaningful to assess the contribution of new sites to meeting affordable housing needs at this geographical level; any such assessment needs to look at the range of population and incomes within the district and HMA.

House prices

- 2.5 The *long-term trends* in house prices by region are summarised in Figures 2.1 and 2.2. These figures are real terms (at 2016 general price level) and roughly 'mix-adjusted', to give the average price of a comparable house (effectively, a semi). Figure 2.1 simply shows selected regions, that with the highest level and growth (London) and that with the lowest (East Midlands), as well as the South West itself and the region which lies between it and London (South East).

Figure 2.1: Real mix-adjusted house price (@2016 values), by selected regions, 1983-2016



Sources: Nationwide Building Society 1983-1996; H M Land Registry 1997-2015.

Note: approximately equivalent to average price of a semi-detached house.

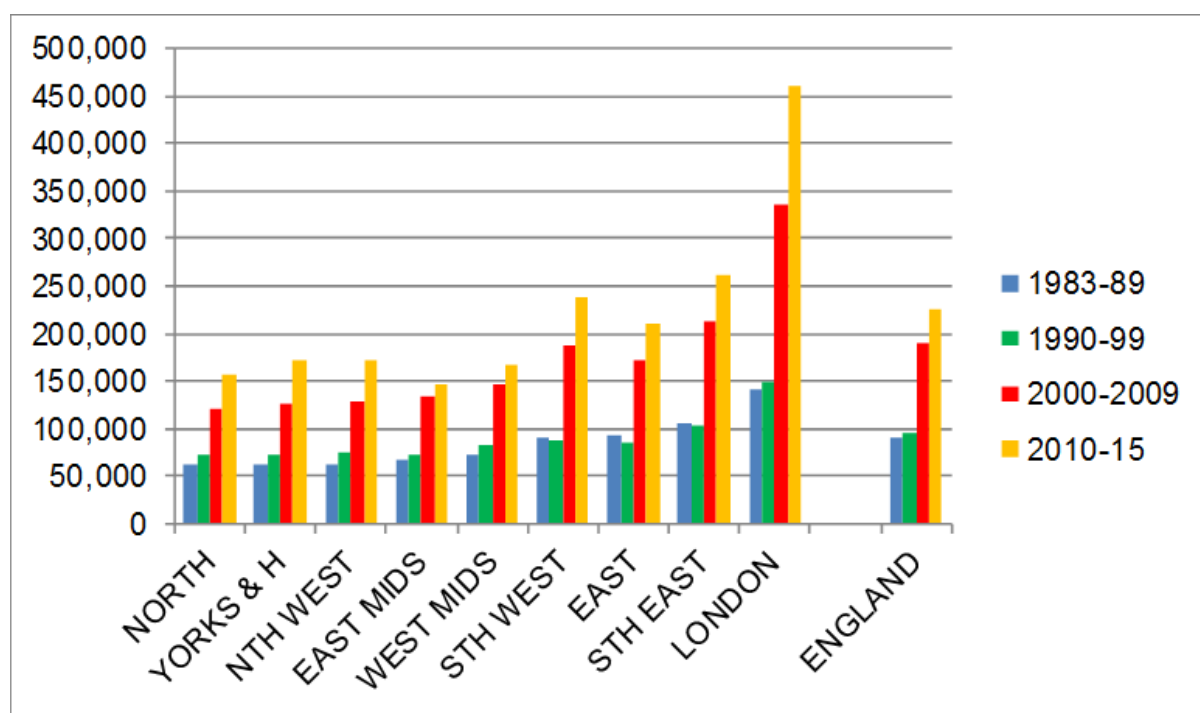
- 2.6 Figure 2.1 underlines that the cyclical trends are similar across regions, although with some differences in leads and lags. The South West is actually close to the England average for much of the period, although the England average diverges after 2011, partly due to the behaviour of London.
- 2.7 Clearly, prices have risen enormously in real terms over this time period, in all regions, with rises of 3-4 times in real prices over this period of 33 years. As was shown in the Barker (2004) report and elsewhere, this long term tendency to rising real house prices goes back even further, at least to the late 1960s. The rate of real terms rise now appears even higher than when Barker reviewed it (around 4.3% pa since 1983, roughly double the annual rate of increase in earnings/income). At the same time, the pattern of increase exhibits major surges in particular periods, typically led by London with other regions catching up later. In addition to the two/three surges shown in this chart, there were two significant surges in the 1970s. The South West's long-term rate of price appreciation is lower than the England average, at 3.7%, but still substantially above the growth in incomes or earnings.
- 2.8 Reasons for house price rises are discussed elsewhere but key factors behind these general rises include: the long-term fall and greater stability in interest rates; the greater availability of mortgage finance (except in the period 2008-12); rising real incomes (although this also faltered in this period); increasing population numbers; generally low/falling housing supply; and the development of a substantial investor ('buy to let') market (including international buyers in London).⁶ It should be noted that while this study is specifically about supply, it is acknowledged that house prices/affordability are strongly driven by demand factors, interacting with sticky/inelastic supply, and that this excess demand is reflected in both house prices and land values. Demand can be stoked up by easy credit, tax concessions, including by

⁶ See for example RTPI (2017) *Better Planning for Housing Affordability*. RTPI.

investors as well as would-be owner-occupiers, as well as by the traditional factors of incomes and demographic growth.

2.9 Figure 2.2 looks at the data in terms of eras, which might be termed roughly decades or alternatively political eras, from Thatcher through Major and Blair-Brown to Cameron/Coalition. In fact, the average price in the 1990s was not much above that in the 1980s, reflecting the subdued market after the boom and bust of 1988-92. Prices increased strongly to new higher levels in the 2000s, but have then resumed their increase after only pausing briefly during the 'Great Financial Crisis' (GFC).

Figure 2.2: Real mix-adjusted house price level (@2016 values) by region and 'era', 1983-2015



Sources: As Figure 1.

Note: Height of bars shows average house price level across each time period, adjusted for general inflation to 2016 values; for example, the average price in the South West in 1983-89 was £89,950; in 2010-15 it was £238,650.

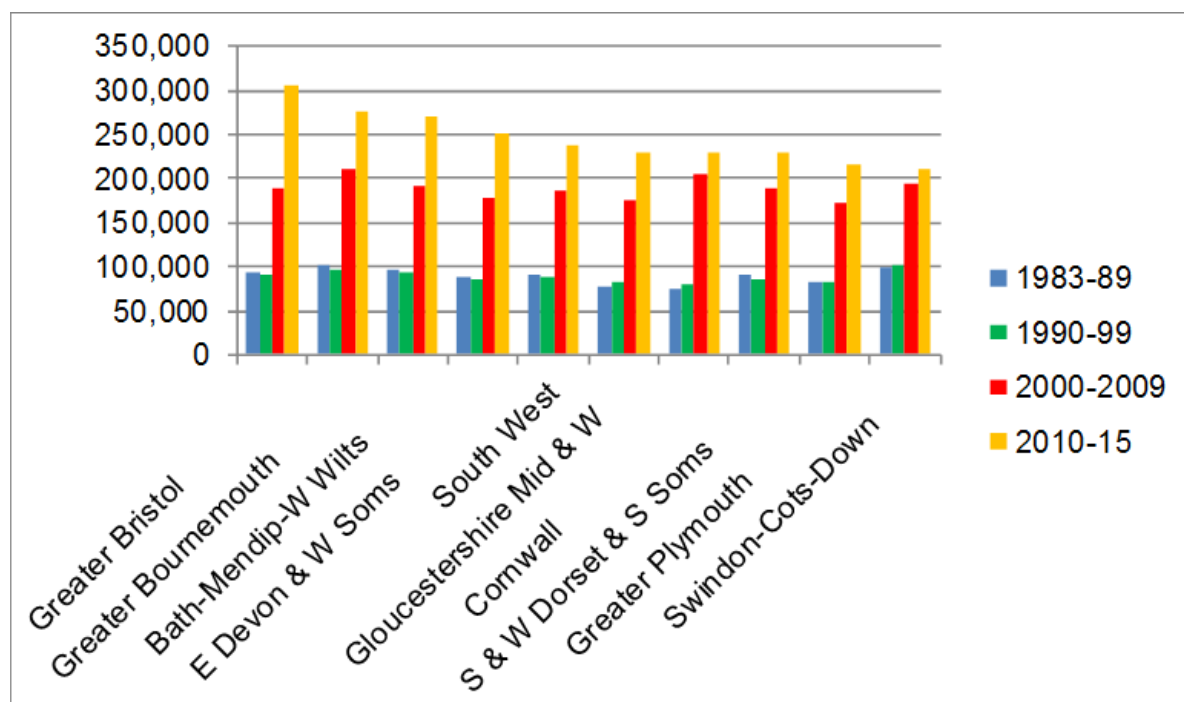
2.10 Looking more carefully at Figure 2.2, it can be discerned that there is an upward shift in the position of the South West between the earlier and more recent periods. Whereas in the 1990s it was similar to the East of England and not much above the West Midlands, now it appears to be well above the West Midlands and closer to the South East. At the same time, London has forged even further ahead.

2.11 Figure 2.3 then looks in the same way at HMAs in the South West⁷ (for the longer trends we use a further grouping of HMAs to give greater clarity). We have ranked the HMAs in descending order of recent price level. On this basis, prices are currently highest in Greater Bristol, Greater Bournemouth and Greater Bath, followed by East Devon/Exeter/Mid-West

⁷ The Housing Market Areas (HMAs) used in this report consolidate some of the HMAs generally used. Annex D sets this out.

Somerset while being rather lower in parts of Somerset, Dorset, Gloucestershire and Cornwall and lowest in Greater Plymouth and Swindon-Cotswold-Downland. The latter area was previously relatively higher price (and the most recent data suggest prices have come back up significantly – see below). Overall, these data suggest stronger demand (or tighter supply?) in the larger urban areas closer to London and the South East.

Figure 2.3: Real mix-adjusted house price (@2016 values) by Housing Market Area in South West and 'era', 1983-2015



Note: Some smaller HMAs have been combined to give more robust figures – see Annex D, 'Consolidated HMAs'.

2.12 Recent/current price levels for all sales are shown Table 2.1 for HMA's while Tables B.1 and B.2 (in Annex C) show values by local authority area. This highlights recent price rises and the current relative position of areas. The areas with the highest prices are Bath, Bristol and Bournemouth (and also Salisbury, part of an HMA in the South East). The lowest priced areas are Greater Plymouth, Torbay, Mid-West Somerset and Forest of Dean. Median prices are probably closer to measuring the entry level for new buyers, but are also influenced by the type and mix of housing in an area (strictly, the properties which are traded). The rankings are not very different for median prices, but some areas look more expensive on this basis (for example Gtr Exeter, N Devon, S Soms, W Dorset & Weymouth) and some look cheaper (for example Cheltenham-Gloucester). Nevertheless, an overall impression from Figure 2.3 and Table 2.1 is the level of prices does not vary that significantly within the region.

Table 2.1: Average Price Measures and Increases for South West HMAs, 2013-16

Housing Market Area	Mix Adj		Increase		Median		Increase	
	Price 2016	Rank (level)	% 2013-16	Rank (incr)	Price 2016	Rank (level)	% 2013-16	Rank (incr)
Gtr Bath	325,268	1	26.5%	4	250,000	3	25.0%	2
Gtr Bristol	320,060	2	33.6%	1	240,000	4	30.4%	1
Gtr Plymouth	224,673	13	14.2%	13	187,000	15	10.0%	15
Torbay	215,066	14	15.9%	11	177,500	16	10.2%	14
Gtr Bournemouth	314,272	3	26.8%	3	263,000	1	16.9%	6
Swindon-Cots-Down	282,799	5	30.4%	2	225,000	6	18.4%	3
S'ton/W Hants/(Salis)	291,302	4	23.5%	7	260,000	2	18.2%	4
Forest of Dean	199,245	16	26.3%	5	193,000	13	17.0%	5
Mid-Nth Cornwall	234,982	10	17.3%	9	210,000	10	12.0%	11
W Cornwall	244,896	9	12.7%	14	219,950	8	12.8%	10
Gtr Exeter	252,715	8	15.1%	12	225,000	6	14.8%	8
Nth Devon	233,158	11	18.9%	8	215,000	9	11.7%	12
Weymouth & W Dorset	258,234	7	4.0%	16	230,500	5	9.8%	16
S Soms & N Dorset	226,359	12	17.1%	10	210,000	10	13.7%	9
Cheltenham- Gloucester	273,156	6	25.6%	6	203,000	12	16.0%	7
Mid-West Somerset	212,712	15	12.7%	14	190,000	14	10.3%	13
South West	272,249		22.4%		225,000		18.4%	

Source: Author's analysis of H M Land Registry data at micro level allocated to HMA areas.

Notes: Greater Bath HMA includes Mendip and former West Wilts district; Salisbury district is included in Southampton-Wt Hants HMA; Cornwall divided between two HMAs, with Caradon district in Greater Plymouth. Mix-adjusted equates roughly to price of semi-detached house. 2016 refers to part-year data.

- 2.13 There have been considerable differences in the extent of recent house price inflation, although the general picture is one of prices rising significantly, by around 20% on average (in a period when earnings rose by only about 4-5%). The highest increases were in Bath, Bristol, Swindon-Cotswold-Downland, (Salisbury) and Bournemouth – again reinforcing the picture of pressure on the major urban areas emanating from the South East. The lowest increases were in Weymouth and West Dorset (possible special factor of 2012 Olympics?), but otherwise all increases were in double figures and hence well above earnings growth.
- 2.14 Comparable district level house prices are shown in Annex C, Tables B.1-B.2. The highest mix-adjusted price levels in 2016 were in BANES, Scilly Is,⁸ Bristol, Poole and Cotswold. The highest median prices were in Scilly, East Dorset, Christchurch, Cotswold and BANES. The highest increases in mix-adjusted prices were seen in Stroud, Bristol, Poole, Swindon and South Gloucestershire. The highest increases in median prices were seen in Bristol, South Gloucestershire, Christchurch, BANES and Mendip.
- 2.15 House prices are indicative of market pressure and potential imbalances of supply and demand, while also being a key input to affordability. They are however also relevant to

⁸ Scilly Isles have very few transactions and might appear extreme on the basis of one or two sales.

viability and to issues of delivery, both the likelihood of sites being built out quickly and the terms of any negotiations about CIL and s106 agreements. The cost of building a standard house (for example a three bed semi) would be of the order of £165,000.⁹ On that basis, the data in Table 2.1 suggest that housebuilding is more than viable in all HMAs in the South West and there is no issue of 'low demand' (prices below replacement cost). Even at LA level there are no areas of clear non-viability, although some cases where values/gross development profits might be relatively low could include Torbay, Mid-West-Somerset, Plymouth, Sedgemoor, Torridge, Gloucester and Forest of Dean.

Market Rents

- 2.16 Private market rents are important because of the growing role of the private rented sector, which has expanded greatly through 'buy to let' investment by small-scale individual investors. Many younger households who would previously have bought are currently renting (so-called 'generation rent'), because of difficulties in accessing home-ownership. The share of under-40 households who own has fallen in the South West from an estimated 71% in 2001 to 46% by 2011 and may fall to only just over 40% in the next few years, with even lower rates in pressured HMAs like Bristol and Bath.
- 2.17 The South West traditionally had a relatively larger private rented sector given its smaller public rented sector, and its rural and coastal character, but this has further expanded in recent years. In 2011 the private rented sector accounted for 18.4% of households in the South West, up from 8.4% in 2001, and the model suggests it is maintaining this higher share. The PRS accounted for rather more households in Torbay, Bristol, Bournemouth HMAs, but rather less in West and South Somerset, North and West Dorset, Forest of Dean, and Swindon-Cotswold-Downland.
- 2.18 We are able to monitor rent levels in private renting using data published by the Valuation Office Agency, although we cannot take data from this source back very far in time. In addition, the PRS was regulated until 1988 so comparisons from that period would not be so meaningful. Table 2.2 presents rent levels (median for 2-bedroom accommodation) in 2011 and 2015, with all figures on 2016 general price level basis.
- 2.19 Rents in the South West are rather below the average for England, but this is very skewed by the high levels in London and also the South East. Rents in England rose by 6.7% in real terms over the four years to 2015, but this disguises a picture of real terms falls in the north, relatively low increases in the midlands and South West, but higher increases in London (31%), South East (20%) and East (19%). These differential changes by region reflect the unbalanced economic growth and prosperity trends in England which are also reflected in house price trends. In London and its environs demand is running ahead of supply and pushing up rents, which also have to reflect the housing asset values to some extent. In the rest of the country, although more people have had live in the PRS for longer periods, the supply has increased a lot because of buy-to-let, and this has kept rent rises at a moderate or negligible level. Also, in weaker markets the effects of welfare cuts, particularly the freezing of the LHA rates at the 30th percentile in 2011, have restricted the ability of landlords to push up rents.

⁹ 90 sq m 3 bed semi BCIS 5 year median build cost Q1 2107 2 storey estate housing SW average index of 100 15% added to base build costs to cover external works. Industry standard assumptions of 6% interest costs plus 25% developer return on build costs. No allowance for land costs.

Table 2.2: Real Market Rents by Housing Market Area in South West, 2011-2015

median, £/week, 2br SW HMAS	2011	2015	Real Change
Bath-Mendip-West Wilts	166	176	6.2%
Greater Bristol	160	184	15.2%
Greater Plymouth	138	139	0.6%
Torbay	147	139	-5.4%
Greater Bournemouth	184	176	-4.4%
Swindon-Cots-Down	147	156	6.7%
Forest of Dean	131	129	-1.8%
Mid-North Cornwall	149	140	-5.6%
West Cornwall	149	140	-5.8%
Greater Exeter	153	153	0.3%
North Devon	141	135	-4.7%
Weymouth & West Dorset	161	152	-5.6%
South Soms & N Dorset	141	137	-3.0%
Cheltenham-Gloucester	150	150	0.0%
Mid-West Somerset	139	134	-3.3%
South West	150	157	4.3%
England	167	178	6.7%

2.20 Within the South West, we can see some similar echoing of these broader effects. Rent levels are highest in the larger urban areas which are closer to London and the SE, and they have been tending to increase in these areas, while actually falling a little in real terms in the more peripheral and coastal locations, which also tend to have lower rent levels.

2.21 At district council level, the list of areas with the highest and lowest rents are generally similar to the lists for house prices, although it is broadly true that rents vary less than prices (so that the gross rate of return, i.e. rent over house price) tends to be lower in the highest priced areas and vice versa.

Social Rents

2.22 We can also report here the level of social sector rents in the different market areas of the region. The figures in Table 2.3 are comparable with Table 2.2 in that they are expressed in real terms at 2016 prices, and they again refer to the weekly rent of a two bedroom unit. They are based on a combination of local authority and housing association/registered provider rent levels for existing stock, with values modelled forward from a 2013 base under 'existing policy' assumptions. Whereas in the period up to 2015 social sector rents were tending to rise in real terms, from 2015 to 2020 they are set to fall as a result of the Summer 2015 Budget policy of reducing social sector rents (to save Housing Benefit costs).

