Strategic Planning & Research Unit

For and on behalf of
Larkfleet Homes

Response to the public consultation on Huntingdonshire's Housing Land Availability Assessment

Report on the deliverability of potential new settlement sites in Huntingdonshire

on behalf of Larkfleet Homes

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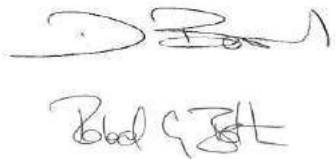

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Contents **Page**

1.0 INTRODUCTION

1.1 This report has been prepared by the Strategic Planning & Research Unit (SPRU) of DLP Planning Ltd on behalf of Larkfleet Homes to undertake a critical analysis of sites included in the Housing and Economic Land Availability Assessment consultation paper, in particular 'Potential New Settlement Proposals'. The most up-to-date research of timescales and delivery rates has been utilised.

1.2 The report has been produced in response to the public consultation currently being undertaken by Huntingdonshire District Council on the Housing Land Availability Assessment.

1.3 The report finds, with the exception of Sibsons Aerodrome, SPRU have found nothing that indicates that the sites reviewed in this report would deliver housing to meet the needs of the District within the Local Plan period.

1.4 National Planning Policy Framework indicates that local planning authorities should use their evidence base to ensure that their Local Plan meets the full, objectively assessed needs for market and affordable housing in the housing market area, as far as is consistent with the policies set out in this Framework, including identifying key sites which are critical to the delivery of the housing strategy over the plan period. In terms of the factors that should be considered when assessing the deliverability , developability and availability of sites, the NPPG (Paragraph: 020 Reference ID: 3-020-20140306) suggests that:

a. There is confidence that there are no legal or ownership problems, this will often mean that the land is controlled by a developer or landowner who has expressed an intention to develop, or to sell.

b. The existence of a planning permission does not in itself mean that the site should be considered available as one does not need to have an interest in the land to make a planning application.

c. Where potential problems have been identified, then an assessment will need to be made as to how and when they can realistically be overcome.

d. Consideration should be given to the delivery record of the developers or landowners and whether the planning background of a site shows a history of unimplemented permissions.

e. In considering achievability including viability, the Guidance suggests that a site can be considered achievable for development where there is a reasonable prospect that the particular type of development will be developed on the site at a particular point in time. It recognises that there is essentially a judgement as to the economic viability of a site, and the capacity of the developer to complete and let or sell the development over a certain period (Paragraph: 021 Reference ID: 3-021-20140306).

f. In assessing suitability, availability, achievability and constraints, it is necessary to assess the timescale within which each site is capable of development, including indicative lead-in times and build-out rates for the development of different scales of sites. It suggests that on larger sites, allowance should be made for several developers and that the advice of

developers and local agents will be important in assessing lead-in times and build-out rates by year (Paragraph: 023 Reference ID: 3023-20140306).

1.5 Findings in this report demonstrate that Sibsons Aerodrome (201) is the most deliverable site when compared against other sites under consideration as new settlements and spatial planning areas; namely:

- RAF Molesworth (138)
- West of A1 from Buckden to Brampton (208)
- Abbotsley Squash Club and Cromwell Golf Course (051)
- Abbotsley Golf Course, surrounding Eynesbury Hardwicke Manor, Abbotsley (052)
- Lodge Farm, Huntingdon (141)
- East of Romans Edge, Godmanchester (123)
- East of Alconbury Weald, Abbots Ripton (151)

1.6 Sibson Aerodrome is under full control of a local housebuilder Larkfleet Homes and therefore is entirely available without being constrained by any fragmented ownership that is common with strategic sites. The site of some 126 hectares and could accommodate up to 2500 homes and supporting infrastructure. As the Council is aware, there is a detailed masterplan for the site based on Garden Village principles. Larkfleet are seeking to deliver a high quality scheme that will meet the needs of the District within the Plan period. Development would commence in 2019/20 and be delivered over a 12 year period.

2.0 MEETING THE REQUIREMENTS OF NATIONAL PLANNING POLICY FRAMEWORK AND NATIONAL PLANNING GUIDANCE

2.1 Ultimately the NPPF seeks to ensure that sites taken forward for allocation are deliverable and developable (paragraph 47). Infrastructure requirements must be met and sites taken forward must be able to demonstrate that this can be achieved (paragraph 182 test of soundness).

2.2 The NPPF also seeks to ensure that a five year supply of housing is maintained. Again this relies on sites being deliverable. Therefore it is essential that the Council is satisfied that sites taken forward for allocation can deliver development and infrastructure on time. This is reliant on a landowner taking a proactive approach to development of their site.

2.3 Paragraph 47 of the NPPF sets out:

To boost significantly the supply of housing, local planning authorities should:

● use their evidence base to ensure that their Local Plan meets the full, objectively assessed needs for market and affordable housing in the housing market area, as far as is consistent with the policies set out in this Framework, including identifying key sites which are critical to the delivery of the housing strategy over the plan period;

● identify and update annually a supply of specific deliverable[1] sites sufficient to provide five years worth of housing against their housing requirements with an additional buffer of 5% (moved forward from later in the plan period) to ensure choice and competition in the market for land. Where there has been a record of persistent under delivery of housing, local planning authorities should increase the buffer to 20% (moved forward from later in the plan period) to provide a realistic prospect of achieving the planned supply and to ensure choice and competition in the market for land;

● identify a supply of specific, developable[2] sites or broad locations for growth, for years 6-10 and, where possible, for years 11-15.