Table 2.3: Real Social Sector Rents by HMAs in South West, 2010-2020 (two-bedroom, @ 2016 prices)

SW HMAS	2010	2015	2020
Bath-Mendip-W Wilts	72.51	84.72	72.52
Greater Bristol	72.84	84.86	72.63
Greater Plymouth	67.56	73.88	63.24
Torbay	71.72	81.44	69.71
Greater Bournemouth	80.63	88.89	76.09
Swindon-Cots-Down	81.90	96.43	82.54
Forest of Dean	75.43	84.65	72.46
Mid-North Cornwall	69.97	76.40	65.39
West Cornwall	69.97	76.40	65.39
Greater Exeter	72.20	80.51	68.91
North Devon	71.88	79.59	68.13
Weymouth & W Dorset	75.16	82.51	70.63
South Soms & N Dorset	74.91	82.10	70.27
Cheltenham-Gloucester	77.14	85.31	73.03
Mid-West Somerset	74.45	81.71	69.94
South West	73.88	82.63	70.73
England	84.55	94.60	80.98

2.23 In the South West in 2015 social sector rents were on average about 53% of the level of market rents as shown in Table 2.2. New 'affordable rent' schemes were delivering housing to broadly the same client group at rents of up to 80% of market levels.

2.24 The key issues here for planning and delivery going forward are: (a) how 'affordable' the so-called 'affordable rent' product will be for households in the region, allowing for the role of Housing Benefit/Universal Credit (including impending further limits on these), and (b) how viable will it be for providers to deliver traditional social rented housing in quantity, alongside 'affordable rent' or other intermediate products, with limited or no subsidy available other than through land value or providers' reserves

Summary

- The South West's long-term rate of price appreciation is lower than the England average, at 3.7%, but still substantially above the growth in incomes or earnings.
- The areas with the highest prices are Bath, Bristol and Bournemouth (and also Salisbury, part of an HMA in the South East). The lowest priced areas are Greater Plymouth, Torbay, Mid-West Somerset and Forest of Dean.
- Similar patterns apply to market rents in the South West. They are highest in the larger urban areas which are closer to London and the SE, and they have been tending to increase in these areas.

- Social sector rents in 2015 were, on average, about 53% of the level of market rents. New 'Affordable Rent' schemes were delivering housing to broadly the same client group at rents of up to 80% of market levels.

3. AFFORDABILITY

Measures of affordability

- 3.1 Affordability can mean different things and be measured in different ways. The most basic distinction is between 'affordability' as a *problem* which we try to measure the extent of, and 'affordable housing' as a set of *products* which may be delivered through new housing schemes including via planning policies.
- 3.2 House price-to-earnings ratios (HPER) are like a mortgage lending multiplier – how many times annual earnings is needed to buy a house. Given that most people are familiar with the idea that you can borrow something like 3.5-4 times salary, these are readily interpretable. Essentially it measures how difficult it would be for a typical full time worker to buy a home with a mortgage, as a *single earner*, if s/he did not have access to capital. The typical earner is either the lower quartile (person 25% of the way up the distribution for full time workers) or the median (50% up). Similarly, the price is typically the lower quartile or the median of all sales, regardless of size or type. Thus it is a rather crude measure, which does not recognise the size of household and the size of home required, nor whether there is a specific requirement for a house rather than a flat; and also it is assumed that the homes for sale at the quartile or median are in satisfactory condition. In the first version reported here, as published by DCLG in Live Tables, the earnings figures are organised spatially by place of work, not residence.
- 3.3 An alternative type of measure is shown in a separate set of tables. This estimates the proportion of *younger households* who have enough income to afford to buy a home of the *appropriate size* for their household, under assumed affordability criteria applied by lenders (as regulated by the FCA). This is implemented by applying lending multiplier norms, with a lower multiplier where there is a second earner. In this version household income from all sources is counted.¹⁰ The second set of measures includes affordability of private market renting. Also shown for information in the tables is the average income of all households and a poverty measure.
- 3.4 Because they measure somewhat different things they will give somewhat different answers, in terms of which area is the most/least affordable and by how much.¹¹
- 3.5 It may be argued that affordability (to buy) also depends a lot on interest rates. This is true up to a point, although perhaps less true than in the past. The big rise in price: income ratios in the 2000s partly arose because we went into a period of consistently low interest rates, and generally easy credit. However, following the financial crisis money has not been so easy and FCA is under an obligation to regulate for prudent lending in terms of both deposit requirements and affordability tests. Typical first time buyers cannot get the very favourable rates available to existing homeowners especially if they are taking a high percentage loan. In addition, the FCA requires them to have a repayment mortgage, or to be able to fund one, and in addition to be capable of withstanding an increase of 2% in interest rates. Under these

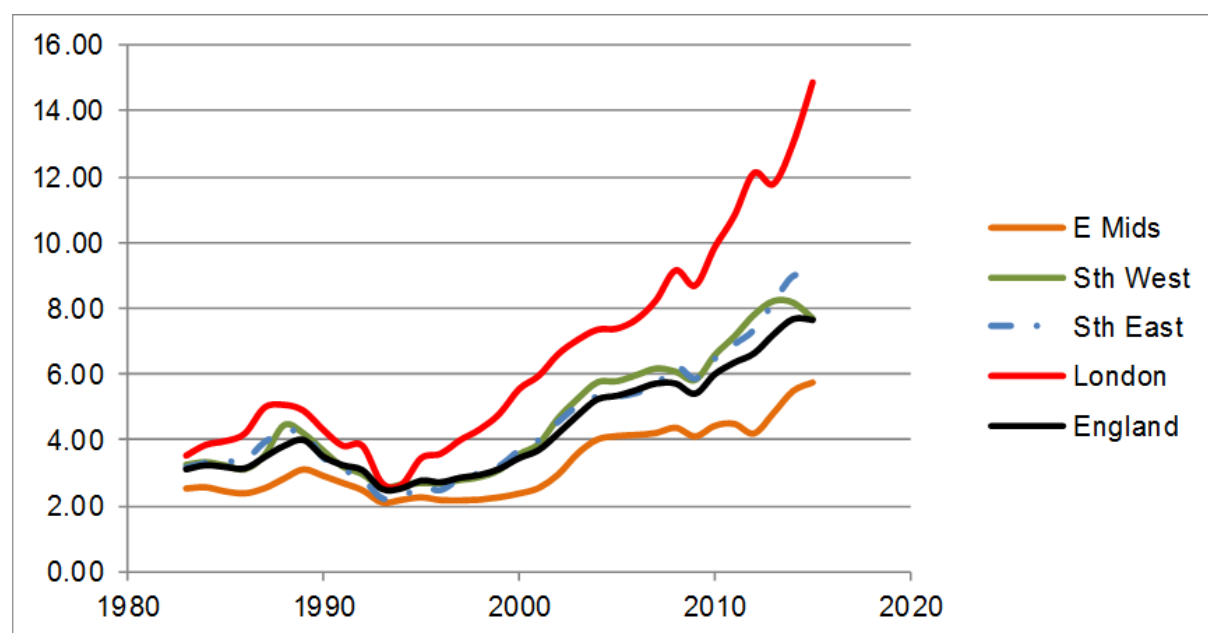
¹⁰ In another version of this approach, income may exclude that from means tested benefits and the incomes of 'other adult' members of complex households.

¹¹ It is also important to be aware that the values derived do depend on detailed assumptions and conventions, which may vary (for example workplace vs residence, quartile vs. median, in the first case, age group, treatment of complex households, size fitting in the second case). For example, the ID2015 estimates make the extremely conservative size assumptions of the so-called bedroom standard, whereas in practice few first time buyers would buy without a spare bedroom, if they could avoid it.

conditions, relatively fixed lending multipliers etc. are not unreasonable as a basis for measuring affordability.

- 3.6 Since the financial crisis of 2007-10, the ability of first time buyers to raise a substantial deposit (10-20%) has been a critical constraint on access to home ownership. Subsequently, this situation has eased to a considerable extent, particularly as Government promoted the 'Funding for Lending' scheme. In addition, the Help To Buy equity loan scheme has played an important role in helping FTBs back into the market, not least on some of the large new build sites featured in this study, where it has assisted the marketing of new build product.
- 3.7 A longer term picture of affordability based on a 32 year time series for a house price: income ratio is shown in Figure 3.1. Again, we select regions to represent the range of variation across England as well as the South West itself. This shows the effects of the booms of 1988 and 2007, and also again the continued rise to unprecedented levels in the last couple of years. The South West has been markedly above the England affordability level, closer to the South East, in periods of upswing in the 1980s, 2000s and 2010s, although a slight fall back is shown in 2015. While London has moved further ahead, with ratios in the teens (and is now acknowledged as one of the least affordable cities in the world), even the overall England rate has moved to a level where one cannot say that a household on average income could readily afford to buy an average house, on the basis of income alone.

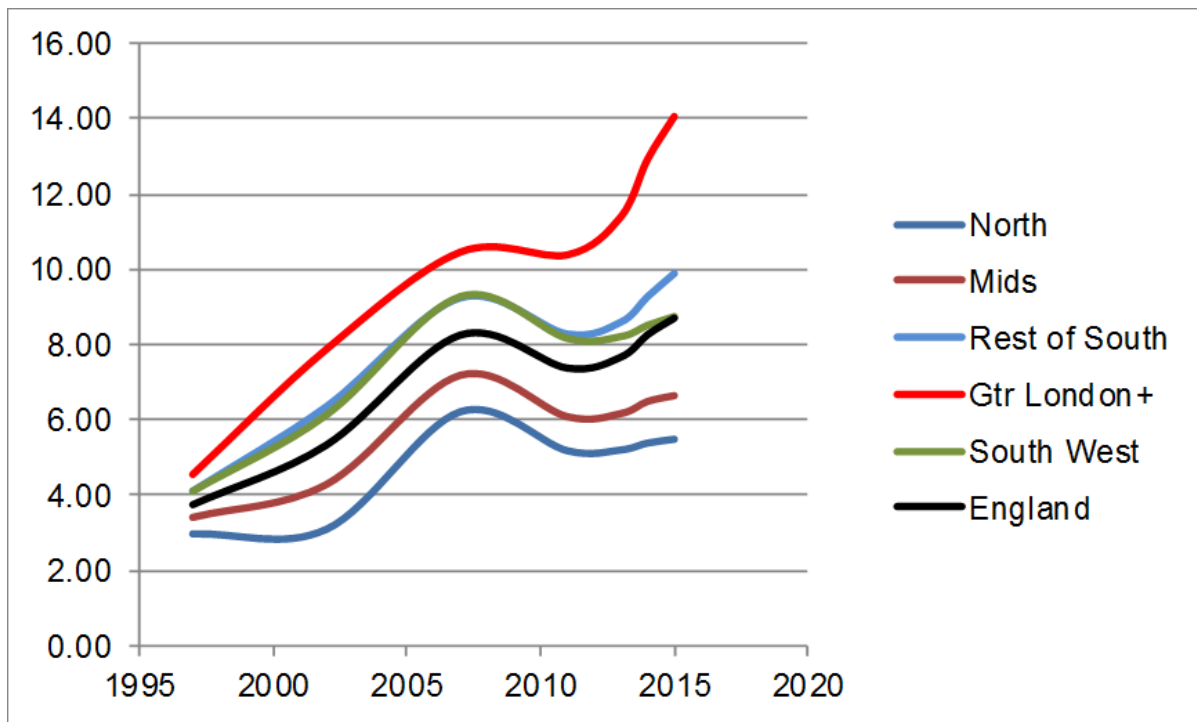
Figure 3.1: Long-Term Affordability by Selected Region: Ratio of mix adjusted house price to mean household income



Sources: Author's estimates based on Nationwide and Land Registry house price data, modelled household income and ONS Personal Disposable Income series.

- 3.8 Figure 3.2 presents a medium term perspective for broad regions and the South West, using the HPER measure. These slightly smoothed lines show all regions moving broadly in parallel, but at different levels and with a tendency to divergence. Again, the South West is close to the South East except in the last couple of years. The level of this ratio paints a picture of basically unaffordable housing, at least for a single full time earner, since the early 2000s.

Figure 3.2: Medium-Term Affordability by Selected Region: Lower quartile house price to workplace earnings ratio, England, selected years 1997-2015

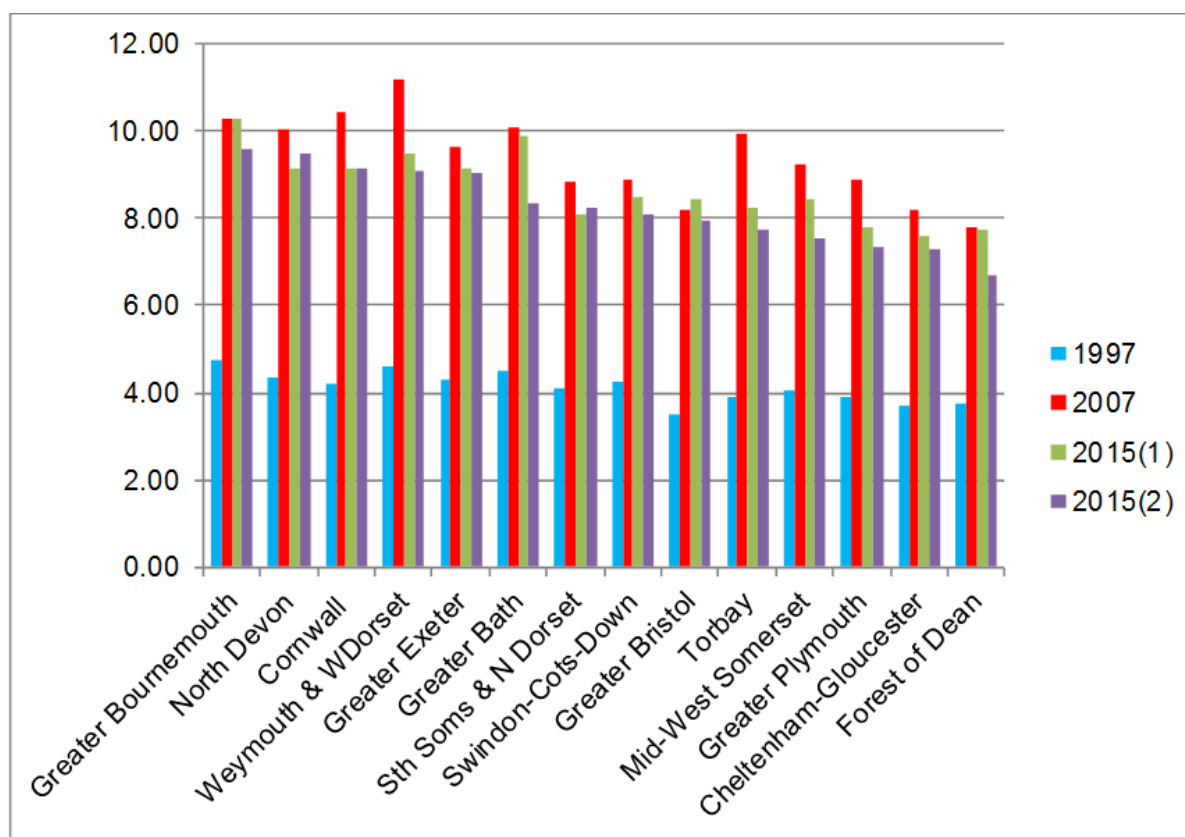


Source: DCLG Live Tables.

Affordability in the South West

3.9 Figure 3.3 drills down a level to look at price-to-earnings ratios since 1997 across the South West HMAs. The first three bars for each area use the same workplace-based HPER, while the last one uses a residence-based earnings denominator. This reduces the ratio a bit in some cases e.g. Bath. This figure shows that all areas experienced the step change in the early 2000s, albeit to varying degrees, and that affordability appears to be a problem across the region. Nonetheless, we can say that currently it appears to be worse in Bournemouth, North Devon, Cornwall, Weymouth/West Dorset and Greater Exeter, and rather less in Mid-West Somerset, Plymouth, Cheltenham-Gloucester and Forest of Dean.

Figure 3.3: Affordability in Medium-Term within South West: House Price to Earnings Ratios by Housing Market Areas, Selected Years, 1997-2015



Sources: DCLG Live Tables, plus ONS Annual Survey of Earnings and Hours (ASHE) residence-based analysis combined with Land Registry Price data.

Note: 1997-2015(1) based on lower quartiles and workplace based earnings; 2015(2) based on medians and residence based earnings (3-year average).

3.10 Annex C (Tables B.3 and B.4) presents local authority level HPER measures. The residence based measure is worst (highest) in Purbeck, Bournemouth, Teignbridge, Poole, North Devon, Weymouth, Christchurch and Cornwall.

3.11 Table 3.1 below presents affordability measured in a rather different way, in terms of the proportion of households with enough income to buy or rent an appropriate size of home, again across the HMAs, ranked in ascending order of affordability to buy.

3.12 On this basis, the least affordable areas are Cornwall, Bristol, Bournemouth and Weymouth/West Dorset, while the more affordable now also include Swindon-Cotswold-Downland and South Somerset/North Dorset. This suggests that, in the former group of areas, household incomes are relatively lower, due to different mixes of household composition and economic activity levels, for example more single earner households. So for example Cornwall has relatively low average incomes, more households with less than £600 pw and relatively more poor households, as well as house prices slightly above the regional average.

Table 3.1: Affordability for Younger Households in South West HMAs: Ability to Buy or Rent in 2015 based on household income distribution

Mean	Mean hhd income	Less than £600 pw	Poor hhd (<60% median)	Threshold Hs Price	% can buy (younger hhd)	% can rent (younger hhd)
hma5	mnginc	pltbf10	ppoor	tpric2sw	Pbuy	pcanrent
Cornwall	814	42%	16%	145,947	39%	61%
Greater Bristol	889	40%	15%	153,452	41%	52%
Greater Bournemouth	965	34%	12%	163,539	41%	56%
Weymouth & WDorset	880	38%	14%	146,065	42%	60%
Torbay	784	46%	18%	124,411	44%	57%
Greater Exeter	885	38%	14%	139,240	45%	61%
Greater Plymouth	796	44%	18%	123,326	45%	59%
North Devon	838	40%	15%	126,207	46%	66%
Greater Bath	914	37%	14%	142,380	46%	55%
Mid-West Somerset	876	38%	15%	123,349	50%	67%
Cheltenham-Gloucester	920	36%	13%	131,962	52%	65%
Sth Soms & N Dorset	913	35%	13%	122,505	53%	69%
Swindon-Cots-Down	976	32%	11%	131,629	54%	67%
Forest of Dean	892	36%	13%	105,973	61%	73%
South West	896	38%	14%	139,716	46%	60%

Sources: Author's estimates using income distributions modelled from UK Household Longitudinal Survey data linked to Census and IMD data at Medium Super Output Area level, and Land Registry house prices or VOA rents (adjusted for size).

Note: Affordability estimated for single and multi-adult households aged up to fifty and all households with dependent children.

- 3.13 It is interesting to contrast the estimates of proportion who can rent and the different ranking for this aspect of affordability. Cornwall is actually slightly better than average and some other coastal areas like Weymouth also benefit from lower rents, relative to their house price level. This may reflect the mix of housing stock or side effects of the seasonal holiday lets. The poorest level of rental affordability is in Bristol, suggesting perhaps that the pressure on the rental market there is greater.
- 3.14 Rental affordability is greater than affordability to buy in all HMAs in the South West, which is indicative of a high price level in the region. While this situation is similar to the South East and East of England, this is not the case in much of northern or midland England, while in London both tenures are equally unaffordable.
- 3.15 District level figures in Annex C show that Bristol is the most unaffordable local authority area for both buying and renting. The next most unaffordable for buying are Weymouth, Bournemouth, Purbeck, then Cornwall. With renting being particularly unaffordable in Bristol, BANES, Bournemouth, and Exeter, these are areas where the need for social housing or affordable rent may be most prominent.

Summary

- The South West is one of the least affordable regions in England with affordability levels close to those of the South East.
- Affordability is a problem across the region.
- Bristol is the most unaffordable local authority area for both buying and renting. The next most unaffordable for buying are Weymouth, Bournemouth, Purbeck, then Cornwall. With renting being particularly unaffordable in Bristol, BANES, Bournemouth, and Exeter, these are areas where the need for social housing or affordable rent may be most prominent.

4. HOUSING NEED AND SUPPLY

Need for affordable housing

- 4.1 In this section we consider evidence of existing housing need and quantified measures of the need for affordable housing. These estimates are shown in Table 4.1 below and are based on common statistical sources and/or modelled estimates which apply across all the areas in the South West, rather than being based on SHMAs undertaken by different organisations using somewhat different models, sources and assumptions.
- 4.2 The first two columns in Table 4.1 provide estimates of the so-called ‘backlog’ of households with unmet needs, as a percentage of all households.¹² The next two columns show flow estimates of new affordable need and net affordable need, while the last column links the backlog stock and the flow to give a measure of the prospects for a household in need getting rehoused.
- 4.3 From the first two columns it appears that unmet needs are greatest in the seaside areas of Torbay, Bournemouth, Cornwall and North Devon, although the UKHLS suggests the larger cities of Plymouth and Bristol have quite high needs. The areas with lowest backlog of existing need appear to be Forest of Dean, South Soms/North Dorset, Swindon-Cotswold-Downland, Weymouth and West Dorset.
- 4.4 The flow of newly arising need from new households (or migrants) who cannot afford to rent in the market appears to be relatively high in Bournemouth, Plymouth, Cheltenham-Gloucester, Torbay, Weymouth and West Dorset. The net need for additional affordable housing, allowing for backlogs and relet supply as well, appears higher in BANES, Greater Bristol and Greater Exeter, while being relatively lower in Cheltenham-Gloucester, Swindon-Cotswold-Downland, and South Soms/North Dorset.

¹² These estimates may be characterised as ‘middle’ estimates from a range of possible definitions, including the main categories of concealed and sharing, overcrowded and unsuitably housed people and households with existing affordability problems, broadly following the approach of the national study ‘Estimating Housing Need’ undertaken for DCLG in 2010. The figures in the first column are probably more robust in the sense that they were originally based on a much larger sample and they have been blended with data from the 2011 Census, whereas those in the second column are based on a new survey source but where the sample size is smaller (because it is a panel who are re-interviewed every year).

Table 4.1: Estimates of Backlog and Annual Needs for Affordable Housing for South West HMAs 2011-16 (percent of resident households)

SW HMAs	Backlog S.E.H./ Model Ave 2011-16	Backlog UKHLS 2009-14 Ave	Model Gross hhd flow can't aff rent	Model Net need for AH 2016	Soc Lets % of back- log ave 2011-16
Bath-Mendip-West Wilts	9.7%	12.0%	1.09%	1.63%	4.0%
Greater Bristol	8.6%	14.8%	1.06%	1.23%	8.1%
Greater Plymouth	9.1%	19.7%	1.44%	0.99%	6.2%
Torbay	16.1%	25.6%	1.22%	0.92%	1.7%
Greater Bournemouth	12.1%	11.5%	1.59%	0.77%	2.3%
Swindon-Cots-Down	7.3%	10.7%	0.51%	0.39%	5.6%
Forest of Dean	5.5%	7.8%	0.82%	0.92%	6.7%
Mid-North Cornwall	12.0%	15.2%	0.93%	1.07%	2.8%
West Cornwall	10.9%	15.2%	1.19%	0.78%	2.8%
Greater Exeter	9.9%	13.5%	1.09%	1.22%	4.7%
North Devon	10.2%	9.5%	1.04%	0.67%	3.9%
Weymouth & West Dorset	7.4%	7.5%	1.20%	0.70%	8.1%
Sth Soms & Nth Dorset	6.3%	11.5%	1.06%	0.54%	5.9%
Cheltenham-Gloucester	9.6%	8.2%	1.30%	0.09%	3.9%
Mid-West Somerset	8.1%	13.6%	0.79%	0.98%	5.2%
South West	9.5%	13.4%	1.1%	0.94%	5.5%
England	9.5%	15.6%	0.9%	0.22%	3.9%

Sources: Author's analysis of Survey of English Housing 1997-2008, as undertaken in DCLG *Estimating Housing Need* study, updated and adjusted for consistency with 2011 Census; Author's analysis of UKHLS ('Understanding Society') waves 1-6; modelled values within SRHMM based on affordability and gross household formation and migration estimates and actual/forecast levels of social rented relets.

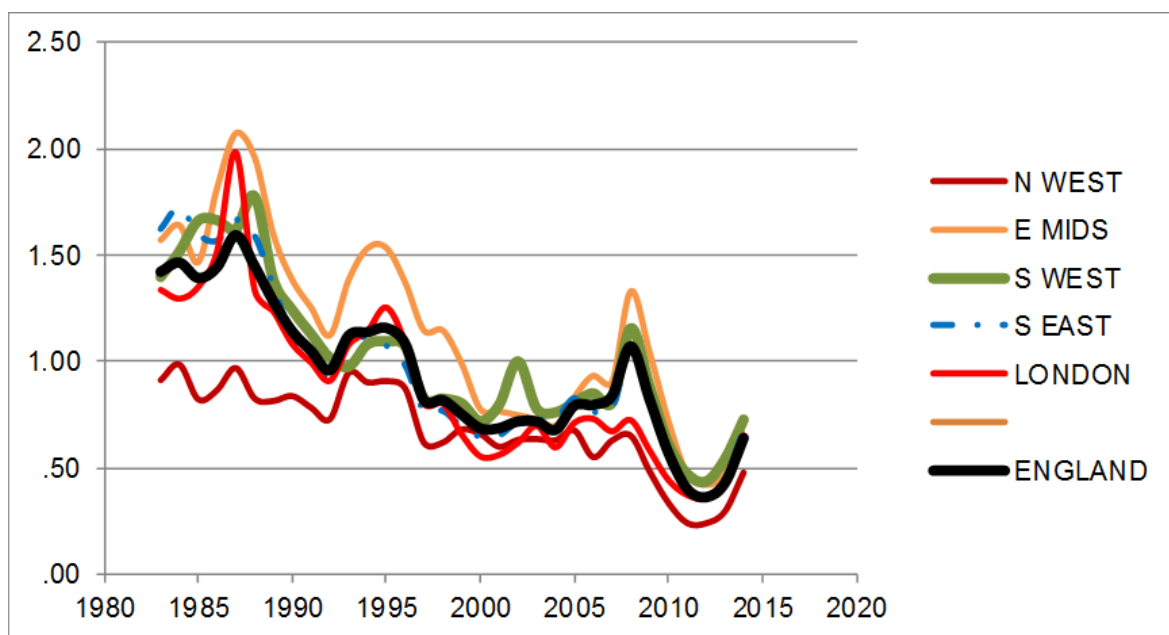
Note: Sample numbers in UKHLS (col 2) are not so large at HMA level and confidence interval is relatively wide, particularly for HMAs shaded in yellow; the precise definition /scope of needs in this survey is slightly different from the figures in col.1. Net need for AH includes gross flow can't afford to rent plus a quota of backlog less predicted annual relets. Final column shows probability of a household in need (in backlog) getting rehoused in social sector – higher numbers imply more supply relative to need.

4.5 For a household in need, their chances of rehousing in social rented accommodation (as shown in last column of Table 4.1) varied quite widely, with particularly low chances in Torbay, Bournemouth, Cornwall, North Devon and BANES. Chances were greater, although not spectacularly so, in Bristol, Plymouth, Forest, Swindon-Cotswold-Downland, and Weymouth and West Dorset.

Housing Supply

4.6 We can trace levels of new housing supply over the same 32-year period that we used to look at house prices and price: income ratios. Figure 4.1 shows that the level of total new housebuilding completions has been in serious decline over quite a long period, even though it kicked up in the cyclical boom periods of 1988 and 2007, and also in the post-recession recovery period of the mid-1990s (with government countercyclical measures a factor at times). As the RTPI has argued, the causes of the housing affordability crisis in many parts of the UK are complex and multi-faceted, but a decline in supply coinciding with a period of unprecedented population growth has undoubtedly contributed to the affordability problem in the region.¹³

Figure 4.1: Total new completions rate by selected region, 1983-2014 (percent of households)

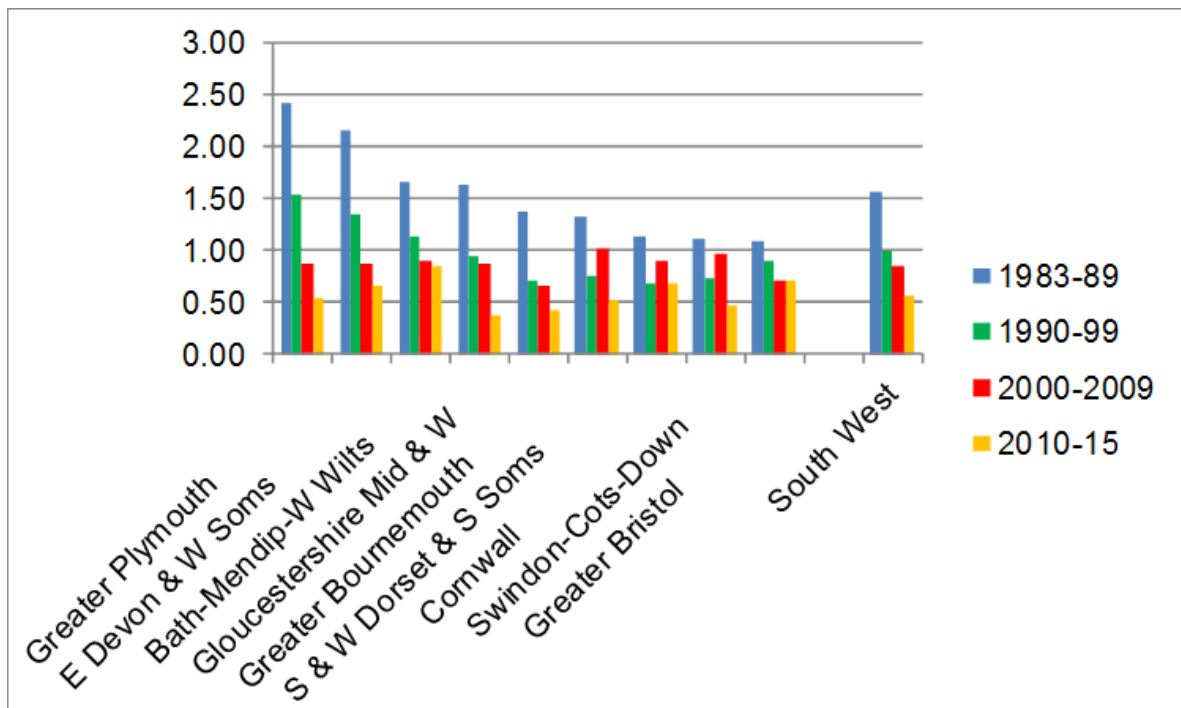


4.7 The figure shows that the South West generally tracked England fairly closely, but with a sharper peak in 1988, and a temporary uptick around 2002.

4.8 The next figure looks at the HMAs within the South West, grouped in some cases, breaking the period down into four eras as before.

¹³ See RTPI (2017) *Better Planning for Housing Affordability*. RTPI.

Figure 4.2: Total new completions rate by South West HMAs and era, 1983-2015 (percent of households)

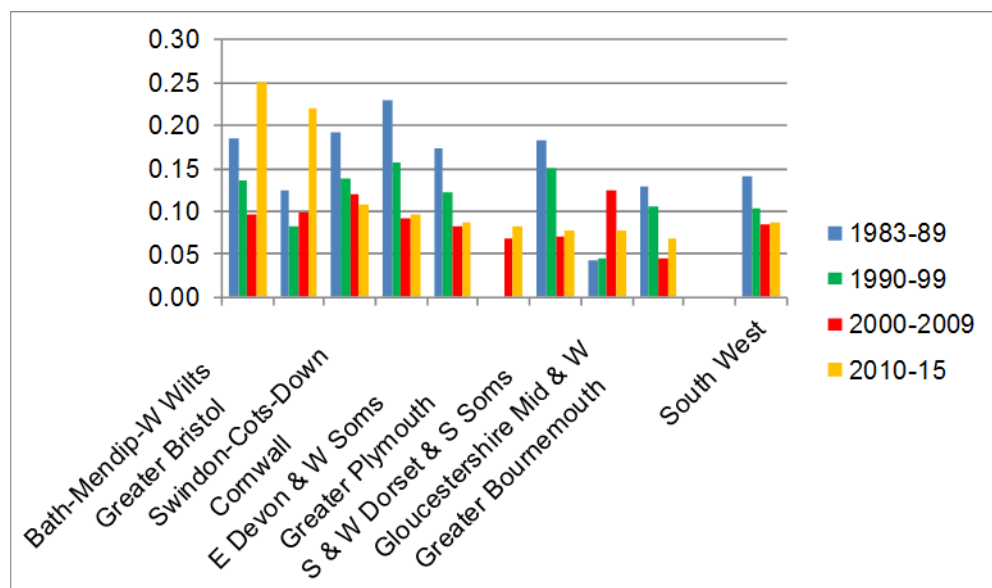


4.9 In the 1980s the areas in the region which built a lot of housing were Greater Plymouth and East Devon/Exeter/West Somerset, followed by BANES and Gloucestershire. At that time output was relatively lower in Greater Bristol and Swindon-Cotswold-Downland. Now, there has been some levelling out, at a low level, with the biggest falls in the former areas.

Social and Affordable Housing Supply

4.10 We have longer period data for social rented sector new build output, and this is summarised in a similar fashion in Figure 4.3. This time the HMAs are ranked according to which has been building more in the most recent period.

Figure 4.3: New social rented completions rate by South West HMAs and era, 1983-2015 (percent of households)



Note: Most recent period figures will include some 'Affordable Rent'.

4.11 Of course, the early '80s were the time of the rapid rundown of social housebuilding programmes, so recent performance is not necessarily worse. Indeed, Greater Bath and Greater Bristol (also Gloucestershire) are building more recently than they were in the 1980s. However, many other areas are building a lot less. These bars are in the same units as column 4 of Table 4.1, so it may be inferred that recent output across most of the region is only a fraction of the indicated level of annual need.

Summary

- The net need for additional affordable housing, allowing for backlogs and relet supply as well, appears higher in BANES, Greater Bristol and Greater Exeter.
- The level of total new housebuilding completions has been in serious decline over quite a long period. The causes of the housing affordability crisis in many parts of the UK are complex and multi-faceted, but a decline in supply coinciding with population growth has undoubtedly contributed to an affordability problem in the region.

5. SCALE AND IMPACT OF THE CASE STUDY SCHEMES

Introduction

5.1 In this section of the report we present an analysis of the impacts of the six case study housing schemes on the housing market, affordability and related outcomes. We start by considering the basic scale and pace of development for each scheme in the context of the HMA in which it sits. Table 5.1 shows the six schemes in their respective HMAs, giving the total capacity, the apparent or expected rate of completions per annum, and the implied figure for the duration of buildout in years. Although the larger schemes tend to have a higher build rate, they are also expected to take longer to complete overall. Charlton Hayes stands out for having a relatively short implied duration, given that its build rate is quite high relative to its total size. This may reflect its location on the edge of a large, high demand city.

Table 5.1: Scale of Scheme in Total and as an Increment to Annual Housebuilding in HMA¹⁴

Scale of Scheme & Impact		Implied			Increment		
Site	HMA	Total Capacity	Apparent Build pa	Duration Years	Affordable Quota % ¹⁵	HMA comps 2016	2021
Bath W Riverside	Gtr Bath	2300	130	18	25%	8%	8%
Cranbrook	Gtr Exeter	8000	350	23	30%	15%	19%
Charlton Hayes	Gtr Bristol	2200	250	9	25%	12%	13%
Monkton Heathfield	Mid-West Soms	4500	250	22	35%	43%	55%
Sherford	Gtr Plymouth (W)	5500	250	22	20%	13%	16%
Tolgus	Cornwall	650	65 ¹⁶	10	25%	7%	6%

5.2 By relating the build rate to the total numbers of completions in the HMAs (estimated for 2016, forecast for 2021), we have a measure of the scale of impact of the scheme on the supply side in its relevant market area. While most of the schemes have a noticeable but still relatively moderate impact on total new build supply, Monkton Heathfield stands out for actually representing a large share of new completions in its (modest sized) HMA (Mid-West Somerset). The larger proportionate impact is reflected in some of the findings reported below. It should be emphasised that we do not regard the new build supply as a separate market from the second-hand market, and the model we use to estimate impacts looks at the operation of the market as a whole.

5.3 The table also shows the policy-determined affordable housing quota set for each scheme. In practice there has not been very great variation in this across the cases studies.

House Prices for the Case Studies

5.4 We now look specifically at the house prices associated with these new build schemes. Table 5.2 compares prices, primarily using the medians, between all sales in the parent HMA and

¹⁴ The modelling was undertaken based on reported numbers which in a few cases have subsequently been subject to minor change based on further input from local authorities.

¹⁵ The quota maybe across the whole scheme or for initial phase(s).