2.4 Paragraph 182 of the NPPF sets out that the Local Plan will be examined by an independent inspector whose role is to assess whether the plan has been prepared in accordance with the Duty to Cooperate, legal and procedural requirements, and whether it is sound. A local planning authority should submit a plan for examination which it considers is "sound" – namely that it is:

[1]Footnote 11 NPPF, paragraph 47 To be considered deliverable, sites should be available now, offer a suitable location for development now, and be achievable with a realistic prospect that housing will be delivered on the site within five years and in particular that development of the site is viable. Sites with planning permission should be considered deliverable until permission expires, unless there is clear evidence that schemes will not be implemented within five years, for example they will not be viable, there is no longer a demand for the type of units or sites have long term phasing plans.

[2] Footnote 12 NPPF paragraph 47 To be considered developable, sites should be in a suitable location for housing development and there should be a reasonable prospect that the site is available and could be viably developed at the point envisaged.

2.5 ● Positively prepared – the plan should be prepared based on a strategy which seeks to meet **objectively assessed development and infrastructure requirements**, including unmet requirements from neighbouring authorities where it is reasonable to do so and consistent with achieving sustainable development;

● **Justified – the plan should be the most appropriate strategy, when considered against the reasonable alternatives**, based on proportionate evidence;

● **Effective – the plan should be deliverable over its period** and based on effective joint working on cross-boundary strategic priorities; and

● Consistent with national policy – the plan should enable the delivery of sustainable development in accordance with the policies in the Framework.

2.6 Planning Practice Guidance (PPG) indicates that appropriateness and likely market attractiveness for the type of development proposed should be taken into consideration when determining the suitability of sites for development/allocation (Paragraph: 019 Reference ID: 3-019-20140306).

2.7 The importance of ensuring sites are marketable is recognised in a number of studies on housing delivery which will be discussed in more detail in section 2 of this report. Of particular note here is the research undertaken by the University of Glasgow for CLG Housing Markets and Planning Analysis Expert Panel – "Factors Affecting Housing Build-out Rates" published in February 2008 by Professor David Adams and Dr Chris Leishman) and the PBA report for Birmingham City Council "Sutton Coalfield Green Belt Sites Phase 2 Report of Study" (June 2014). Both studies indicate that competition in the market plays an important role in housing delivery and suppression.

3.0 EVIDENCE REGARDING DELIVERY RATES OF LARGE URBAN EXTENSIONS AND NEW SETTLEMENTS

3.1 Recent research (November 2016) on housing delivery rates has been undertaken by Nathaniel Lichfield and Partners (NLP), who in a study of 70 large sites (defined as those over 500 dwellings) found the following:

3.2 The average planning approval period and delivery of first dwellings is 6.6 years for sites delivering between 1500-1999 dwellings and 6.9 years for sites over 2000 dwellings;

3.3 The average annual build-out rate is 142 dpa for sites with 1,500 -1,999 dwellings and 171 for sites with 2,000+ dwellings.

3.4 As is evident from NLP's research that sites over 1500 dwellings take much longer for development to commence. This is not surprising given the infrastructure requirements associated with large sites.

3.5 In 2016 Home Builders Federation (HBF) undertook research, in response to the Government's criticism that large sites are only delivering 48 dwellings per annum. This research was based upon a survey of 300 large sites in February and March 2016.

3.6 In the HBF research, "large sites" were defined as those with at least 350 dwellings in total. In 2015, the average sales on all sites (including start-ups, on-going, tail-ends) was 70 dwellings a year.

3.7 There have been a number of other reports that sought to understand both the likely rates of delivery and the reason for such rates. The earliest work by Colin Buchanan, Housing Delivery on Strategic Sites (2005) considered lead in times and delivery rates on strategic sites in the East of England (Appendix 1, paragraph 3.3.2) and reviewed completion rates on the basis of the size of the site, this research suggests a range of delivery rates dependent on the size of the site, suggesting that on sites of 1,000 dwellings, delivery had been an average of 188 dwellings per year. For sites over 3000 dwellings the average annual delivery rate was 330 dwellings per annum.

3.8 In the Buchanan study, lead in times averaged at 5 years from date of submission of a planning application to the commencement of development on site. On sites over 3000 dwellings this increased to 5.5 years lead in time.

3.9 The PBA report for Birmingham City Council "Sutton Coalfield Green Belt Sites Phase 2 Report of Study" (June 2014) also reviews some of the above evidence and concludes that for the three former green belt sites examined in that report, all performed as the national trend would suggest (paragraph 6.1). This performance is summarised in paragraph 3.26 of the report as follows:

3.10 *"There are a number of features demonstrated by the three Sutton Coldfield sites examined in Section 2 which are consistent with the research examined in this Section. These are, namely:*

3.11 *6-7 years from release to first delivery of housing; and*

3.12 *Maximum delivery on any site in one year of 219 units (suggesting 2-3 developers were present); and*

3.13 *Peak mean delivery of 141 unit's pa per site across the area (422 divided by three sites); and*

3.14 *Mean delivery across the three sites of 106 units' pa (1,591 divided by 15 years), or 35 unit's pa per site as an equivalent flat trajectory ironing out the peaks and troughs of the housebuilding cycle through the years in question."*

3.15 Evidence from all these studies indicates that, the larger the site, the longer it will take for development to commence. Typically 6 to 7 years for sites over 2000 dwellings.

Zones of competition

3.16 This PBA Report considers the impact of competition between sites which is also an issue with all sites with the exception of Sibson Aertodrome. The report refers back to section 4 of the earlier University of Glasgow Report table 9 of which suggests that developers of greenfield sites on the edge of small and medium sized towns would regard sites within a range of 5.62 miles as representing competition. The impact of this competition is to change prices (paragraph 4.09 and 4.11).

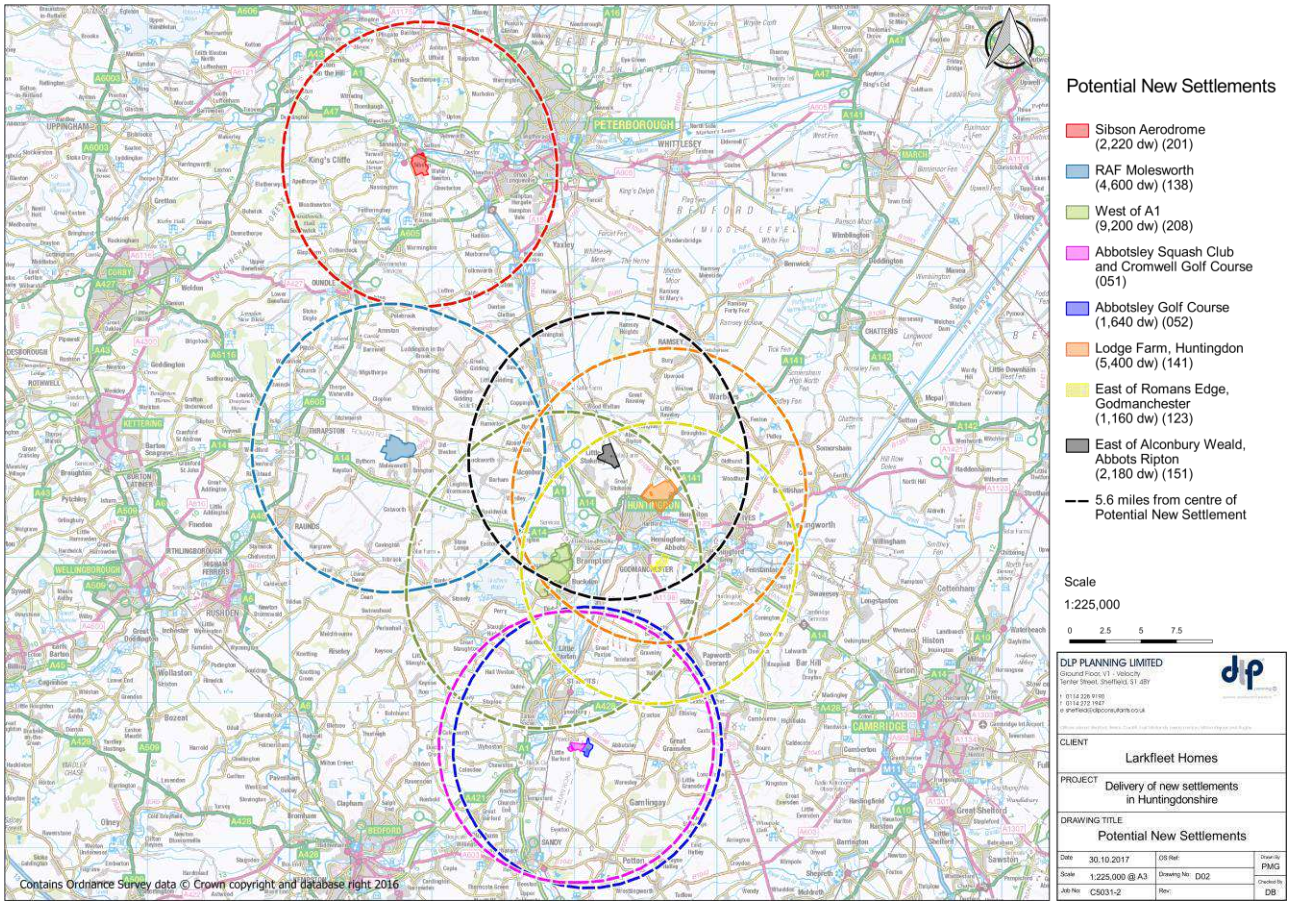
3.17 The plan on the next page illustrates that the majority of sites under consideration as new settlements in Huntingshire are all within a short distance of each other and would generally be perceived as being in competition with each other. Based on the findings of the Glasgow research paper and PBA report, this would influence the delivery rates of development. In considering the delivery of these larger sites with substantial infrastructure costs future competition, and hence concerns regarding pricing, is likely to make developers cautious rather than optimistic in terms of their planned rate of delivery (PBA paragraphs 6.4 and 6.5).

3.18 This is supported by findings of a report by the HBF on larger development schemes in August 2015 'Responding to demand; Understanding private housing supply' indicates that, when development is concentrated on a few large sites this further stifles the market-responsiveness of supply. Given that the majority of the sites under consideration, with the exception of Sibson Aerodrome, are within close proximity to each other, it is likely to have a similar effect on housing delivery i.e. supressing delivery.

3.19 As indicated previously, PPG indicates that appropriateness and likely market attractiveness for the type of development proposed should be taken into consideration when determining the suitability of sites for development/allocation (Paragraph: 019 Reference ID: 3-019-20140306)

Local market Evidence of lead in times and delivery rates

3.20 It is important to consider the local market circumstances in considering the potential for strategic sites to be brought forward to meet a plans housing requirement. This next section will consider various market indicators as well as review the delivery of strategic sites in the wider area.



Past Rates of Delivery

3.21 In considering past rates of delivery this can be compared to both extant policies and contemporary measures of housing need.

a. In terms of the development plans for the period since 2002 for which we have the data these are summarised as follows:

b. The Huntingdonshire Local Plan Alteration Adopted December 2002 required 12,300 dwellings between 1991 and 2006 or 820 dpa (Paragraph 2.6).

c. Huntingdonshire LDF Core Strategy: Adopted 2009 required at least 14,000 homes from 2001 to 2026 (Policy CS 2) or 560 dpa.

d. The Huntingdonshire Local Plan Stage 3 (Draft Local Plan for consultation) states (paragraph 3.36 that overall development target for Huntingdonshire is to provide 21,000 new homes between 2011-2036 to meet the objectively assessed need as set out in the JSPU's Technical Report. This is 840 dpa.

e. The OAHN has been updated and has been reduced to 20,100 dwellings (as suggested in the Huntingdonshire Local Plan to 2036 Quarterly Update and Infrastructure Planning Update: Overview and Scrutiny Panel (Economy and

Growth) Report 6th April 2017 & Cabinet Report 20th April 2017). This is 773 dpa (assuming a period of 2011 to 2036).