¹⁶ Consultant team estimate – scheme not yet started.

new build sales in the particular location of the sites (effectively proxied the postcode sector). The best year for which we have a lot of observations at individual house level (from Land Registry) which can be analysed in this way is 2013. For 2016, we only have LA-level data from Land Registry, but we do report sales prices as compiled by the website Zoopla for the relevant postcode sectors. It should be noted that in the last two cases (Sherford and Tolgus), where there has been limited output so far, the prices refer to sales in nearby locations.

Table 5.2: House price comparisons between scheme localities and Housing Market Areas

House Prices		Mix-adj Mean	Median	Median	Median	Zoopla
Site	HMA	HMA 2013	HMA 2013	New, PCS 2013	HMA 2016	PCS 2016
Bath W Riverside	Gtr Bath	257,000	200,000	241,500	250,000	251,000
Cranbrook	Gtr Exeter	220,000	196,000	210,000	225,000	235,400
Charlton Hayes	Gtr Bristol	227,000	184,000	209,495	240,000	239,800
Monkton						
Heathfield	Mid-West Soms	189,000	172,000	200,000	190,000	216,000
Sherford	Gtr Plymouth	197,000	170,000	188,950	187,000	277,300
Tolgus	(W) Cornwall	217,000	195,000	225,000	215,000	*

- 5.5 The main conclusion from this analysis is that new build sales on these larger sites in the SW tend to be priced somewhat above the median level for the HMA as a whole. This was true in all cases in 2013. It is slightly less clear-cut in 2016, although prices have increased in all cases. It is possible to argue from some of the Zoopla figures that the 'premium' on these new build sites may have been squeezed down in some cases. However, the more general conclusion is that it is difficult to claim, from these data, that large new build sites provide 'more affordable' market housing.
- 5.6 The relationship between average or median new house prices on a particular site and the equivalent for the whole market may be influenced by the mix of housing types and sizes on the site. It is therefore of interest to look at the type mix on these sites, as in Table 5.3, which uses LR data on new build sales for the period 2011-14. Bath Western Riverside stands out as mainly flatted 'urban' development. The other sites have in common that the mix is wider ranging. So none are dominated by detached houses, which might be expected to push up the average price. If one takes terraces and flats as more potentially affordable types, all these schemes have quite substantial proportions in these two types, and the two schemes on the edge of bigger cities (Charlton Hayes and Sherford) have majorities in these two types.

Table 5.3: Type Mix of New Build Sales by Site, 2011-14

Site	HMA	Detached	Semi	Terrace	Flat
Bath W Riverside	Gtr Bath	0.0%	0.0%	8.4%	91.6%
Cranbrook	Gtr Exeter	31.8%	26.4%	31.8%	10.0%
Charlton Hayes	Gtr Bristol	17.3%	16.5%	30.9%	35.3%
Monkton					
Heathfield	Mid-West Soms	36.6%	27.6%	27.6%	8.2%
Sherford	Gtr Plymouth	14.7%	20.6%	61.8%	2.9%
Tolgus	(W) Cornwall	37.5%	12.5%	37.5%	12.5%

Modelled Impacts on Market Affordability and Social Need

- 5.7 We have made use of the Sub-Regional Housing Market Model (SRHMM) referred to earlier (and described in more detail in Annex B) to test the scale of impact of these six schemes on the housing market, and thereby on housing affordability and the associated need for affordable and social housing. The model is run first with a baseline scenario and then with a variant in which additional land release is made in the six HMAs listed in Table 5.1, sufficient to generate an increase in output approximately equal to that shown in Table 5.1. The responses to this change, for example in terms of internal migration, household formation, house prices and rents are taken account of in the forecast, which runs forward over 25 years. These responses are generated by econometric functions fitted to past data. Here we focus on impacts at time horizons of 5-15 years.
- 5.8 Table 5.4 shows the impacts as percentage changes in these three key indicators by 2021 and 2031, for the six Housing Market Areas and for the South West region as a whole. It can be seen that the impacts on house prices are greater in some cases than others, notably in the case of Monkton Heathfield, which represents a large input into a relatively small housing market (Mid-West Somerset). The smallest impacts are in Bath and Cornwall, where the sites contribute only a relatively small share to annual new supply. The middle of the range cases (Cranbrook, Charlton Hayes, Sherford) tend to impact prices by about 3-4% by 2021 and 4-6% by 2031.
- 5.9 Prices would be lower on average across the region as a whole by 1.7% in 2021 and 3.1% in 2031. This arises partly because the directly affected market areas are a significant part of the whole region, and partly because there are spillover effects between HMAs. For example, there are significant impacts by 2031 on prices in Torbay and North Devon, and lesser impacts on most other areas.

Table 5.4: Impacts of Additional Housebuilding Output represented by the six case study sites on house prices and affordability

Price & Affordability Impacts		House Prices		Affordability to Buy		Affordability to Rent	
Site	HMA	2021	2031	2021	2031	2021	2031
Bath W Riverside	Gtr Bath	-2.2%	-3.1%	3.5%	4.4%	0.7%	0.5%
Cranbrook	Gtr Exeter	-3.8%	-4.3%	5.1%	4.7%	1.4%	0.4%
Charlton Hayes	Gtr Bristol Mid-West	-2.9%	-5.0%	4.9%	7.6%	1.0%	1.3%
Monkton Heathfield	Soms	-8.3%	-15.3%	12.9%	21.4%	2.7%	6.8%
Sherford	Gtr Plymouth (W)	-3.0%	-6.3%	4.4%	8.6%	1.3%	1.7%
Tolgus	Cornwall	-1.1%	-2.3%	1.3%	2.0%	0.4%	0.1%
	SW Region	-1.7%	-3.1%	2.2%	3.7%	0.6%	0.8%

- 5.10 Two measures of affordability are presented. The first measures the ability of younger households (aged up to 40) to buy, given normal mortgage lending criteria, taking account of estimated income distributions. In the exceptional case of Mid-West Somerset the improvement is in double figures, with 13-21% more of these households able to buy. More

typical local improvements are in the range 5-8%, with an average regional impact around 2-3%.

- 5.11 The second measure of affordability focuses on the ability of the same younger age group to afford market rentals, applying a conventional target ratio of outgoings to gross income (25%). Here it is notable that the impacts are much more muted, of the order of 1-2% in middle cases and less than 1% in some instances, or across the region as a whole. This lesser sensitivity of market rents, compared with house prices, is a general feature of the model, which we would argue does reflect the realities of the housing market. The low sensitivity of rental affordability to general new housing supply has knock-on implications for housing needs assessments, insofar as these take account of people’s ability to enter or sustain a position in the private market. In general, private rental is the entry level for market housing, and as such is the critical determinant of the proportion of households who are able to function in the housing market without assistance.
- 5.12 Table 5.5 presents three indicators relating to social housing need and supply. The first shows the increase in social housing supply enabled by these large developments, all of which entail a significant share of affordable housing (we assume half of this would be social or Affordable Rent). In Mid-West Somerset this impact is of the order of one-third to a half, whereas more typically there is a boost of around 10%.

Table 5.5: Impacts of Additional Housebuilding on New Social Rented Supply, Backlog Need and the Chances of a Household in Need being Rehoused

Social Housing & Need		Social Rent New Supply		Backlog Need		Chances of Rehousing	
Site	HMA	2021	2031	2021	2031	2021	2031
Bath W Riverside	Gtr Bath	6.5%	5.5%	-0.9%	-0.1%	1.1%	3.9%
Cranbrook	Gtr Exeter	16.5%	9.6%	-0.9%	2.8%	1.6%	-0.1%
Charlton Hayes	Gtr Bristol	11.3%	8.6%	-2.0%	-1.6%	20.3%	18.5%
	Mid-West						
Monkton Heathfield	Soms	46.2%	34.8%	-4.2%	-7.6%	69.7%	57.1%
Sherford	Gtr Plymouth	14.0%	8.1%	-1.9%	-1.2%	10.8%	11.9%
Tolgus	(W) Cornwall	4.8%	3.3%	-1.0%	-0.7%	8.2%	3.6%
	S W Region			-0.9%	-0.8%	7.3%	8.1%

- 5.13 ‘Backlog need’ refers to households with existing problems, whether of unaffordable housing payments, overcrowding, shared or concealed households, housing which is unsuitable (for example for people with health conditions or children), or in poor physical condition. Increased housing supply has some impact on these problems but it tends not to be very dramatic. That reflects the point already made about rental affordability impacts being smaller, and also that some of these problems need to be tackled by other kinds of interventions. A more positive picture is derived from the last indicator considered, which measures the chances of a household with one or more of these needs getting rehoused in the social rented sector. The increased housing supply scenario has an often quite large, although somewhat variable, impact on this indicator, with generally higher impacts in Mid-West Somerset, Greater Bristol and Greater Plymouth. These beneficial effects reflect a combination of (a) reduced numbers in need, (b) increased supply of new lets, and (c) increased relets turnover.

- 5.14 Overall, we can say that promoting a set of larger sites for additional development through the planning system should lead to improvements in general housing market affordability, particularly for first time buyers and in the medium to longer-term. This should also contribute to reducing housing needs, and in particular to enabling people in housing need to have a better chance of moving into appropriate social rented housing. It is not apparently the case that new build market housing on larger sites is itself particularly affordable, but rather that (a) the general increase in supply progressively improves affordability, while (b) such sites enable the delivery of significant additions to the social housing stock, so long as S106 obligations can be applied a significant level.
- 5.15 Similar impacts would be achieved if the same quantum and type of market and affordable dwellings were delivered at the same pace but across a large number of smaller sites. But this is many 'ifs' and it is not clear that a multiplicity of smaller sites would be built out any faster or be subject to the same s106 obligations than the type of large-scale development we have reviewed.

Summary

- While most of the case study schemes have a noticeable but still relatively moderate impact on total new build supply, Monkton Heathfield stands out as representing a large share of new completions in its (modest sized) HMA (Mid-West Somerset).
- New build sales on the case study sites tend to be priced somewhat above the median level for the HMA as a whole.
- Promoting a set of larger sites for additional development through the planning system may lead to improvements in general housing market affordability as well as the potential significant additions to the affordable housing stock.

6. STRATEGIC SITES AND DELIVERY

Planning process

- 6.1 Five of the six case study sites were first identified in a formal planning policy, in regional planning guidance in the early 2000s. At this stage, the case studies were not set out in detail but were within a general area for growth. They were taken forward as an allocation in a local plan which typically defined the land allocated for development and the scale of that development (residential and non-residential). In some, but not all the case studies, the site was also included in a structure plan which may have been before or after its identification in regional planning guidance.
- 6.2 Thereafter, there has been an outline application defining the principles for the development followed by a series of reserved matters permissions – setting out the details for the layout of that phase of development along with other matters for example the amount and type of affordable housing to be delivered and other planning obligations to be met. The table below indicates the planning timeline for the case study sites including the slightly different route taken by the sixth and smallest case study – Tolgus.

**Table 6.1: Planning Timeline of Case Study Sites
RPG – Regional Planning Guidance RSS – Regional Spatial Strategy (final draft – never formally adopted)**

	Pre RPG	RPG	RSS	Structure Plan	Local Plan (or equivalent)	First application	First PP granted	Reserved matters – 1 st RM application	Start on Site	Timeline – site inception to start on site
1. Bath Western Riverside	2000 – council identifies site	2001 V General location	2008 V Site identified	2002 Site identified for major mixed use development	2007 – site identified 2014 – site identified	2006	2010	06/2011	2011	2000 – 2011 11 years
2. Cranbrook	1999 structure plan – 1 st mention	V General location	V General location	2004 Site identified – 3,000 dws	2006 – 2,900 dws 2016 – 6,300 dws	2003	2010	01/2011	2011	1999 – 2011 12 years
3. Charlton Hayes		V General location	V Site identified	2002 – General location	2005 – 2,200 dws	2003	2008	04/2009	2009	2001 – 2009 8 years
4. Monkton Heathfield	2000 Structure Plan – general location	V General location	V Area of search	2000	2004 – 50 ha site identified 2012 – site for 4,500 dws	2005	2009	07/2010	2012	2000 – 2012 12 years
5. Sherford	1999 structure plan	V General location	V Site identified	2004 Site for 4,000 dws	2002 – 3,500 dws 2007 (AAP) and 2006 core strategy - 4,000 dws	2006	2013	03/2015	2015	1999 – 2015 16 years
6. Tolgus		V General location	V General location	2004 – area for growth	2009 AAP – preferred location 2016 town framework – site identified	2012	2013	No RM application as yet for the residential element.	2016 (initial highway works)	N/A but c.15 years

- 6.3 From the time that the case study sites first appear in a formal planning document until their start on site is, on average, about 10 years – sometimes longer (up to 16 years) and sometimes a little faster. This will underestimate the true total time it will have taken from scheme inception to start of development as there will have been a period of pre-planning before the regional or structure plans were adopted and quite possibly time taken to bring the site together into a coherent ownership package before the scheme could be promoted.
- 6.4 It is not possible to say from this research whether the timelines for the South West case studies of this scale are more or less than found elsewhere in the country (although our experience suggests not). The length of time for the planning process to start on site does not appear to relate directly to the scale of the development – so we have a scheme of 2,300 dwellings and one of 4,500 dwellings that took almost the same number of years (11 and 12) between their initial inclusion in a development plan and start on site. It is appreciated that smaller schemes (in the tens and hundreds of dwellings) would be expected to start to deliver housing in a significantly shorter time.

Factors behind the planning timeline

- 6.5 The research has not identified a single reason that explains the lengthy process from formal identification of a scheme to the start of its development. To a large extent, the time taken is a reflection of the complexity of bringing together all the elements of large-scale development and taking them through the planning process to achieve effective place-making.
- 6.6 The case studies have highlighted a number of specific issues that can affect the timeline to first development to some extent or another. The key issues identified include:
- Bringing land ownerships together to secure a land-holding of sufficient scale and in the right location suitable for allocating in a development plan. Land ownership issues can subsequently dog development later on and the local authority may have little it can do to intervene between private sector interests (although, as commented on later, there are ways in which local authorities can help to minimise ownership issues).
 - Agreeing a master plan for the scheme and/or design guide and then negotiating a S106 agreement that sets out how the future quality of the development will be achieved. S106 agreements can involve a wide range of organisations (especially in two tier authorities) and a wide range of issues to re-solve. Effective multi agency negotiations require adequate resourcing (for the local authority and developer/landowner team) and an understanding of the requirement and funding of infrastructure needed to support large-scale schemes.
 - The need for external funding (typically but not exclusively from the HCA) can delay development when it is not readily available and a scheme requires infrastructure to proceed for example highway works, flood control measures. On the other hand, a funding deadline can accelerate development decisions. Securing funding to the optimum timetable is not easy to achieve and can involve a range of agencies, authorities and private sector interests.
 - The case studies were all subject to the economic downturn of 2007/2008 and the slow recovery thereafter. This led to delays as values dropped and viability deteriorated and the developer initiated a renegotiation of the final/emerging s106 agreements. This did not happen with all the case studies and where there was some flexibility in the S106 agreement already (and a location in a strong housing market area) the scheme proceeded as already set out.

- Other national policy changes can provide a ‘shock’ to the development process – again, primarily when these affect funding. An example given of this was the impact of the 2015 Budget which pegged back affordable housing rents leading to one housing association withdrawing its offer for affordable housing and an alternative provider had to be sought with a consequent delay.
- It is difficult to quantify but the case studies suggest that working relationships between developer and local planning authority, between different public sector authorities and within landowner/developer consortiums can help to smooth the development process or can slow down progress when they do not work well. We return to this theme in a later chapter.

6.7 The analysis of the planning timelines also highlights the time taken between outline planning permission and agreeing the details of development (through the reserved matters applications). For our case studies, this could take as long 2 years. RM permissions are often for packages of development (for example as little as 100 dwellings even in the largest schemes). The number of dwellings ready for development is controlled by the pattern of RM applications and, with the outline permission in place, this will largely be at the discretion of the developer. The scope and coverage of any design guide and/or masterplan will inform RM applications and where there is a design guide of sufficient detail and supported by the developer and local authority, the process of securing detailed planning permission is likely to be much smoother.

6.8 One option to help maintain the supply of permitted dwellings (where a scheme is too large for a single reserved matters application) may be for the S106 agreement to set out a timetable for RM applications. This option requires further development but could assist in maintaining development pace on large-scale schemes. Later in the report we also highlight the workload for planning authorities in dealing with large-scale developments the number of planning applications they need to deal with. Ensuring sufficient officer capacity to do so is important.

Pace of development

6.9 Housebuilding rates take a couple of years to build up. Our estimates of build rates (based on local evidence for example published monitoring reports) are set out in the table below. Some figures vary slightly from those shown in the previous chapter because of minor differences between data sources.

Table 6.2: Housebuilding rates

Case Study	Start on site	Dwellings completed	Notional pace ¹⁷ (dw pa)
1. Western Riverside	2011	800	133
2. Cranbrook	2011	1,500	350
3. Charlton Hayes	2009	1,750	250
4. Monkton Heathfield	2012	810	250
5. Sherford	2015	c.25	n/a
6. Tolgus	2016	-	n/a

¹⁷ Estimates of development pace will depend on data sources available – we have taken averages of last three years where data permits.

- 6.10 The table indicates that the large-scale developments can achieve about 250/350 completions each year but that this figure is a 'maximum' average. Where detailed information is available, it does indicate that building rates can fluctuate quite markedly year-to-year.
- 6.11 Case study interviews suggested that annual completions of between 40 and 50 (market) dwellings could be expected for each development 'flag'. The number of 'flags' (and hence overall delivery rates) will be influenced by the strength of the local market, competing supply in the wider area, developer consortium arrangements, as well as the perceived quality of the development. The planning system cannot, of itself, accelerate the pace of delivery and setting long-term rates of delivery without reference to the market, could prove unachievable.

Summary

- Large-scale strategic developments necessarily take time to start to produce housing completions. On average it is 10 years between the time a large-scale strategic development is first identified in a (regional) plan until start on site and about two years between outline planning permission and the first RM permission.
- There is no single reason for the length of the planning timeline and issues around land ownership, funding availability, working relationships and guidance can play a part in this. The market down turn of the late 2000s held back development in most of the case studies.
- There has been a maximum 'average' build rate of 250-350 dwellings per annum which reflects the strength of the local market amongst other factors.

7. TYPES OF HOUSING PROVIDED

Introduction

7.1 This section considers the numbers and types of affordable housing being provided in the case study schemes. It goes on to consider the factors influencing this delivery including factors which are within the control of the local authority and as well as external factors such as grant and the market. Finally, it looks at delivery of accessible, adaptable and wheelchair housing.

Affordable housing

7.2 The following table compares the proportion of affordable housing being delivered with that set out in Plan policies and that which was originally contained in the S106 agreements.