3.22 The table below compares the policy position with delivery over the last 5 and 10 years. This suggests that against policy there has been a very marginal over supply over the 10 year period of some 136 dwellings but this is contrasted to an undersupply of 869 dwellings if just the last five years are considered. In the last 5 years there has been a substantial level of undersupply with just under 78% of the requirement being delivered. If just the last 3 years are considered then this equates to just under 75% of the emerging OAHN being delivered.

3.23 Against the Draft Local Plan requirement (which is set by the Strategic Housing Market Assessment there has been a substantial shortfall.

Table 1 Comparison of completions rates against policy requirements

Huntingdonshire	Net housing completions	Policy Requirement	Difference
2002-2003	578	820	-242
2003-2004	576	820	-244
2004-2005	698	820	-122
2005-2006	742	820	-78
2006-2007	651	560	91
2007-2008	728	560	168
2008-2009	815	560	255
2009-2010	782	560	222
2010-2011	829	560	269
2011-2012	846	773	73
2012-2013	412	773	-361
2013-2014	686	773	-87
2014-2015	515	773	-258
2015-2016	537	773	-236
5 year position	2,996	3,865	-869
10 year position	6,801	6,665	136

Source CCC Monitoring & HDC 2016 AMR

3.24 In respect of the official DCLG household projections, there have been a range of such projections over the years of the assessment. These are set out in the table below. One point of note is that the failure to meet the higher levels of projected requirement will have had an impact on later levels of demand for housing.

3.25 The table below illustrates that since 2004 the district has only met the DCLG requirement on 3 occasions, and only once in the last 5 years. There will be demographic impacts of providing below the contemporary DCLG figures and these will not necessarily be discernible at the local level but it is exactly these circumstances that have been a contributory factor to the national housing crisis.

3.26 The table above does however illustrate that completion in the District can rise substantially from the low levels experienced in 2014/15 and 20156/16.

Table 2 Comparison of past build rates against the contemporary DCLG household projections

Huntingdonshire	Net housing completions	DCLG (inc 3% vacancy Rate)	Difference
2002-2003	578		578
2003-2004	576		576
2004-2005	698	1,030	-332
2005-2006	742	1,030	-288
2006-2007	651	1,340	-689
2007-2008	728	1,340	-612
2008-2009	815	797	18
2009-2010	782	797	-15
2010-2011	829	797	32
2011-2012	846	797	49
2012-2013	412	707	-295
2013-2014	686	707	-21
2014-2015	515	720	-205
2014-2016	537	721	-184
3 year position	1,738	2,148	-410
5 year position	2,996	3,652	-656
10 year position	6,801	8,723	-1,922

Source CCC Monitoring, HDC 2016 AMR & DCLG Household projections

Delivery of Affordable Housing

3.27 One of the advantages of larger strategic sites is that they have the ability to spread development costs and deliver sustainable quantities of affordable housing (not just in percentage terms) but in terms of overall numbers.

3.28 In terms of the delivery of affordable housing, the record for HDC has been substantially below the level required to meet the identified affordable housing need 2011 to 2031 of 7,212 dwellings (361 dpa).

3.29 The shortfall by 2016 was some 1,227 dwellings.

3.30 At present, developments in HDC are only delivering 32% of the identified affordable housing need.

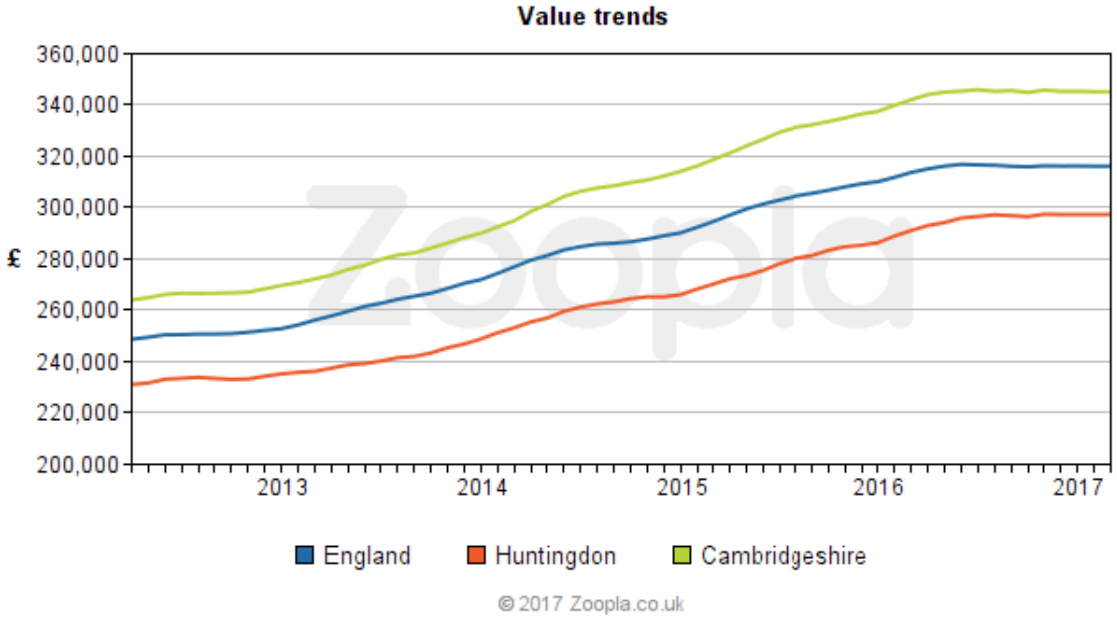
Table 3 Affordable Housing Completions compared to SHMA annualised requirement

	Affordable Housing Completions (Gross)	SHMA annualised requirement	Difference
2011/12	256	361	-105
2012/13	26	361	-335
2013/14	112	361	-249
2014/15	129	361	-232
2015/16	55	361	-306
Total	578	1,805	-1,227

Local Market evidence – House Prices

3.31 House prices can provide a good indication of the relative strength of the housing market. In the case of Huntingdon, the value trends since 2012 are shown in the chart below and this indicates that prices are generally trending at a lower level than Cambridgeshire as a whole, and are also lower than England. This would suggest that the market is not as strong as other parts of the county which indicates a slightly weaker housing market and hence build out rates are less likely to be higher than the average for the country as a whole.

Chart 1: House Values



Local Markets - Affordability

3.32 Affordability can be assessed by the comparison of Median House Prices to Median earnings as well as lower quartile house prices to lower quartile earnings. The tables

below illustrates that while affordability has risen in the last three years from 6.92 to 7.35 in the last three years (Meridian House Prices to Median Earning). This is a substantial increase form the ratio of 4.86 in 2002. There has been a similar rise in the lower quartile figures, it has also continued to increase beyond than the national average. This would suggest market factors exist which indicates delivery rates could be higher than those experienced nationally.

3.33 The level of affordability in Huntingdonshire however is better than that of the surrounding areas, and as such completion rates from these neighbouring authorities are likely to be higher than those experienced or delivered in Huntingdonshire. This may also mean that households may move into the District to secure slightly better value housing.

Table 4 Ratio Median House price to Median Earning earnings by Local Authority, 2013 to 2015

Local authority name	2014	2015	2016	Average
Cambridge	11.49	13.4	13.78	12.89
East Cambridgeshire	8.13	8.47	9	8.53
Fenland	6.25	6.54	6.71	6.50
Huntingdonshire	6.92	7.41	7.73	7.35
South Cambridgeshire	9.1	10.59	10.79	10.16
Forest Heath	7.63	8.11	8.6	8.11
St Edmundsbury	9.09	9.43	9.36	9.29

Source: ONS Ratio of house price to residence-based earnings (lower quartile and median), 2002 to 2016

9.1 Ratio of lower quartile house price to lower quartile earnings by Local Authority, 2013 to 2015

Local authority name	2014	2015	2016	Average
Cambridge	10.82	12.28	13.45	12.18
East Cambridgeshire	7.48	7.82	8.87	8.06
Fenland	5.72	6.03	6.06	5.94
Huntingdonshire	6.68	7.23	7.68	7.20
South Cambridgeshire	7.76	9.66	9.36	8.93
Forest Heath	7.34	8.02	7.78	7.71
St Edmundsbury	8.84	8.75	9	8.86

Source: ONS Ratio of house price to residence-based earnings (lower quartile and median), 2002 to 2016

Local market evidence - past delivery

3.34 In order to understand the impact of the Council's assumptions, SPRU has considered completion rates on the following sites.

Case Study: Loves Farm

3.35 Land North of Cambridge Road St Neots Cambridgeshire (0101550OUT) is a large site still under construction.

3.36 The application was lodged in July 2001 for Housing and mixed use (business, leisure and primary school) with supporting infrastructure comprising of 63.2 hectares. The decision notice was issued in April 2006.

3.37 Reserved matters for the first residential units were submitted in 2006.

f. The salient history of the sites is as follows:

g. 0101550OUT originally submitted by Gallagher Estates;

h. 1300469REM approved for 32 dwellings, submitted by Bovis Homes (Parcel C6);

i. 1401685REM approved for 60 dwellings, submitted by Bovis Homes (Parcels D1 and D2);

j. 1300048REM approved for 9 dwellings, submitted by Bovis Homes (Parcel C7);

k. 1100059NMA approved for amendments to 0701589REM for 102 dwellings (Parcel B3), submitted by Redrow;

l. 0901380REM approved for 46 dwellings (Parcel C3), submitted by Bedfordshire Pilgrims Housing Association;

m. Parcels G3 and H3- conditions discharge by Persimmon Homes. (15/80049/COND);

n. 0604132REM approved for 34 affordable dwellings, submitted by Bedfordshire Pilgrims Housing Association (Parcel B4);

o. 0603460REM approved for 21 flats, submitted by Bedfordshire Pilgrims Housing Association, building control application accepted November 2007;

p. 0700822REM approved for 38 dwellings (Parcels A1/A2), submitted by David Wilson Homes;

3.38 There have been a total of 8 developers (9 if Charles Church is counted as a second outlet for Persimmon Homes):

q. David Wilson Homes - completed developments in south east and south west corner;

r. Miller Homes - completed development in south of the site and are now building on their Priory Meadow development on the east of Love's Farm;

s. Redrow Homes - are building in the south and north west of the site and an undeveloped parcel in the site;

t. Barratt Homes - completed their development in centre of site;

u. Persimmon Homes- have one completed development on the east of the site and are developing two further parcels in the site under the Charles Church Brand;

v. Abbey Homes - have completed a development close to the south-western entrance and are now building in the north-west corner;

w. Bovis Homes

x. British Pilgrims Housing Association;

3.39 The AMR 2016 states that as of March 2016, there have been 1,386 completions, the first completions are assumed to have taken place in 2007. It is noted that the first building control applications were approved in 2007.