Table 7.1 Delivery Affordable Housing Compared to Plan

Case Study	Total no. of dwellings	% AH in plan (at time of planning permission)	% proposed for site	No. AH dwellings delivered to date (approx.)	% AH achieved to date (approx)
BWR	2,300	35%	25% (more if additional public funding obtained)	210	25%
Cranbrook	8,000	40%	30% AH and 10% 'affordable by design'	450	30%
Charlton Hayes	2,200	33.3%	25% affordable (with up to 33.3% if funding available)	c700	30%
Monkton Heathfield	4,500	35% original plan, 25% current plan	35% for 1 st phase	220	27%
Sherford	5,500	50% and 30% in each LA area	20% for first part of development.	Few completions	Few completions
Tolgus	650	Up to 25%	Not agreed yet.	Not started	Not started

Notes:

% AH in plan is the % relevant at time of planning permission

% AH achieved may relate to whole site or a particular (first) phase

Numbers for affordable housing delivered are approximates

- 7.3 Numbers and percentages of affordable housing sought varied against percentages outlined in Local Plans. Plan policies usually refer to averages across districts and there is an expectation that this will vary for different sites depending on site-specific factors, often related to viability. It is notable that in regeneration sites where remediation is required, affordable housing contributions may be below district average (BWR). Some of the urban extension/new town developments have met the then Plan levels of affordable housing (Cranbrook, Monkton Heathfield) but this is not always the case (Sherford).
- 7.4 While variation around the district level target is understandable, the impact of falling short of this level in such large schemes is likely to have a significant impact on whether the district meets its overall target. Policy which commonly considers small and rural schemes to have lower capacity for including affordable housing will exacerbate this potential problem.

Tenure

- 7.5 In most areas, housing tenure included conventional market housing for sale and the traditional range of affordable options including low cost sale, Affordable Rent/intermediate rent and social renting. Other alternatives were discussed in the case study interviews and self-build/custom build was not found to have been developed in any of the schemes. This is to be expected given to the timing of the developments which predated the government's support of custom build. Nevertheless, in schemes which were in early stages or had further phases to be agreed, council staff suggested that the custom build approach may be explored but no-one highlighted it as a significant priority.
- 7.6 The buy-to-let sector was not mentioned by any interviewees as playing a part in any of the large-scale developments although this does not rule out the possibility that there was some involvement. However, the institutional private rented sector and 'build to rent' was highlighted as a valuable contributor in two case study schemes. Involvement of an institutional private rented provider sped up delivery and assisted with cash flow for a main developer where a large block of dwellings was purchased at a single point rather than the slower rate of owner occupied purchases. This has clear benefits for the main developer and, at the same time, institutional PRS can assist local authorities by meeting a significant element of identified demand over a short time, as individuals can rent far more quickly than going through the house purchasing process. The PRS can meet an additional segment of need to that met by conventional affordable options. This may be from people with more disposable than traditional house purchasers. Given the profile of potential renters, it may have a role as a major element of supply in a limited number of urban centres in the South West.
- 7.7 The appropriateness of the type and amount of affordable housing being delivered can also be considered. Policy required a varying percentage of affordable housing ranging from 25% to 50% in different places. Local authority policies tended to be flexible in setting different targets or exempting very small schemes. Some targets varied between rural and urban areas or between different zones within a single authority. Policy usually identified a requirement for different proportions from the variety of types of affordable housing at a local authority level and s106 agreements set out requirements for each type of housing within a single large housing development. Typically, based on housing need assessments, the requirement within developments was for a majority of social rented housing and smaller amounts of affordable rent and low cost home ownership. In several cases the mix of types delivered changed so that there were fewer social rented than planned and more affordable rent and LCHO. Reasons for this related to viability and/or because of changed funding priorities of HCA.

- 7.8 Local authority and registered providers of affordable housing¹⁸ (RP) case study interviewees both expressed a variety of opinions regarding the delivery of different types of affordable housing on large housing sites. For some, the reduction in social rented housing represented a missed opportunity to meet needs. Some LAs addressed this through a mix of funding where the authority supported the social rented housing element. However, others questioned the justification and appropriateness of providing large numbers of affordable housing on large sites, especially on the edge of towns. The location of one scheme made it unpopular and an RP noted difficulty in letting social rent. In a further scheme, social rented and affordable rented tenants found costs including service charges high and this was thought to have contributed to high turnover rates.
- 7.9 Concentrating affordable housing in a large scheme was seen as inappropriate for the needs people who wanted to remain in villages in their own community and close to their employment. A further concern was that in large schemes which take many years to develop the needs identified at the start are out-of-date. Over the prolonged time period it is also difficult for the s106 for a large site to keep up with changing policy and funding priorities.
- 7.10 On the other hand, developers find large greenfield sites attractive because they are easier to build out and bring economies of scale and potential for using standard house types. This makes them potentially cheaper to deliver, although as scale increases, there is likely to be a need for more and more significant infrastructure. In addition, cost savings that come as a result of standardisation may hinder place making. Nevertheless, large schemes remain attractive for local authorities due to their ability to meet a large proportion of affordable housing need in a single site but relatively slow pace of delivery can reduce the impact.
- 7.11 These considerations point to large sites being only part of a solution to meeting affordable housing needs. They should not supplant other, more flexible and local provision in villages or in urban brownfield and windfall sites. Moreover, the management of large schemes requires opportunities built in to review the proportion and mix of affordable housing over time and this can perhaps be best achieved through conditions within s106 agreements.

Role of Grant

- 7.12 Grant was an important consideration for all large-scale sites examined. For some it was essential both for delivery of the affordable housing and for the scheme itself, sometimes together with other funding for infrastructure. For example, one developer was required to provide 25% affordable housing but this would cascade downward as the level of subsidy available reduced, going to zero if there was no subsidy. In some developments all of the affordable housing was built with an element of public subsidy whereas in others there was an expectation that a basic percentage requirement in the S106 would be met with nil grant but that additional affordable housing over this percentage could attract grant.
- 7.13 Grant was available from the HCA and could be supplemented by the local authority although the latter was not typical. Sometimes this was split on the basis of different sources funding different tenures, for example in one, the council funded affordable rent while HCA funded low cost home ownership. Some additional, targeted funding such as the Community Land Fund (aimed at areas suffering from second home ownership) was also sought. Other funding from a variety of sources was used the schemes. Local authorities also used their own or other publicly owned land to help deliver affordable homes. Even when the funding was directed

¹⁸ RPs are typically housing associations and this is what was found with the case studies.

towards for example infrastructure the effect was normally to increase the proportion of affordable housing as this is the element that would generally drop away when viability was weaker.

- 7.14 Grant funding has had major policy shifts over the last 10 years – 2011/15 NAHP put emphasis on funding for home ownership but NAHP 2016/2020 supports a more mixed programme although not social rent. The model has now also shifted towards situation whereby grant is used very much to ‘add value’. Over the period these schemes have been in existence, changes to national funding strategy meant that HCA funding has become more limited. In particular, HCA funding is directed towards varying proportions of Affordable Rent and LCHO rather than social rent. This altered the tenure mix in schemes where the original affordable split sometimes included as much as 70% social rent. Continuing to provide social rent, for example, in later phases of schemes, was difficult and affordable rent played a bigger role. Some authorities pointed to an emerging mis-match between identified need for social rented housing and provision of affordable housing as affordable rent or LCHO. In most cases, it would appear that local authority funding or use of resources such as land is required to attempt to redress this imbalance but that local authorities may not be able to provide or access the required level of funding for social rented housing.

Changes within Schemes

- 7.15 Within the sites themselves targets were also variable. In some cases two levels of target were set – one based on assumptions about likely levels of public subsidy and another more aspirational target if greater subsidy could be achieved (Charlton Hayes). Unsurprisingly, given trends in government policy, public subsidy has tended not to meet these higher aspirations, although some uplift in delivered affordable housing has been achieved in some schemes through active pursuit of pots of public money. It is notable that several planning agreements explicitly require the developer and affordable housing provider to take all reasonable steps to pursue all public funding opportunities which may arise.
- 7.16 In some cases, the scale of affordable housing in early phases has been higher than that anticipated in future phases. There are a number of reasons for this, including the need for additional infrastructure expenditure and changed viability/funding circumstances. In some instances affordable housing in early stages has been prioritised as a way of kick starting development. In a similar vein, public investment in other areas such as infrastructure has also been an early input, allowing value to be “crystalized” and developers to commit to the sites in the longer term.

Level of Detail and Control in Agreements

- 7.17 Local authorities wished to have an input into the mix of units on the site, using different approaches to achieve this. Some authorities included clauses in the outline and detailed planning permissions that required affordable housing to be developed in strict accordance with accompanying documents referred to as an “affordable housing scheme” or an “affordable housing distribution plan”. These could cross-refer to a masterplan and in one case to a “pepper potting scheme”, the name indicating the authority’s approach to the location of affordable housing.
- 7.18 The level of detail included in s106 agreements and accompanying documents will typically include the number of dwellings and unit sizes for each affordable tenure. Doing so on a

parcel-by-parcel basis, as the site is developed out, prevents unacceptable bunching of affordable units in the final few plots of large schemes.

The Housing Market

7.19 Market cycles also influenced affordable housing delivery, and indeed, delivery of housing more generally. In our sample of schemes, some had lower targets than initially anticipated because of the impact of the recession after 2007 and its negative impact on viability. The role of funding in kick starting schemes became significant at that time.

7.20 The subsequent upturn in the economy brought a different set of issues where S106 agreements signed during a depressed period appear less suited to the changed circumstances. An example was cited of an agreement which defined how much an RP would pay a developer for completed properties. This is useful in giving certainty to both parties but locked in conditions which become unsustainable in changed market conditions. In this case the RP agreed to pay over X% of the market value when the market was weak but when values per square foot more than doubled it became impossible to deliver affordable housing at this price level. An affordable housing officer commented that:

“The lesson learned is the need for flexibility in major projects going over many years where at the beginning there’s a viability problem and you are putting in vast amounts of public subsidy to get over that viability problem. There has to be provision for periodic reviews of the viability.”

7.21 This has been achieved in a more recent scheme where the district council and developer have agreed regular viability reviews after every X dwellings to see if proportion of affordable housing can be increased. At mid-point there will be a fuller viability review for second half of the development.

Accessible/Adaptable/Wheelchair Housing

7.22 There was a range of approaches to accessible/adaptable housing. Where local authorities placed higher priority on this more was achieved. Some did not mention this in S106 agreements, while at least one authority had included adaptable housing requirements in an SPD. Another had not delivered any adaptable housing in their completed phases but hope to negotiate this in future phases. One authority was exploring options for requiring adaptable housing in market housing.

7.23 There was a distinction between wheelchair and accessible housing. Several had wanted to or actually achieved Lifetime Homes standards at least for the affordable housing. An authority had required 20% of all dwellings to achieve Part M Category 2 accessibility standard (similar to Lifetime Homes) and that these could be affordable housing and/or market housing. None of the interviews had knowledge of wheelchair housing being delivered for market housing. Some authorities had provision of adapted and wheelchair dwellings within affordable housing that was in line with national guidelines and/or local needs assessment.

7.24 Standards achieved in adaptable housing moved with changing national standards. One authority is now asking (because of changes to national housing quality and accessibility standards) for all flats on ground floors or with lifts to either Category 2 or Lifetime Homes and allow for 10% wheelchair accessible housing.

7.25 Clearly, issues of demand are more of a concern for speculative market housing where developers are afraid of having unsellable units than in affordable housing where it is easier to identify potential occupiers in advance. This was demonstrated in an example of one authority that identified an adaptable affordable home which would be pre-allocated if possible but if no appropriate resident was found, it would be fitted out as a larger general needs home with an option of reverting to disabled housing in a future let. Such an option is more difficult to attain in market housing. The issue is at least partly one of lack of knowledge about potential demand for accessible/adaptable market housing. Recognising this, one authority is proposing to research the need for wheelchair housing in the private sector.

Summary

- Delivery of affordable housing was guided by local targets but varied due to scheme specific factors. Large schemes can have a major impact on whether a local authority meets its affordable housing targets.
- Proportions of Social Rent, Affordable Rent and LCHO often differed from plan targets, usually because of changed funding priorities or viability issues which meant less social housing was delivered.
- Providing large amounts of affordable housing on single sites, especially on the edges of settlements misses significant sections of need and may need to be complemented with smaller village and infill brownfield urban sites.
- Some schemes are reliant on grant funding directly for affordable housing, although it is possible to deliver affordable housing with no direct funding in some cases.
- Schemes were able to deliver accessible housing for affordable homes and improved building regulations is making accessibility in the private sector more widespread. However, it has not been possible to secure wheelchair accommodation in the private sector but wheelchair affordable housing relating to identified need has been delivered.

8. VIABILITY ISSUES

Introduction

- 8.1 Viability is a common issue across all of the case studies, although the reasons and the impact vary considerably. Where viability is a significant issue, the typical factors are:
- Changing external factors;
 - Scale and timing of infrastructure requirements.
- 8.2 There are also some individual site issues that are likely to have some wider applicability, such as higher existing use values and regeneration costs for brownfield sites.
- 8.3 Some of the case studies have been in receipt of substantial amounts of public funding and this has enabled delivery to proceed, often providing significant planning obligations in terms of affordable housing and other infrastructure. We have interpreted these situations as presenting a viability issue as the underlying scheme economics are not sufficient to deliver the housing, infrastructure and other planning obligations without some external assistance.

External Factors

- 8.4 The external factors identified through the case study research include the 2007/08 financial crash and subsequent recession. This had a clear impact on the housing market generally and came at a critical moment for some of the case studies. Where S106 agreements were in the process of being negotiated, the crash resulted in significant delays and complex renegotiations.
- 8.5 Other external factors include the reduction in affordable housing rents as part of the 2015 budget. Again, this will have affected a cross section of sites in addition to the case studies researched here but it had specific impact on some of the case studies, with examples including withdrawal of an offer from a RP for the affordable housing to be provided. This instance required new arrangements with another RP at a reduced value for the affordable housing.
- 8.6 These external factors are outside the control of the developers and the Planning Authorities and demonstrate that sites can be affected by external as well as site-specific issues. It is not clear what measures can be put in place to address all potential issues although it is apparent that development schemes are more vulnerable at critical moments of the consenting process for a scheme, and less vulnerable when they are already delivering market and affordable housing. This suggests that where progress continues to be required, flexibility is needed and the availability of external funding can be particularly important. It also suggests that it may be appropriate to put into place 'temporary' solutions such as repayable loans, review mechanisms (to allow the situation to be re-visited when circumstances improve) and reduction in planning obligations for the early part of schemes if necessary. In broad terms, effective solutions are those that that reduce risk of proceeding with the development.

Infrastructure Requirements

- 8.7 The case studies were also required to provide infrastructure as part of the development, either to facilitate development on the site and/or to provide part of the strategic

infrastructure needed in the area. The infrastructure required includes on and off-site transport, schools and green space as well as town centres, environmental mitigation and other community facilities.

- 8.8 Although the requirement to provide infrastructure is a common factor, the scale of what is needed and the viability implications of this, vary between the case studies. Where infrastructure requirements are substantial, the viability issues can be sufficient to effectively halt progress until some solution such as funding support or reduced planning obligations can be arranged. However, it seems apparent that where infrastructure is a viability issue this is often where several adverse factors coincide (for example the 2007/08 financial crash and/or low market values as well as infrastructure provision).
- 8.9 The timing of infrastructure is also important. Development that is expected to provide expensive infrastructure early on (and/or before housing delivery has started) can pose significant risks to the developer as well as the straight cash flow implications. Many of the case studies required early infrastructure provision and generally this has been addressed through public sector support in order to allow progress to continue. In one case study, extensive infrastructure requirements contributed to a viability gap which was preventing development from getting under way. £30m of public investment from a combination of local authority, government agency and other public sources, along with developer contributions, secured this infrastructure and also affordable housing in the early stages of development. This “crystallised” the site value, allowing the development to proceed.
- 8.10 Where values are higher and/or sales risks relatively low, and the infrastructure burden is not unduly high then development is able to proceed with little or no public sector assistance. However, it is not possible to calibrate the scale in terms of infrastructure costs in relation to values/dwelling or risk. On some case studies, public funding is aimed at securing infrastructure ahead of need (or agreed triggers) in order to increase the attractiveness of the scheme and increase delivery for example schools or roads to access other areas of the site. This assistance could be in the form of loans that get repaid as delivery increases.

Other Viability Factors

- 8.11 Open market housing values vary substantially across the SW and this is discussed at some length in section 2. Generally, values will vary more than build costs and therefore values are likely to be one of the major determinants of viability. However, landowners will often have greater expectations where house prices are higher and this may mitigate the effect through increase land values. Nonetheless where house prices are higher, then viability should be stronger and this should allow development to provide more planning obligations including affordable housing. However, the case studies forming this research do not provide a clear support for this argument although it could be argued that the Bath Western Riverside site (with its remediation costs etc.) would not have come forward in a lower value area without substantial additional public support. Overall, it seems likely that where values are higher but development costs with infrastructure and planning obligations are not correspondingly higher, then more value will be accruing to the land owners.
- 8.12 In some instances, the case studies were all or partly on brownfield land. This has raised viability concerns based on higher site value issues, resulting in negotiation about the planning obligations.

Dealing with Viability Issues

- 8.13 The case studies suggest that viability can be a major issue for LPAs, with developers/landowners complaining that planning obligations are too onerous.
- 8.14 Typically, the main discussion takes place as part of the outline planning permission process, which will set the headline affordable housing proportion (often the main planning obligation cost) as well as the other on and off site infrastructure requirements. However, some viability concerns are being raised part way through the case study development for example when the requirement for further infrastructure is triggered.
- 8.15 LPAs recognise that they may not have the skills to deal with viability in complex large-scale developments and often make use of external advisors although this can distance the authority from the process (although in one of the case studies the LPA dealt with assessments in-house).
- 8.16 LPAs may also argue that, on large sites which represent a significant amount of their delivery over a plan period, the balance of power can be tilted towards the developer. This can weaken their bargaining position with the developer who knows that delivery pace is crucial for the authority in meeting its targets.
- 8.17 Introducing review mechanisms to future proof the process can be controversial – developers will seek to avoid the uncertainty while LPAs (and the RPs) may not want to be locked into a deal that becomes out of date. However, committing to future review mechanisms can be a way of moving forward in the short term and commencing delivery.
- 8.18 When viability issues are raised, the outcomes include reducing the proportion of affordable housing and/or changing the affordable tenures (typically away from social rent to Affordable Rent and/or intermediate home ownership) and dwelling sizes (from larger to smaller affordable dwellings).
- 8.19 Planning Policy Guidance (PPG) and other guidance such as Viability Testing Local Plans¹⁹ and RICS research²⁰ is fairly consistent about the basis for land values in viability testing,²¹ with the expected approach involving some premium above existing uses and that the costs of unusual constraints will be deducted from the values that might be expected from an unconstrained site. Despite these guidelines, the case studies show some situations where it appears that known costs are being used as a lever to negotiate/re-negotiate planning obligations. This may be a result of the initial negotiations with landowners and the option agreements – although situations are generally too muddled to ever arrive at a definitive view. However, this does suggest that a transparent and consistently applied approach to land values will be of benefit to the LPA when considering what position to take.
- 8.20 For many of the case studies it is clear that public funding has underpinned delivery of the affordable housing, even where the funding is targeted towards infrastructure.