3.40 This evidence suggests an average annual build rate of 154 dwellings a year.

Land at Riverside Mill

3.41 This application for 426 mixed residential units, with public house and community hall with ancillary parking on land at Riverside Mill, Mill Lane Little Paxton St Neots Cambridgeshire (0302792FUL) was made in October 2003 and approved in October 2005.

3.42 A further application (0901203S73) was made in September 2009 and granted in 2010 for a substitution of house types. This increased the capacity of the site to 442 dwellings.

3.43 This site was developed out by 3 developers Taylor Wimpey, Twigden Homes and Kier Homes Ltd.

3.44 Building control applications were approved in 2007 and 2013 for 480 and 426 dwellings respectively.

3.45 By 2016 some 352 dwellings had been completed, so assuming a full year of completions from March 2011 onwards this represents a build rate of 70 dwellings a year.

Evidence from wider area

3.46 The NLP research provides a summary of the rates of deployment on the sites that have been considered in the context of that research. This includes not only Loves farm reviewed above but also strategic sites in the surrounding wider area. These have been extracted and are summarised in the table on the next page.

3.47 What the table below demonstrates is that when strategic sites are allocated in Huntingdonshire they can deliver at close to the national average (171 dpa). The review of Loves farm also highlights that first completions may occur within 6 years of the submission of the outline application. For sites of this size this is slightly faster than average.

3.48 In should be noted that the higher rates of completion that have been achieved on strategic sites and especially the highest two Cranbrook (321 dpa) site, the Eastern Expansion Area (Broughton Gate & Brooklands) Milton Keynes (268 dpa) have been achieved specific circumstance. To achieve these high rates of delivery Cranbrook had a consortium of experienced developers as well as government funding for infrastructure.

3.49 In the Eastern Expansion Area in Milton Keynes these levels were achieved with the assistance of a headline developer released serviced parcels with the roads already provided were so house builders where are able to proceed straight onto the site and commence delivery (NLP Start to Finish page 15). This approach limited the upfront site works required and boosted annual build rates. Furthermore, it allowed for multiple outlets building-out on different serviced parcels, with monitoring data from

Milton Keynes Council suggesting an average of12 parcels being active across the build period which helped to optimise the build rate.

Conclusions

3.50 In light of the above it would appear that in terms of lead in times the involvement of an experienced developer at the outset of the process will speed the delivery of a strategic site though the process (as was the case with Loves Farm).

3.51 In is also clear that a single developer co-ordinating infrastructure and the orderly release of sites may also be an important factor in the successful delivery of a strategic site in a timely manner so that it assists in meeting the housing requirement of the plan.

Table 5 Comparison of delivery rates on strategic sites in the wider area

Site	LPA	Number	type	Start	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16
Orchard Park	Cambridgeshire	900	GF	2006/07	100	290	148	103	95	56	34	16	75							
South Broughton (Broughton & Atterbury)	Milton Keynes	1,200	GF	2003/04	114	105	170	409	204	180	18									
Love's Farm	Huntingdonshire	1,352	GF	2007/08	34	186	336	302	216	60	108	59								
The Wixams	Bedford	4,500	BF	2008/09	8	190	160	138	113	109										
Cambourne	Cambridgeshire	4,343	GF	1999/00	42	361	213	337	620	151	377	267	219	190	162	206	154	151	129	240
South Eastern Expansion Area	Milton Keynes	4,000	GF	2008/09	154	359	371	114	473	138										

Source: NLP "From Start to finish"(appendix 4)

4.0 SIBSON AERODROME DELIVERABILITY

4.1 Results of the HELAA

Constraints
• Development would create a significant amount of traffic, transport assessment required • No public transport infrastructure • Very limited access to services and amenities • There is a need for open space to be provided • Noise could be an issue from A1 to eastern boundary • Development would be highly visible owing to little vegetation on site • Maybe protected species on site. • Potential impact on heritage assets and conservation area. • Need to establish waste water flow prior to development (Pre-planning enquiry with Anglian Water) • Wansford Railway Tunnel immediately north of the siyte is Grade II listed. Sibson House Hotel and its associated Barns situated to the east of the site are Grade II Listed. To the opposite side of the A1, approximately 45 metres north east of the site, Sibson Manor House, Sibson Manor Cottage and The Granary south of Sibson Manor House are all Grade II Listed.
Suitability
• Site is primarily grade 3 agricultural land • Well located to existing road network • Site has limited access to services and facilities, provision of utility services and facilities would be required • Mix development would be expected • Expression of interest was submitted to HCA Garden Villages programme in July 2016, but was unsuccessful • Larkfleet homes envisages 2,500 homes, 1.5 ha of employment land, combined early years and primary school and 40 ha of green infrastructure • Based on Garden Village principles site should accommodate 2,220 homes, 15 ha of employment, 6.3 ha of education, retail and community, 49 ha of open space.
Availability
Under full control of a local housebuilder Larkfleet Homes.
Achievability
Owner confirmed site is deliverable from 2019/20 onwards (see trajectory below)

Site Overview

4.2 Sibson Aerodrome is under full control of a local housebuilder Larkfleet Homes and therefore is entirely available without being constrained by any fragmented ownership

that is common with strategic sites. The site of some 126 hectares and could accommodate up to 2500 homes and supporting infrastructure.

4.3 A multi-disciplinary team of specialist consultants have undertaken a comprehensive series of surveys and appraisals for the aerodrome and its environs. From this work, no significant constraints for bringing forward a new Garden Village at this location have been identified.