¹⁹ Local Housing Delivery Group Chaired by Sir John Harman, 2012.

²⁰ RICS, 2015, Financial Viability Appraisal in Planning Decisions: Theory and Practice.

²¹ Although other guidance such as RICS's 2012 Financial Viability in Planning has more emphasis on other market land sales.

Summary

- Viability problems are a common issue across all of the case studies, generally resulting from changing external factors (for example the property market downturn of 2007/08), and the scale and timing of infrastructure requirements. Some of the case studies have been in receipt of substantial amounts of public funding in order to overcome these issues and this has enabled delivery to proceed.
- The infrastructure required for the case studies includes on and off-site transport, schools and green space as well as town centres, environmental mitigation and other community facilities. Where the site is required to provide substantial infrastructure, the viability issues can be sufficient to halt progress until some solution such as funding support or reduced planning obligations can be arranged. Viability issues are exacerbated where the infrastructure is required early in the development – with an adverse impact on cash flow.
- Logically viability issues should be less where market values are higher (and vice versa) but the case studies did not present a clear picture.
- Typically, the main viability discussion takes place as part of the outline planning permission process, which will set the headline affordable housing proportion as well as the other on and off site infrastructure requirements. Where viability negotiations take place, outcomes include reducing the proportion of affordable housing and/or changing the affordable tenures and dwelling sizes. Public funding has underpinned delivery of the affordable housing, even where the funding is targeted towards infrastructure.

9. DEVELOPMENT CHARACTERISTICS

Introduction

- 9.1 The six case studies span two new settlements, one relatively high-density urban infill and three suburban extensions to existing settlements.

Density

- 9.2 The overall planned density is set at the outline application stage, with the detailed development characteristics (actual density, dwelling sizes, energy standards) reflect standards at the time of the reserved matters application. In some cases, it is apparent at reserved matters that sites may be more constrained than originally anticipated and as a result may not be able to deliver the housing numbers originally planned without extending the site area.
- 9.3 Where the original plans were developed under PPG 3 (which encouraged higher density development) there are some signs of tension between the densities proposed and the housebuilders' current preferred delivery. There is no evidence that developers are pushing up densities – quite the opposite in some cases – reflecting housebuilder views on sales risks/viability and more 'suburban' locations. This could be interpreted as the original plans becoming 'out of date' in respect of prevailing market, suggesting that flexibility may be required if there is a genuine mismatch between the housing planned and the effective market demand.

Market Housing

- 9.4 The market development characteristics reflect the case study situation, with predominantly flatted development in the higher density locations (the urban infill and parts of the town centres in the new settlements) and mainly houses in the urban extensions and most of the new settlements.
- 9.5 Discussion with the housebuilders notes that on large sites the market housing is generally on the smaller end of the housebuilders' range as this fits the market better. By comparison, the largest dwellings in housebuilders' ranges will tend to be on smaller sites where an 'exclusivity' premium may be achieved. This suggests that in order to provide the widest range of house sizes careful site design may be needed to present a larger development as a set of smaller ones.
- 9.6 Where there are housebuilding consortiums on the same site then these will typically complement each other in terms of the sections of the housing market each is targeting. To some extent this will include dwelling types (for example one may have more standard smaller dwellings whilst another may have more larger ones), as well as complementary quality/price points. This will also apply to different brands operating under the same housebuilder.

Affordable Housing

- 9.7 We considered the scale of affordable housing delivered in a previous chapter but here we review the affordable housing characteristics. Affordable housing tends to be quite separate from the market housing characteristics, and will vary by affordable tenure.

- 9.8 Rented affordable housing is more likely to be either flats or, where there is a need, larger family units (for example four bedroom houses, although these will be much less numerous than the flats). As a result, affordable housing is typically smaller units than the market housing on a given site, although this does not mean that the space provided in equivalent bedroom units is smaller. This size differential reflects the housing need identified by the LPAs as well as fitting with the viability issues associated with affordable housing; and the difference is also apparent on other sites as well as the case studies reviewed here. One of the issues affecting the provision of the larger family rented affordable housing is the benefits cap, which has meant that RPs may be less keen to take on these house types.
- 9.9 There is broad agreement that mono-tenure housing provision is not suitable in most circumstances and that smaller cluster of different tenures strike the right balance between management implications and balanced communities.
- 9.10 Low cost home ownership dwellings (for example shared ownership) tend to be two or three bedroom houses as these are where the demand for this tenure is strongest. There are some examples of low cost home ownership flats being provided in the case studies but in most locations these are more challenging for the Housing Associations to sell on.
- 9.11 There tends to be more certainty about the tenure and mix of affordable dwellings being provided in the case studies compared to market dwellings. This is because the outline consent and S106 will set out the affordable housing provision. While this certainty is useful in terms of meeting housing need, there can be issues around the lack of flexibility this means for RPs as they may be asked to take on a set of affordable dwellings beyond the timescale that they can comfortably be planned for. For example, this can highlight risks to RPs from external factors such as the 2015 budget and the reduction in social rents plus benefits caps, as well as possible changes in housing need.

Broadening the Range of Housing Types

- 9.12 Self/custom build has not really been part of the case studies as the original permissions predate the government push on this type of development. However, later phases may start to introduce this to the mix of dwelling types provided.
- 9.13 Specific housing for older persons is also not a significant component of the case studies despite the clear demographic changes pointing to a need for this type of housing. This might include bungalows as well as specialist retirement housing.
- 9.14 It is apparent that the large-scale developments making up the case studies are beyond the reach of most of the smaller housebuilders. However, where smaller sites become available within the larger developments then the smaller businesses are able to take them on. Having a more diverse range of housebuilders is likely to produce more variety in the house types provided.

Summary

- The case studies include different development types and the development characteristics reflect this – with flats provided in higher density regeneration sites and in the parts of the town centres for new settlements; and predominantly houses in the more suburban settings.
- Where the sites can be presented as a collection of smaller developments there may be a greater spread of dwelling sizes (and smaller sites within the overall development may enable smaller housebuilders to also deliver on site).
- Affordable housing tends to be smaller units than market housing, with rented affordable tenures more likely to be flats and low cost home ownership more likely to be smaller houses.
- The long-term commitment to the tenure and type of affordable housing may provide some certainty in terms of meeting housing need, but there can be issues around the lack of flexibility this means for RPs as they may be asked to take on a set of affordable dwellings beyond the timescale that can comfortably be planned for.
- The type of housebuilder involved in large-scale developments is limited to the major national developers (as well as RPs). Proactive planning is required to broaden the range of businesses involved.

10. ROLE OF THE MASTER PLAN AND DESIGN GUIDES

Introduction

- 10.1 The case studies have masterplans setting out the development to be provided and generally these are used to shape the outline applications. Design Guides are then generally used to inform the detailed design in the reserved matters application. Not all situations will follow this exact role (for example design guides can be part of masterplans) but the combination of broad principles and detailed design work serves to set the character of the development and in effect the overall quality.
- 10.2 The definition of quality can be subjective and this is brought out within the case studies used for this research. The study team does not include a specialist design competency but the range of interviewees were able to offer perspectives on quality and how it affected the delivery of housing on these sites.

Information Provided

- 10.3 The issues that masterplans and design guides will deal with will vary from scheme to scheme but there are some common factors such as broad locations, standards, dwelling types and mixes. The masterplans will consider the site opportunities and constraints, and will work through different development options to arrive at the best balance of development. Generally, masterplans will allow for some flexibility to allow market dwelling mixes etc. to be matched with demand in due course but they will need to provide enough detail to allow scrutiny by the LPA officers and Planning Committee.
- 10.4 While a certain level of information is needed by the developers to plan and cost delivery on the site, the principle of maintaining flexibility is important.

Quality and Deliverability

- 10.5 The case study interviews highlighted the role of quality and how it can be interpreted differently.
- 10.6 In some cases, the developments were heavily design-led although the primary reasons varied by case, from matching the surrounding area and its constraints to taking a long-term view about quality place making. While there was broad consensus that quality is a 'good thing' and should in principle provide extended commercial benefits as well as attractive environments, there is a tension with the need to deliver short-term returns to housebuilders and their shareholders/financiers. In the case studies that were heavily design-led the development was very much tailored to the masterplan and design guide principles, and this meant that the housebuilders were obliged to amend the types of housing provided. This could have an impact on the pace of development as moving away from standard house types to deliver a locally distinctive scheme can have a cost penalty.
- 10.7 In order to ensure that development adheres to the masterplan and design guide there are various mechanisms employed, starting with the role of the LPA's officers and planning committee but also including control of the land (which allows a direct influence on the form of the development). All of these mechanisms are seen as playing a role in ensuring that design-led quality is maintained through the life of the development, and when there are weaknesses in any part of this process then the quality may be compromised. Within this there

is a risk that if design-led quality principles are pushed too far then the development may not be commercially realistic, for example if the local market is too constrained to allow the uplift in values that better quality might provide in higher value locations. If this is the case then there will be implications for delivery of both market and affordable housing. The case studies show that there are questions of judgment in these issues and that these decisions are necessarily taken on the basis of imperfect information.

- 10.8 The case studies show that quality can also be interpreted as having good infrastructure provision as an end in its own right and also to facilitate delivery. This aspect of quality is clearly very important. Delivering the infrastructure is part of the masterplan delivery strategy and would require good liaison with the LPA, service providers and most likely public sector funders. With regard to external funding, part of the role of the masterplan will be to inform the business case for external funding in terms of delivery that can be expected as a result of support received.

Producing the Masterplan and the Design Guide

- 10.9 We note that across the case studies some of the masterplanning and design work is undertaken by the developers, and some by the LPA. Generally, the original masterplan is driven by the original land owner/assembler and/or developers with the local authority responding to their proposals as part of the consenting process. Where the land owner/assembler drives production of the masterplan and design guide, they can take steps to set the scheme quality and to build in safeguards to ensure that the housebuilders deliver it. Volume housebuilders are clearly able to efficiently deliver housing but some of the case study interviews revealed some concerns about these organisations delivering place-making components of these large schemes, such as high streets etc.
- 10.10 There is no particular picture about which approach to design may produce the highest quality development in terms of design although a minority of case studies have been considered to have design quality issues, and these are developments that have been driven by developer commissioned masterplanning/design guides. In these cases, the respective LPAs have responded by becoming involved in the design for later phases of the development. This type of involvement can have capability and capacity implications for LPAs, particularly if these skills are need sporadically over the course of a long-term development.
- 10.11 Overall, it seems that while the private sector is clearly capable of producing high quality design-led development there is a case for some oversight by the LPA with the required design standards secured through some policy framework.
- 10.12 The research shows that LPAs are learning lessons about the length of time a Masterplan and Design Guide will be in place, and how external events can change leaving the LPA and the developers with out-of-date policies. Where large-scale developments are being delivered in phases this problem is reduced and there is a trade-off between providing some certainty about delivery and building in the opportunity for practical flexibility.
- 10.13 In addition, it is clear that there may be other practical reasons why masterplans need to be reviewed. The case studies have noted occasions when the original site capacity estimates are often over-optimistic, particularly when some of the housebuilders preferred delivery is at a lower density than the original scheme proposals, and also as more constraints come to light.

Summary

- Design has an impact on deliverability of schemes. Some of the case studies have had particularly design-led approaches and these are expected to have longer-term commercial gains – but may also have short-term tensions with more standard approaches to delivery and if misjudged, may constrain market and affordable housing delivery.
- Both the private sector and the public sector have a role in the masterplanning and the design guide. While the original masterplanning will be undertaken to support the promotion of the site, there is also a role for the LPA to maintain oversight of the design process to ensure the desired quality is safeguarded and for the officers and committee members to uphold the principles set out.
- There will be occasions where masterplanning will need to be revised and therefore some flexibility is important.

11. HOW LOCAL AUTHORITIES APPROACH THE DEVELOPMENT PROCESS

Diversity of Scheme Contexts

- 11.1 All of the case study developments represent a significant element of local authorities' housing supply. In this sense they were all strategic but their strategic significance often went beyond just housing.
- 11.2 All of the (larger) schemes included non-residential uses but some went further than just mixed use and their objectives included creating successful new towns or regenerating significant city centre locations. These different objectives played a part in how local authorities tackled development. The skills and experience of the authorities also influenced their approaches.

Different Organisational Approaches

- 11.3 As described in detail in section 6, the genesis of the schemes followed a similar pattern – they were first identified in a historic regional plan (often as part of a broad location for major development) before becoming a named development allocation in a local plan. The schemes would then be subjects of outline planning permission applications with a series of RM permissions providing (alongside S106 agreements) the details needed to commence development.
- 11.4 The schemes were therefore progressed under the same system as other applications but their scale and significance meant that they were far more complex and the stakes were higher for the local authority and for the other participants. Success or failure of these schemes would impact on a wide variety of local authority plans and strategies which went beyond planning for housing. Delivery required consideration and input, sometimes in the form of funding, from a number of agencies beyond the planning authority.
- 11.5 The ways in which planning authorities have responded to the task of facilitating large-scale developments varies quite significantly and not just in response to the scale and complexity of the development.
- 11.6 The most basic model adopted by the local authority would be for the scheme to be dealt with by the existing development management (DM) team within a single authority. Because of the scale and complexity, a manager with responsibility for progressing the scheme would be appointed but working with a range of other officers from within their authority and with officers from the county council in two tier authorities to deal with the various policy and funding issues that arise from the planning of large-scale schemes.
- 11.7 Specialist external advisors are also brought into the process when they are needed. This is particularly the case in dealing with issues around the viability of development (particularly in relation to affordable housing) which are, in the main, outsourced to external consultants, often the District Valuer (DV). But the LPA can then somewhat loses control of the process.
- 11.8 An authority may set up a dedicated multidisciplinary teams which brings together the relevant specialists within the authority or authorities if there is to be cross authority working. These teams may include additional urban design skills in an attempt to keep control of vital elements of place-making.

- 11.9 Other models of delivery involve the establishment of a separate ‘grouping’ to oversee the project. These organisations (perhaps labelled as projects or delivery boards) may be set up and have oversight for one scheme or for the growth of a wider area and they may involve just one authority or a group of authorities. Critically, though, they bring together the local authorities and the developers/landowners involved as well as the major potential funders (such as the HCA and the LEP). Again, depending on how the organisation is set up, local politicians can be involved in the decision-making processes but this is not universal.
- 11.10 These arrangements can sit alongside formal agreements between the local authority and developer/landowner which commit the council to provide certain infrastructure and housing funding in return for a commitment from a developer to bring the site forward and start delivering housing.
- 11.11 The research has shown that these different sorts of arrangements can help maintain the momentum of the development process, resolve issues at a very senior level and provide a ‘single voice’ for a scheme, especially when external funding sources are being sought.
- 11.12 In addition, recently available capacity building funding has been useful to many of the LPAs in building up their skills and knowledge for dealing with their larger schemes and in simply adding to the number of officers to deal with all aspects of the planning process for the large-scale schemes. Nevertheless, there was a view that some technical skills, especially in relation to valuation and legal issues still require to be bought in rather than rely on in-house resources.
- 11.13 The importance of leadership was highlighted over several case studies. Strong leadership within the local authority was associated with commitment to the scheme objectives. Where the scheme was viewed as more than simply a large-scale housing development, this was an impetus for senior officer and political support.
- 11.14 The importance of ‘leadership’ is not exclusive to the local authority sector and the way development consortium organise themselves and operate can have a bearing on the effectiveness of working arrangements with local authorities. This is not something the authority can readily influence but does need to be borne in mind.

Funding

- 11.15 Securing appropriate funding for development can be critical to the success of large-scale housing developments and, evidently, the more infrastructure required, the more significant the need for funding.
- 11.16 To achieve this, the authority needs a clear view of what funding is required and when and how this fits with national and regional bodies’ priorities, recognising when these may change and that there is a shift away from grant towards loan funding models.
- 11.17 This was striking where for example local authorities were able to complement funding from HCA for affordable rent and social rent with council funded social rented units. Partnership working with RPs and developers is also necessary to make the case for inclusion in HCA and other funding body programmes. Having a strategic view of when to bring forward schemes was also important with one authority stating that it had missed the deadline for application for NHAP funding. Of course, the lack of control which local authorities have over bringing forward delivery hampers them in this respect.

11.18 Funders such as HCA responded well and were able to fund schemes where the local authority/project board was able to demonstrate need for and benefits from funding and that the scheme was ready to go with other agencies (for example county highway departments, housebuilders and RPs) lined up and planning consent in place. Other authorities, with similar schemes but less preparation and less strongly argued cases were unsuccessful in bidding for funds. The following comment from a local authority officer well illustrates the point:

“Key thing is having a plan - being very clear about when ...infrastructure is needed – so plan when to work up designs for each element and seek funding... Must take advantage of all funding opportunities - the various different programmes that are available...”

11.19 The downside of working to enable readiness for funding opportunities is that there is a view that schemes can be hurried through the planning process to achieve this. If this means rushed approval and lack of attention to detail in areas such as design or affordable housing provision, this can contribute to local authorities lacking engagement and control and limiting their ability to foster place making and sustainable communities. Since funding is necessary for large schemes, whether directly for affordable housing or for infrastructure, readiness is essential and good practice can ensure that this is not at the expense of scheme quality.

11.20 Success in obtaining external funding appears to rest on: i) a clear development strategy shared across all relevant authorities; ii) high level political agreement on what is required and priorities for funding; iii) ‘ready-to-go schemes’ that can pick up short term funding opportunities; iv) a clear ‘single voice’ to funders so it is apparent what is required; and vi) lobbying to ensure the value of the scheme is understood by funding decision takers and local and national politicians.

Sharing Experiences

11.21 The case studies have highlighted the capacity and range of skills required of local authorities in taking forward large-scale schemes. Often officers and politicians are dealing with complex design, funding, scheme viability and other issues that are largely unfamiliar. There is no ‘guide book’ that sets out how to bring forward large sites and each authority will learn from their own experience.

11.22 While developers and housebuilders may bring experience from elsewhere, this is not the case for local authorities. There is some sharing of knowledge on an informal basis with authorities liaising directly with other LAs they know to be dealing with similar situations – but this is a bit ‘hit and miss’. We found no evidence of a regional or national network of knowledge whereby authorities can ‘learn’ from others.

Delivery Models

11.23 We have set out the different ways in which local authorities organise themselves to facilitate large-scale developments. Some interviewees did not consider that the current set of arrangements open to authorities were the best way to deal with large-scale developments and were arguing for more radical solutions.

11.24 These included (re-)introducing the development corporation model for large-scale schemes, although this need not necessarily be public sector-led. This option was seen to have advantages in terms of control of the land and therefore it would be easier to ensure design

and place-making standards were met while the pace of delivery of new housing is maintained. Without being specific on the details of how they might operate, some local authority interviewees suggested alternatives such as Community Land Trusts; Garden Village and Joint Venture Models could be explored further.

Summary

- Although large-scale development follow the same basic planning pathway, local authorities take different approaches to the way they organise themselves to plan for and deliver them. These range from a standard DM approach (with enhanced resources), a within-house team approach through to bespoke organisations that bring together local political leaders along with key agencies and the developers/landowners.
- Securing external funding for infrastructure and/or affordable housing is critical to many of the large-scale developments. This is particularly the case when there is a requirement for up front infrastructure provision and potential cash-flow difficulties. Success in obtaining external funding appears to rest on: i) a clear development strategy shared across all relevant authorities; ii) high level political agreement on what is required and priorities for funding; iii) 'ready-to-go schemes' that can pick up short term funding opportunities; iv) a clear 'single voice' to funders.
- Delivering large-scale development requires a range of skills and approaches that maybe unfamiliar and authorities look to each other, on an informal basis, to share ideas and learn from others' experience.
- Other models of delivery (including development corporations and garden villages) could offer other and better options to ensure delivery of large-scale developments.

CONCLUDING COMMENTS

- 12.1 As the RTPI anticipated, the South West has relatively high house prices and (private) rents with the long-term rate of price appreciation substantially above the growth in incomes or earnings. Prices are highest in Bath, Bristol and Bournemouth – the larger urban areas which are closer to London and the South East but affordability issues are not limited to these areas.
- 12.2 Yet the level of total new housebuilding completions has been in serious decline over quite a long period. The causes of the housing affordability crisis in many parts of the UK are complex and multi-faceted, but a decline in supply coinciding with population growth has undoubtedly contributed to an affordability problem in the region.
- 12.3 The case studies of large-scale development for this research are substantial in scale (up to 8,000 dwellings) but while most of them have a noticeable impact on total new build supply in their locality this is generally still relatively moderate. Neither do they appear to offer cheaper housing solutions with prices somewhat above the median level for their HMA as a whole. However, large-scale schemes do provide opportunities to deliver a steady flow of a relatively large amount of affordable housing (of around 25/30% of the total dwellings). The promotion of larger sites may lead to improvements in general housing market affordability, although this would also be the case if similar numbers of new homes of a similar type could be provided in total across a number of smaller sites.
- 12.4 Large-scale housing developments have to create successful places. This requires a clear strategy from the local authority that fits with the wide range of its objectives. Principally, these developments are about meeting the need for housing but they must also meet economic and sustainability objectives. Their delivery requires co-ordination with infrastructure provision which is dealt with at county, regional and national levels. Transport implications of largescale housing development can be local, regional and national. Transport considerations must be across all modes from pedestrian and cycling networks to links with national motorways and rail systems. Providing for additional school places is often an important consideration. Employment opportunities are necessary if the housing development is to be sustainable. Employment issues may relate to areas beyond the housing development or even the district and should mesh with sub regional, regional and national policy.
- 12.5 All of this points to the need for a long lead in time and a strategic approach to planning and delivery. Developments of the scale we reviewed (600 to 8,000 dwellings) had lead-in times of around 10 years from first being identified in a (regional) plan until start on site and about two years between outline planning permission and the first RM permission.
- 12.6 Once the schemes are started, they then can deliver up to 250-350 dwellings per annum. However, the flow of completions can be erratic year on year and will depend on a number of factors including the pipeline of full permissions and the strength of the local market and the perceived attractiveness of the scheme to draw in purchasers.
- 12.7 Viability issues can affect a scheme across its life and will usually involve compromises between the amount and type of affordable housing secured and other infrastructure. S106 agreements are often reviewed more than once and the availability of public funding will impact on what can be achieved. Viability issues differed subtly between the case studies and different solutions were identified – sometimes but not always involving future reviews of the amount of affordable housing provided.

- 12.8 Obtaining external funding to support the development depends on a number of factors and simply identifying a general need for funding is unlikely to be sufficient. We identified six factors that seem to be important in securing public sector funding: i) a clear development strategy shared across all relevant authorities; ii) high level political agreement on what is required and priorities for funding; iii) 'ready-to-go schemes' that can pick up short-term funding opportunities; iv) a clear 'single voice' to funders so it is apparent what is required; and vi) lobbying to ensure the value of the scheme is understood by funding decision takers and local and national politicians.
- 12.9 There are different ways in which authorities organise themselves to deal with large-scale developments including setting up bespoke and dedicated teams which bring together a range of traditional planning skills alongside development and funding know-how and involve partnership working between the public and private sector and at the most senior level. It is increasingly unusual for an authority to deal with this scale of development through its standard DM route.
- 12.10 Steps within the control of the local authority which could form part of good practice in delivering large-scale developments include:
- Early identification of potential schemes including analysis of key challenges such as land ownership consolidation, infrastructure constraints;
 - Once scheme promoters and developers have emerged or been identified, a partnering relationship with these stakeholders is established as soon as possible – this may be best as a bespoke single purpose group;
 - Consideration of development corporation approaches (either private or public sector-led) as well as joint venture models etc;
 - Leadership within the local authority, including member support, which establishes the importance of the scheme to the authority and how it fits with the authority's objectives and plans;
 - Robust design guides and master plans that can support and potentially streamline the planning process and assist both the local authority in meeting its objectives and developers in providing a level playing field;
 - Local authorities and their partners need to have good intelligence of potential sources of funding and senior figures should be proactive in promoting the scheme in terms of the objectives of funders;
 - Ensuring that there is adequate capacity within the authority(ies) with the right skills – including expertise in viability so can act as an 'intelligent client' (even if external organisations undertake specific assessments);
 - Sharing knowledge and experience with other local authorities working on similar schemes to strengthen good practice.
- 12.11 Central government, local government associations and organisations such as the RTPI itself could play a significant role in providing practical guidance for LAs on good practice in delivery of large-scale development – this could simply be establishing networks to share knowledge between a peer group of LAs with experience of large-scale developments.

ANNEXES

ANNEX A – STUDY SPECIFICATION – PURPOSE OF THE RESEARCH

It is becoming increasingly apparent that current planning practice aimed at delivering affordable housing is limited in what it can achieve and that new ideas need to be developed. Less apparent is what these ideas could or should be, but in seeking to expand knowledge and understanding, the RTPI SW is of the opinion that it would make sense to examine what has happened and is happening in the South West by examining selected case studies. Three settlements appear suitable with a more recent consent providing additional information. The three are Cranbrook and Sherford in Devon, and Poundbury in Dorset. The fourth is land to the west of Stonehouse in Gloucestershire.

The thinking behind these four is that as there is a 25-year period between the inception of these four developments, so the time differences should enable us to find out what changes have occurred and to make informed and realistic comparisons. In respect of the changes, these would relate to the initiating factors for each settlement: why the locations were chosen; what factors influenced settlement size and settlement boundaries; what proportions of total housing were to be classed as 'affordable' housing, how they fitted into the developments and how they were to be managed. Management in this sense should include both social and private landlords. Information about house prices and rents payable during the above stages in the development process would be particularly welcome.

With regard to making comparisons, it is considered that this should relate to planning policy, development management, what has been built, changes in housing tenure and changes in house prices and rents. On the planning side, the focus should be on changes to policy and conditions of consent, and whether the level and detail of these have changed in any way. Consideration should also be given to the acquisition of the land and the release of land to builders.

In respect of what has been built, the research should provide detail on changes in housing density and the size of dwellings, and the extent to which increases in house and land values have led to more intense developments. With regard to management, attention should focus on changes to land and house prices, rents and changes to tenure. This is because increases in the number of buy-to-let properties reduce the supply for home ownership which helps increase house prices.

The underlying purpose for examining the above is to enable planners and others to get a better idea of what has been happening to housing delivery and house prices. Important points are to appreciate how affordability thresholds have changed, the impacts these can have on the provision of new dwellings and how they affect the supply and demand for dwellings. The aim is to increase understanding about the ways in which the housing market has and is changing and, as a consequence, to assist in the adoption of more appropriate approaches in the delivery of housing that is genuinely more affordable.

ANNEX B – THE SUB-REGIONAL HOUSING MARKET MODEL

A central platform for the contribution of Professor Glen Bramley to this exercise is modelling the impacts of different planning scenarios for housing is the Sub-regional Housing Market Model (SRHMM) which he has developed with colleagues over the last six years.

This new sub-regional economic model of housing markets was primarily developed and intended to inform or assess planning decisions on housing provision in the current decentralised planning framework in England. This model builds on previous work (notably Meen 2011; Leishman et al 2008, ODPM 2005, Bramley & Leishman 2005; as reviewed in Bramley 2013a) but goes beyond it in terms of using a more appropriate geographical framework of sub-regional housing market areas, explicit modelling of the supply process as a function of planning, economic modelling of demographic change, and linking component models in an integrated simulation approach which takes account of spatial interaction between markets. Its outputs were initially primarily intended to provide a critical missing element in the evidence basis for localised planning decisions and an ability to assess the performance of the whole system in promoting supply and affordability. However, in recent applications we used it as a basis for longer-run forward forecasts of a range of economic and housing market variables and how they influence poverty at national and regional levels in a mutually consistent fashion (Stephens et al 2014; Bramley et al 2016), the latter in large studies funded by the major national charity the Joseph Rowntree Foundation.

The model was developed out of a feasibility study commissioned by the National Housing and Planning Advice Unit (NHPAU), the government agency then charged with advising regional planning bodies on housing numbers and affordability (Andrew et al 2009, 2010). Although the NHPAU was wound up following the change of Government in 2010, the authors were able to develop the model further in work for a particular group of local authorities (Gloucestershire County and Districts) for use in SHMA and housing planning generally. The current model built further on that work (Bramley 2011) and on the recent opportunity to update the model using information from the 2011 Census and other sources. It has also been informed by the experience of developing and using a model with similar architecture for New Zealand. In addition to use in the contexts of WoE and Gloucestershire housing-planning issues it also featured in contributions to the Lyons Review of Housing Supply, the London Housing Commission, and a current project for RTP1 (South West). The fullest account of the model in a peer-reviewed monograph length article is in Bramley & Watkins (2016). However, this refers to v.14 of the model, whereas the operative version used in this policy modelling study is v.18, incorporating a range of further developments and refinements described more fully in Bramley et al (2016).

Main characteristics of the model

The characteristics of this model which make it suitable for the purposes of this study can be set out as follows:

- It is a *long run* model, which focuses on annual changes over a period of 20-30 years; this contrasts with most mainstream macro-economic and regional models, which focus on short period changes over 2-4 years.
- It recognizes the *spatial structure* of the housing market in England, by being constructed at the level of 'housing market areas' (HMAs), while reflecting the interactions between spatially-related market areas as effected through mechanisms of migration and price spillovers.
- It handles the important role of *demographic numbers and processes* by going beyond extrapolative household projections and explicitly modelling migration and household

formation as processes which respond to housing market and economic conditions, while at the same time influencing and modifying them.

- It recognizes that *housing supply* has important impacts on the housing market in the long-run and that this supply is a dynamic economic process, albeit con-strained significantly by planning and physical limits on land availability.
- The model generates *household income levels and distributions* which are important for affordability, when taken in conjunction with house prices. It also generates *labour market indicators* (employment and unemployment rates) which are useful for the analysis of poverty while being consistent with the economic and demographic scenarios.
- The model user has considerable *control over key inputs* which drive the system and can apply judgement about future trends in economic growth and other parameters at national and HMA levels, rather than working with a system which is a complete 'black box'.

The model is implemented in an Excel spreadsheet format, so that the evolution of any variable in any area over time can be observed. Further details and insight into the model may be gained from Annex A, which identifies the key economic functions in the model, what drives them, and the evidence base upon which these functions are based

Spatial Framework

The spatial framework for the model is based on recent research into housing market areas (HMAs) in England. In a parallel project for the former NHPAU a separate research team produced a comprehensive analysis of this issue and tested a range of sets of HMA boundaries (Jones et al 2010). The set used here were selected as the most suitable 'interim' output from that project, and were based on a composite of official travel-to-work areas, modified to achieve minimum 55% self-containment in migration of 25+ age group, and subsequently tested against house price criteria (which led to little change). The version of this set of HMAs used here is that based on grouping of whole local authority districts (pre-2009), rather than the ward-based set of boundaries, in order to maximise data availability. Within England this generated 102 HMAs, ranging from 'London' (population 9.6m) to Oswestry (40,000). When applying the model to the whole of the UK within the context of the JRF policy modelling project, 14 further sub-regional areas were added to the system, 8 covering Scotland, 4 covering Wales and 2 covering Northern Ireland. The basis for the Scottish areas was the set used in the study for Scottish Government by Leishman et al (2008), developing an affordability model for Scotland. Wales was divided into four regions (South Wales, Welsh Valleys, Mid and West Wales, and North East Wales) and Northern Ireland into two regions (Greater Belfast, Rest of Northern Ireland) based on the author's knowledge from previous experience researching housing markets and in these countries.

Key functions within the model

In this section we provide fuller information about the key econometric functions which lie at the heart of the model's forecasts.

House prices. The model predicts average house prices (in real terms, and mix-adjusted) annually for each HMA. Based on the NHPAU feasibility study we sought to develop a longer panel model on data over 24 years (1983-2007) for a set of 58 'big' HMAs, made possible by combining two datasets, a more recent one for the 102 HMAs and an earlier one for the 90 former Health Authority area units. Using this dataset, the model form chosen was a 'partial adjustment' model, which regresses price change (in log difference form) against lagged log price level and other explanatory variables in log level form. This approach is a simple and robust way of achieving some of the aims of more complex cointegration approaches, including dealing with non-stationarity in price levels. The estimation was

undertaken in Stata using the Fixed Effects (FE) estimator, which overcomes unobserved heterogeneity in the panel and makes the model draw all of its explanation from the time-variation in the predictors. Overall the model explains nearly half of the variance in the (log) change in house price (r-squared=0.492).

New construction. New private house-building is forecast using an explicit behavioural model fitted to HMA-level annual data for the period 1998-2007, following previous research particularly Bramley & Leishman (2005). This predicts mix-adjusted new private supply, and explains nearly three-fifths of the variance (r-squared=0.593). The main planning inputs are the flow of new planning permissions and the stock of existing permissions, with the former having a much stronger effect. Other variables on the land supply side include the share of small sites and the previously-developed land share (both negative), and the share of greenspace as a more general environmental/supply factor (positive). New house-building has a positive momentum effect from the lagged previous level of completions and a spatial effect from average levels of house-building in the surrounding areas (positive). House prices affect house-building through the relative level of mix-adjusted price, although the effect is weak, consistent with much evidence for the relatively low price-responsiveness of housing supply in England (see Barker 2004). Mortgage interest rates have a negative effect, consistent with other research on housing construction. New social housing output has a positive effect, perhaps surprisingly, but reflecting the growing importance of s.106 policies. One other variable included is the level of out-migration from surrounding areas.

Migration. Internal domestic migration is modelled for a panel of data for HMAs over 10 years (1998-2007), with separate models to forecast in-migration and out-migration rates for each of four age groups (0-14/15-24/25-59/60+). Models were fitted in Stata using Generalised Least Squares Random Effects model with robust standard errors. The gross migration rates tend to be much higher for the 15-24 age group and relatively low for the 60+ group. 27 variables in all are used, of which 14 vary over time as well as space and 13 are fixed cross-sectional variables. The overall fit of these models (r-squared) varies between 0.586 and 0.820. An important structural feature is that in-migration equations include a term for the outmigration volume from contiguous districts, while out-migration equations contain terms for lagged gross in-migration and international migration. The house price factor is included in relative form, to avoid problems of non-stationarity, and also in its spatially contiguous form. In general the results show higher prices reducing in-migration and increasing out-migration as expected. New house-building rates are also included in the model, with new private build in the HMA increasing in-migration while new build in the surrounding areas tending to increase out-migration and reduce in-migration. Other economic variables in the migration models include interest rates (negative) household income, unemployment, social renting share, and low income poverty. Certain other demographic factors are included, for example white ethnicity and students, along with a number of environmental factors, including density, sparsity/rurality, greenspace, air quality, climate and scenic areas. In the simulation model, the total of in-migration is controlled to be consistent with total out-migration. There are also damping limits to prevent in-migration rates fluctuating too sharply or into 'illegal' negative territory.

Household formation. The chosen approach uses micro panel data from the BHPS (1992-2008) and is a by-product of the study by Bramley (2016). The model predicts the odds of an individual adult in each of four adult age groups being a household representative person (HRP). These models include a range of demographic and socio-economic factors which, in the context of the HMA simulation, are either fixed values or trended forward based on observed trends in the Labour Force Survey 1992-2008. These include students, Asian ethnicity, aged over 75, marriage and relationship breakdown, and previous household types. A further set of variables are active time-varying factors within the simulation model. These include some demographic factors (recent migrants, number of children and birth of a child) and economic variables including unemployment (negative effect) and low income

poverty (positive effect) as well as affordability measured by the house price: income ratio (negative effect). The model also includes a measure of the rationed housing supply in terms of social sector lettings rate (positive for younger group), and two types of concealed households (positive). House prices and social lettings variables were attached to the BHPS sample at the level of larger local authorities or grouped smaller authorities ('SAR' areas). These relationships are generally consistent with findings from previous research, which emphasises the importance of demographic factors like age but also shows moderate economic effects from incomes, prices and supply, particularly for the younger age group. The inclusion of concealed households provides a link with the modelling of backlog unmet housing needs.

Incomes. The base level of *household income* and its distribution were both estimated at district level for 2007 in Wilcox & Bramley (2010). The figures have now been rebased on 2012 consistent with the estimates made in study by Bramley & Watkins to generate the ID2015 housing affordability indicator, based on FRS data. The function to predict changes in average household income from this base includes variables for age group shares (under 25 and over 60, both negative), the proportion of working adults, median earnings, low income score (negative), social renting, high occupational groups, lone parents and single elderly households (both negative). This function is calibrated using a cross-sectional regression on the 2007 figures. The function to predict low income poverty (the IMD low income score) includes unemployment rate, economic activity rate, lower quartile earnings, single person and lone parent households, non-white population, long term illness and students.

Private market rents. Market rent levels: a new econometric model for private market rent levels was estimated using a short regional panel of data (GOR regions + Other UK Countries, 1997-2011). This includes the lagged rental affordability ratio (rent/earnings, -ve), lagged log house price level (+ve), social (RSL) rent level (+ve), unemployment rate (-ve), broad younger population (-ve), log population share aged 25-29 (+ve), single person households (+ve), high occupational class (+ve), housing vacancies (-ve), and three macro financial indicators, including stock market capitalization/GDP and a measure of stock market volatility. Although this is now the preferred model, it may be compared with previous versions.