4.4 Continued work is being undertaken to explore how housing can be brought forward at the earliest opportunity. It is anticipated that the village will be led by Larkfleet Homes in conjunction with three other independent housebuilders, in addition to Swift Homes, Larkfleet's own affordable housing registered provider. Due to the proposed number of developers on site, development will be brought forward more quickly. As can be seen from the trajectory below, it will be delivering 200 dwellings per annum by year 3.

4.5 Delivery of the early phases of Sibson Garden Village will be accelerated through use of innovative construction methods including the potential for modular housing. This type of housing is constructed off-site and transported to the Garden Village to be set upon permanent foundations. This process is not only quicker to produce, but also results in less building waste due to the way the dwellings are prepared. Modular housing will therefore supplement traditional build, to ensure that home building is accelerated.

4.6 Sibson is at a more advanced stage than many of the other sites in terms of site surveys and developer involvement, and given that it is of a size which can support the infrastructure required. The following trajectory sets out the timescale for delivery of development on the site.

Table 6 Sibson Aerodrome Proposed Trajectory

Development Period	Year	Phase	Build Rate	Cumulative Total
1	2019/20	Phase 1	75	75
1	2020/21	Phase 1	150	225
2	2021/22	Phase 1	200	425
3	2022/23	Phase 2	200	625
4	2023/24	Phase 2	200	825
5	2024/25	Phase 2	200	1,025
6	2025/26	Phase 2/3	200	1,225
7	2026/27	Phase 3	200	1,425
8	2027/28	Phase 3	200	1,625
9	2028/29	Phase 3/4	200	1,825
10	2029/30	Phase 4	200	2,025
11	2030/31	Phase 4	200	2,225
12	2031/32	Phase 4	200	2,425

Phasing

4.7 The Concept Masterplan has been developed so that Sibson Garden Village can come forward in a number of phases maximising the potential to bring forward separate development parcels by individual developers. It is proposed that the first

phases of residential development can come forward in the northeast quadrant with a link to Elton Road and construction of the new A1 Junction.

4.8 Through the completion of Phases one, two and three the inner orbital road will be complete allowing full circular corridors of movement, as well as delivery of the key components of social infrastructure.

4.9 Social Infrastructure will be delivered in phases alongside the new homes and appropriate trigger points will be established with providers, stakeholders and consultees.

4.10 Employment land will be delivered through a partnership approach with the community with innovative measures provided to deliver realistic employment options.

4.11 The site is located quite a distance from the other sites and housing sales would be less likely to be as affected by competition if the site was taken forward for allocation as a new settlement.

4.12 Given the many benefits of the site it is well placed to demonstrate that it can meet the requirements of the NPPF in terms of delivering development and associated infrastructure (NPPF, paragraph 182), and assisting the Council in maintaining a 5 year housing land supply.

4.13 In terms of a deliverable highway access solution, a Technical Appendix Emerging Access Strategy prepared by Milestone Transport Planning in July 2017 demonstrates that proposed improvements to the A1 Trunk Road and its sub-standard junction with the Old North Road will deliver a direct vehicular access between Sibson Aerodrome and the Strategic Road Network (SRN) that is operational in safety terms but will also deliver a range of positive benefits to the wider community.

4.14 This Technical Appendix identifies two different options (Option 1 and Option 2) which have been reviewed by Highways England. Larkfleet are now at an advanced stage in their discussions with Highways England over what form the access solution will take. A number of fundamental issues have already been addressed and further dialogue is scheduled to establish further details of an 'in principle' highway solution.

4.15 It should be noted that both option 1 and option 2 demonstrate a deliverable solution that would address the current sub-standard nature of the slip from the Old Great North Road to the A1(T) at Wansford station. The eventual solution will dramatically reduce any reliance on local roads emanating from car borne traffic from the development by delivering a package of highway infrastructure improvement works, **facilitating direct access onto the A1**.

4.16 The proposed improvements to the A1 / Old Great North Road junction are a key thread of a wider, far-ranging vision for an integrated transport solution for Sibson that will sustain quality of life and well-being for all the community. Known as 'Sibson Connect' it is defined as:

> *"An integrated Strategy that delivers efficient, reliable and legible travel connections to existing settlements and transport hubs, encourages sustainable travel choices and removes physical and psychological barriers to movement."*

4.17 In addition to being able to provide direct access onto the A1, Sibson goes further by offering a range of sustainable travel choices including:

- Community led travel options such as a fleet of electric/hybrid buses and an electric car pool for bespoke local travel and commuter needs:
- Additional connections to the existing bus/guided bus network;
- Nene Valley Railway / Transport Corridor
- Nene Valley / Hereward Way pedestrian and cycle routes

4.18 Of particular note is the potential for Sibson to utilise the Nene Valley Railway (NVR) to provide an upgraded rail service between Sibson and Peterborough city centre. There is a unique opportunity to provide a direct rail link into a principal city within 20 minutes travel time. Such a provision offers a significant sustainability arm to the development that goes right to the heart of the objectives of the development.

4.19 In terms of the suitability of the site, it is evident in the light of the Technical Appendix that Sibson is able to provide a safe and deliverable means of access onto the A1 thereby minimising impact on the local road network. This capacity means that in RPS view the site is significantly advanced and highly suitable in relation to other Strategic Expansion Locations (SELs), most notably Wyton Airfield.