Private rented sector scale. The share of households in the private rented sector is also modelled in a partially new way. The previous version based this wholly on a micro tenure choice (to buy) model fitted to BHPS data for three broad age groups. The current version blends this model with an aggregate regional panel based model which aims to capture some supply side influences as well (i.e. Buy to Let investment). This models change in PRS stock on the basis of: log change in all housing stock (mainly driven by new build) (+ve), change in log house price (+ve), lagged rental affordability rate (+ve), broad younger aged population (+ve), one-person households (+ve), and social rented dwelling stock share (-ve); and some macro-financial variables including stock market capitalization and the ratio of outstanding domestic private debt securities to GDP.

Social lettings, which mainly arise from relets (turnover) within the existing stock, are modelled using a regression model fitted to annual data for LA districts over the period 1993-2007. This model explains 53% of the variance using 14 variables of which 7 are time-varying. The most important influences, based on standardised coefficients, are house prices (negative), unemployment (negative), single adult households, out-migration (-ve), crime rate and density (-ve).

Economy and labour market. The starting point for the model is effectively the expected growth in economic output (Gross Value Added, GVA). Treasury-published short/medium term forecasts (average of independent forecasts) at national level are used to determine the short run trajectory as the economy recovers from the recent recession. Thereafter, growth is assumed to follow a trend based partly on the local growth rate (1997-2007) and partly on the national rate, with the balance

between these being a controllable parameter (central assumption 60% local 40% national). National trend GVA growth is assumed to settle on an overall average growth rate 2016-36 of 2.45% pa. Employment (job) growth is determined by GVA growth, and productivity trend, itself based on an average of national trend and past subregional trend. A labour market balance is calculated for each sub-regional HMA for each period; changes in this balance ratio then impact on changes in the employment rate in the resident population, the unemployment rate and the commuting share, using controllable parameters. Forward forecasts of earnings are driven by a combination of GVA per worker (weight 0.8), modified by labour market balance (weight 0.25) and trended occupational mix (0.25).

Credit rationing. Abnormal credit rationing conditions in the period 2008-2013 are represented by a factor similar to that used in Bramley et al (2010) applied to a number of variables including prices, price: earnings ratio and mortgage interest rate. In addition as noted above a Buy to Let factor partly proxies lending conditions. General credit conditions going forward are characterized by a number of macro financial system variables, as used in the private rental models.

Vacancy feedback. The model contains additional feedback factors related to 'excess' or 'deficient' vacancies, to ensure that vacancy rates do not rise to excessive levels or fall into negative territory. These feedbacks from excess or deficient/negative vacancies impact on household formation (headship), especially for the younger and middle age groups, on in-migration, on new construction and on demolitions, and most importantly on house prices.

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ANNEX C – LOCAL AUTHORITY LEVEL FIGURES

Local Authority	Median		Median price		Increase 2013-16 %	Rank
	Price 2013	2015				
Bath and North East Somerset UA	239,000	268,000	300,000	5	25.5%	4
Bournemouth UA	197,500	220,000	227,000		14.9%	
Bristol, City of UA	179,725	218,000	245,000	10	36.3%	1
Cheltenham	205,000	223,500	235,000		14.6%	
Christchurch	250,000	300,500	318,000	3	27.2%	3
Cornwall UA	188,500	205,000	210,000		11.4%	
Cotswold	275,000	311,975	307,000	4	11.6%	
East Devon	217,500	240,000	241,525		11.0%	
East Dorset	272,000	310,000	330,000	2	21.3%	6
Exeter	183,000	207,000	217,850		19.0%	10
Forest of Dean	165,000	183,750	193,000		17.0%	
Gloucester	142,000	160,000	171,000		20.4%	8
Isles of Scilly	292,500	275,000	345,000	1	17.9%	
Mendip	185,000	208,250	227,000		22.7%	5
Mid Devon	191,250	205,000	212,000		10.8%	
North Devon	192,500	215,000	215,000		11.7%	
North Dorset	212,500	235,000	249,500	9	17.4%	
North Somerset UA	190,000	213,125	229,950		21.0%	7
Plymouth UA	144,000	155,000	160,000		11.1%	
Poole UA	220,000	250,000	261,750	8	19.0%	10
Purbeck	245,000	270,000	282,500	6	15.3%	
Sedgemoor	167,000	185,000	188,000		12.6%	
South Gloucestershire UA	185,000	220,000	238,000		28.6%	2
South Hams	242,000	268,975	267,750	7	10.6%	
South Somerset	174,000	186,250	195,000		12.1%	
Stroud	193,000	220,000	227,500		17.9%	
Swindon UA	155,000	173,000	185,000		19.4%	9
Taunton Deane	172,500	188,000	187,500		8.7%	
Teignbridge	192,500	214,250	220,000		14.3%	
Tewkesbury	190,000	217,000	225,000		18.4%	
Torbay UA	161,100	173,000	177,500		10.2%	
Torrige	175,552	195,000	195,000		11.1%	
West Devon	202,250	229,000	220,000		8.8%	
West Dorset	230,000	250,000	260,000	9	13.0%	
West Somerset	197,000	203,500	200,000		1.5%	
Weymouth and Portland	180,000	195,000	195,500		8.6%	
Wiltshire UA	199,950	229,000	237,000		18.5%	
Total	190,000	215,000	225,000		18.4%	

Table C.2	Mean	Mean	Mean			
Local Authority	Mix-Adj	Mix-Adj	Mix-Adj	Rank	Increase	Rank
	Price	Price	Price	Level		Increase
	2013	2015	2016			
Bath and NE Somerset	331,188	366,079	442,782	1	33.7%	6
Bournemouth UA	229,493	278,722	282,999		23.3%	
Bristol, City of UA	271,135	344,750	370,906	3	36.8%	2
Cheltenham	269,216	329,120	340,501	6	26.5%	8
Christchurch	265,992	318,133	328,575	8	23.5%	
Cornwall UA	205,555	225,134	235,812		14.7%	
Cotswold	300,353	374,858	350,569	5	16.7%	
East Devon	235,378	268,653	262,345		11.5%	
East Dorset	233,543	281,503	289,265		23.9%	
Exeter	236,196	299,204	293,532		24.3%	
Forest of Dean	157,716	171,832	199,245		26.3%	9
Gloucester	166,973	187,292	197,989		18.6%	
Isles of Scilly	332,065	363,367	389,059	2	17.2%	
Mendip	206,900	227,318	254,209		22.9%	
Mid Devon	194,334	207,418	215,033		10.7%	
North Devon	196,073	219,737	233,158		18.9%	
North Dorset	217,471	227,748	250,667		15.3%	
North Somerset UA	209,826	244,604	263,068		25.4%	10
Plymouth UA	171,337	195,009	202,024		17.9%	
Poole UA	272,137	331,517	364,604	4	34.0%	3
Purbeck	253,252	298,640	309,493	10	22.2%	
Sedgemoor	176,042	219,680	200,656		14.0%	
South GlosUA	209,487	261,438	280,510		33.9%	4
South Hams	281,900	301,946	311,483	9	10.5%	
South Somerset	183,250	211,653	216,199		18.0%	
Stroud	211,611	251,919	332,027	7	56.9%	1
Swindon UA	170,841	225,854	228,746		33.9%	4
Taunton Deane	194,923	226,844	222,407		14.1%	
Teignbridge	199,764	219,003	225,493		12.9%	
Tewkesbury	202,286	249,835	262,412		29.7%	7
Torbay UA	185,623	212,420	215,066		15.9%	
Torridge	174,444	205,011	196,928		12.9%	
West Devon	198,468	220,616	221,933		11.8%	
West Dorset	239,531	276,057	275,387		15.0%	
West Somerset	211,311	211,064	218,914		3.6%	
Weymouth and Portland	262,311	231,012	234,480		-10.6%	
Wiltshire UA	219,736	256,428	267,676		21.8%	
Total	222,380	260,041	272,249		22.4%	

Table C.3

Lower Quartile House Price: LQ FT Earnings Ratio

Local Authority	1997	2002	2007	2011	2013	2015
	lqhper97	lqhper02	lqhper07	lqhper11	lqhper13b	lqhper15
Bath and North East Somerset UA	4.67	6.56	10.04	9.05	9.34	10.43
Bournemouth UA	4.39	7.06	8.89	8.54	8.13	8.56
Bristol, City of UA	3.19	5.29	7.91	6.90	6.98	8.18
Cheltenham	4.00	5.89	8.56	7.82	8.05	8.68
Christchurch	5.11	8.32	12.37	9.51	10.67	12.31
Cornwall UA	4.20	6.16	10.46	9.10	8.86	9.12
Cotswold	5.37	8.01	12.00	10.62	11.59	11.54
East Devon	4.68	6.91	10.22	9.54	9.30	9.12
East Dorset	5.47	8.77	12.90	11.82	11.57	12.85
Exeter	3.60	5.96	9.13	8.25	8.10	8.75
Forest of Dean	3.76	4.68	7.81	7.13	7.11	7.74
Gloucester	3.28	4.83	7.68	5.84	5.53	6.20
Mendip	4.19	6.68	10.12	8.96	8.41	9.05
Mid Devon	4.06	6.30	9.00	7.78	8.37	8.54
North Devon	4.37	7.33	10.05	8.86	9.13	9.14
North Dorset	5.22	6.90	9.75	9.70	9.41	8.85
North Somerset UA	3.94	5.67	8.06	7.96	7.84	8.39
Plymouth UA	3.23	4.11	7.26	6.34	6.02	6.19
Poole UA	4.58	7.47	10.11	8.83	9.21	10.01
Purbeck	5.20	7.07	9.32	9.84	10.25	11.17
Sedgemoor	3.65	4.88	8.56	7.56	7.19	8.12
South Gloucestershire UA	3.69	5.51	8.75	7.69	8.06	9.00
South Hams	4.90	7.28	11.03	10.08	10.60	10.66
South Somerset	3.65	5.51	8.49	7.23	7.17	7.79
Stroud	3.84	5.65	8.89	7.51	7.35	8.05
Swindon UA	3.21	5.56	6.95	5.77	5.74	6.66
Taunton Deane	4.24	6.56	9.41	8.10	7.86	8.19
Teignbridge	4.68	6.04	9.88	8.62	9.18	9.81
Tewkesbury	3.93	5.77	8.46	7.63	7.81	8.11
Torbay UA	3.88	6.21	9.95	7.38	7.68	8.26
Torrige	4.29	6.93	10.57	9.04	8.96	9.19
West Devon	5.20	6.24	11.11	8.74	9.53	9.12
West Dorset	4.74	7.29	11.72	9.86	9.89	9.93
West Somerset	4.74	6.10	10.97	10.36	9.50	10.19
Weymouth and Portland	4.35	6.08	10.41	8.08	8.79	8.78
Wiltshire UA	4.61	6.65	9.18	8.25	8.55	8.82
Total	4.11	6.13	9.28	8.17	8.21	8.75

Table C.4**Residence
Based**

Median HPER

Local Authority	mdhper153
Bath and North East Somerset UA	8.18
Bournemouth UA	9.80
Bristol, City of UA	8.22
Cheltenham	7.03
Christchurch	9.15
Cornwall UA	9.12
Cotswold	8.01
East Devon	8.66
East Dorset	9.00
Exeter	8.90
Forest of Dean	6.67
Gloucester	7.87
Mendip	8.64
Mid Devon	9.02
North Devon	9.50
North Dorset	8.08
North Somerset UA	7.56
Plymouth UA	7.37
Poole UA	9.52
Purbeck	10.49
Sedgemoor	7.69
South Gloucestershire UA	7.74
South Hams	6.75
South Somerset	8.28
Stroud	8.05
Swindon UA	7.96
Taunton Deane	7.37
Teignbridge	9.53
Tewkesbury	6.81
Torbay UA	7.77
Torrige	7.93
West Devon	7.25
West Dorset	8.96
Weymouth and Portland	9.24
Wiltshire UA	8.20
Total	8.31

Table C.5

LAD level incomes confronting HMA level prices

Local Authority	Mean hhd income	Less than £600 pw	Poor hhd (<60% med	Threshold Hs Price	% can buy (younger hhd)	% can rent (younger hhd)
CompsName	mnginc	pltbf10	ppoor	tpric2sw	pbuy	pcanrent
Bath and North East Somerset UA	941	0.359	0.131	142,380	0.486	0.490
Bournemouth UA	880	0.406	0.135	163,539	0.371	0.516
Bristol, City of UA	819	0.450	0.180	153,452	0.362	0.409
Cheltenham	929	0.371	0.125	131,962	0.539	0.594
Christchurch	1000	0.308	0.114	163,539	0.409	0.578
Cornwall UA	814	0.416	0.164	145,947	0.389	0.607
Cotswold	1032	0.292	0.097	131,629	0.577	0.633
East Devon	938	0.338	0.124	139,240	0.476	0.655
East Dorset	1128	0.240	0.083	163,539	0.484	0.633
Exeter	835	0.423	0.155	139,240	0.432	0.505
Forest of Dean	892	0.357	0.131	105,973	0.606	0.734
Gloucester	871	0.387	0.142	131,962	0.477	0.671
Isles of Scilly	917	0.355	0.110	145,947	0.485	0.736
Mendip	869	0.385	0.145	142,380	0.427	0.641
Mid Devon	870	0.373	0.143	139,240	0.424	0.665
North Devon	838	0.400	0.152	126,207	0.458	0.664
North Dorset	984	0.308	0.106	122,505	0.582	0.715
North Somerset UA	943	0.360	0.128	153,452	0.436	0.668
Plymouth UA	752	0.479	0.197	123,326	0.421	0.550
Poole UA	1008	0.312	0.102	163,539	0.428	0.589
Purbeck	959	0.319	0.115	163,539	0.386	0.609
Sedgemoor	870	0.390	0.156	123,349	0.488	0.695
South Gloucestershire UA	982	0.319	0.109	153,452	0.464	0.618
South Hams	940	0.334	0.124	123,326	0.558	0.660
South Somerset	885	0.369	0.137	122,505	0.515	0.684
Stroud	986	0.314	0.108	131,629	0.541	0.711
Swindon UA	921	0.363	0.128	131,629	0.508	0.665
Taunton Deane	894	0.372	0.140	123,349	0.520	0.659
Teignbridge	903	0.362	0.133	139,240	0.457	0.634
Tewkesbury	990	0.301	0.099	131,962	0.562	0.698
Torbay UA	784	0.458	0.178	124,411	0.440	0.569
Torridge	767	0.450	0.181	123,326	0.428	0.650
West Devon	873	0.367	0.134	123,326	0.511	0.701
West Dorset	934	0.341	0.121	146,065	0.455	0.635
West Somerset	826	0.408	0.155	123,349	0.467	0.636
Weymouth and Portland	811	0.433	0.172	146,065	0.365	0.546
Wiltshire UA	994	0.306	0.106	131,629	0.545	0.669
Total	896	0.377	0.140	139,716	0.459	0.603

ANNEX D – HOUSING MARKET AREAS USED IN MARKET ANALYSIS

Housing Market Areas in SW

(based on pre-2009
districts)

Name of HMA	Name of Local authority	HWLA	HMA5	Consolidated Grouping of HMAs
Greater Bath	Bath and North E Soms	232	53	Greater Bath
Greater Bath	Mendip	248	53	Greater Bath
Greater Bath	West Wiltshire	275	53	Greater Bath
Greater Bristol	Bristol	234	54	Greater Bristol
Greater Bristol	North Somerset	253	54	Greater Bristol
Greater Bristol	South Gloucester	262	54	Greater Bristol
Greater Plymouth	Caradon	235	55	Greater Plymouth
Greater Plymouth	Plymouth	256	55	Greater Plymouth
Greater Plymouth	South Hams	263	55	Greater Plymouth
Greater Plymouth	Torridge	271	55	Greater Plymouth
Greater Plymouth	West Devon	272	55	Greater Plymouth
Torbay	Torbay	270	56	East Devon-Mid/West Somerset
Greater Bournemouth	Bournemouth	233	57	Greater Bournemouth
Greater Bournemouth	Christchurch	238	57	Greater Bournemouth
Greater Bournemouth	East Dorset	241	57	Greater Bournemouth
Greater Bournemouth	Poole	257	57	Greater Bournemouth
Greater Bournemouth	Purbeck	258	57	Greater Bournemouth
Swindon-Cotswold-Downland	Cotswold	239	58	Swindon-Cotswold-Downland
Swindon-Cotswold-Downland	Kennet	246	58	Swindon-Cotswold-Downland
Swindon-Cotswold-Downland	North Wiltshire	254	58	Swindon-Cotswold-Downland
Swindon-Cotswold-Downland	Stroud	265	58	Swindon-Cotswold-Downland
Swindon-Cotswold-Downland	Swindon	266	58	Swindon-Cotswold-Downland
Southampton & West Hants	Salisbury	260	66	Southampton & West Hants
Forest of Dean	Forest of Dean	243	81	Gloucs Mid & West
Mid-North Cornwall	North Cornwall	250	99	Cornwall
Mid-North Cornwall	Restormel	259	99	Cornwall
West Cornwall	Carrick	236	100	Cornwall
West Cornwall	Isles of Scilly	245	100	Cornwall
West Cornwall	Kerrier	247	100	Cornwall
West Cornwall	Penwith	255	100	Cornwall
Greater Exeter	East Devon	240	109	East Devon-Mid/West Somerset

Greater Exeter	Exeter	242	109	East Devon-Mid/West Somerset
Greater Exeter	Mid Devon	249	109	East Devon-Mid/West Somerset
Greater Exeter	Teignbridge	268	109	East Devon-Mid/West Somerset
North Devon	North Devon	251	110	East Devon-Mid/West Somerset
Weymouth & West Dorset	West Dorset	273	111	S & W Dorset & S Soms
Weymouth & West Dorset	Weymouth and Portland	276	111	S & W Dorset & S Soms
North Dorset & South Soms	North Dorset	252	112	S & W Dorset & S Soms
North Dorset & South Soms	South Somerset	264	112	S & W Dorset & S Soms
Gloucester-Cheltenham	Cheltenham	237	117	Gloucs Mid & West
Gloucester-Cheltenham	Gloucester	244	117	Gloucs Mid & West
Gloucester-Cheltenham	Tewkesbury	269	117	Gloucs Mid & West
Mid-West Somerset	Sedgemoor	261	136	East Devon-Mid/West Somerset
Mid-West Somerset	Taunton Deane	267	136	East Devon-Mid/West Somerset
Mid-West Somerset	West Somerset	274	136	East Devon-Mid/West Somerset

About the research

This report is based on research conducted by Heriot Watt University and Three Dragons.

Further information

The report is available on the RTPI website at: <http://rtpi.org.uk/knowledge/better-planning/better-planning-housing-affordability/>

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