5.0 DELIVERABILITY OF OTHER 'POTENTIAL NEW SETTLEMENTS' SITES

RAF Molesworth (138)

5.1 Results of the HELAA

Constraints
• Air quality assessment required due to scale of proposed development • Could be land contamination owing to current use • There may be protected species on site • Potential impact on heritage assets and conservation area • Potential for surface water flooding • Scale of development would require open space and community facilities • Need to establish waste water flow prior to development (Pre-planning enquiry with Anglian Water) • Molesworth Conservation Area is situated approximately 400m south of the site.
Suitability
• Given its use as an airbase the site is almost entirely classified as urban land • Well located to strategic road network • Number of services and facilities provided within the site (potential for retention) • Site already has a level of infrastructure and utilities provision • The site is constrained by its proximity to and impact on variety of conservation assets. • Limited impact on heritage assets • Mix development would be expected Based on garden village principles, site has capacity for 4,600 homes, 32 ha of employment land, 13ha of education, retail and community, and 102ha of open space.
Availability
The site will be transferred to HCA in 2022/23. However in Sept'17 the US Embassy stated the site would not be releases until 2024 at the earlies. Site was submitted for Call for Sites in August '17.
Achievability
• Landowner is not seeking allocation at this time. • No evidence of developer involvement.

Site Overview

5.2 This brownfield site is a former RAF base located approximately 13 miles to the west of Huntingdon to the north of the villages of Molesworth and Brington and west of Old Weston.

5.3 Based on garden village development principles the anticipated capacity of this site would be approximately 4,600 homes, 32ha of employment land, 13ha for education, retail and community facilities and 102ha for open space, landscaping and transport infrastructure.

5.4 With regard to the delivery of development the lead in time would be beyond 2024, as confirmed by the landowner. The draft Huntingdonshire Local Plan runs to 2036. NLP study on large scale housing sites, 'Start to Finish – How quickly do large scale housing sites deliver? (November 2016), indicates that brownfield sites over 2000 dwellings generally take 8.6 years to commence development and build rates average out at 148 dwellings per annum.

5.5 The landowner, US Embassy, formally updated the MOD that the site would not be released until 2024 at the earliest. The site was submitted in response to the Call for Sites in August 2017. Allocation is not being sought at this time but the agent is keen to see acknowledgement in the Local Plan of the site's future potential.

5.6 Given the lack of certainty and commitment by the landowner, and the lack of developer involvement, and the likely lead in time (8.6 years) the site is considered undeliverable and undevelopable[i] at the current time. As such, it cannot be relied upon to deliver a sustainable new settlement in Huntingdonshire.

5.7 It would not meet the requirements of the NPPF in terms of deliverability or developability and soundness of the Local Plan if taken forward (paragraphs 47 and 182).

5.8 **West of A1 from Buckden to Brampton (208)**

5.9 Results of the HELAA

Constraints
• Significant areas within north eastern part of the site is located within the A14 upgrade safeguarding area, so they cannot be confirmed for development. • Development would be visible from some distance • Owning to location next to A1 site would suffer from noise pollution • Maybe some protected species on board • Need to establish waste water flow prior to development (Pre-planning enquiry with Anglian Water) • Scale of development would require open space and community facilities
Suitability
• Site primarily grade 2 agricultural land • Located well to strategic road network • Site has limited access to services and facilities, provision of utility services and facilities would be required • Site is constrained by its proximity to and potential impact on a variety of nature conservation assets. • Based on Garden Village principles site should accommodate 9,200 homes, 69 ha of employment, 26ha for education, retail and community facilities and 200 ha for open space.
Availability
Site submitted by Savills on behalf of Church Commissioners
Achievability
• Sites owner has confirmed availability of the site. • No evidence of developer involvement

Site Overview

5.10 The Council's HELAA concludes that this is an extensive site of a scale appropriate to a new settlement. It is primarily grade 2 agricultural land which nationally is classified as amongst the best and most versatile. The site is primarily in flood zone 1 which places it in the lowest category of risk.

5.11 The site immediately adjoins the A1 which forms the eastern boundary of the site. Brampton Hut roundabout providing access to the A14 is 1km to the north. The nearest railway station would be Huntingdon which is approximately 4.5kms from the north eastern side of the site via Brampton. Alternatively St Neots railway station is approximately 9kms from the southern boundary of the site via the A1 and Little

Paxton. Huntingdon and St Neots form the nearest major concentrations of employment.

5.12 Based on garden village development principles the anticipated capacity of this site would be approximately 9,200 homes, 69ha of employment land, 26ha for education, retail and community facilities and 200ha for open space, landscaping and transport infrastructure.

5.13 Whilst the site's owner and agent has confirmed the availability of the site for development, they have not indicated when delivery might be achieved. With regard to deliverability, as is evident in the study by Glasgow University and report by PBA in section 3 of this report, given the competition from the development of the adjoining site it is likely to take much longer to develop out this site. There is no evidence of developer involvement and the site also contains areas of safeguarded land which are reserved for the expansion of the A14. It is not known at this time if all of the land is available. In these circumstances it would not meet the requirements of the NPPF in terms of deliverability or developability (paragraph 47) and soundness of the Local Plan if taken forward (paragraph 182).

5.14 **Abbotsley Squash Club and Cromwell Golf Club and Abbotsley Golf Course**

5.15 Results of the HELAA

Constraints
• Development would create a significant amount of traffic, transport assessment required • No public transport infrastructure • Public footpaths run through the site • Development will give rise to noise and light pollution • Will require ecological conservation mitigation plan • Potential for archaeological finds • Potential surface water flood risk • Need to establish waste water flow prior to development (Pre-planning enquiry with Anglian Water) • Site would require open space and community facilities
Suitability
• Although Golf Course land the site is classified as grade 2 agricultural land • Limited access to services and facilities, St Neots is 4km away • Provision of utility services and infrastructure would be necessary • Site would impact upon the grade II listed Eynesbury Hardwicke House, around 50m north of the site • Would require a mixed development On garden village principles site has capacity for 1,640 homes, 11ha of employment, 4.6ha for education, retail and community, 36ha for open space
Availability
Submitted by Miss Vivien Saunders (Vector Planning & Design)
Achievability
The site's owner/agent has stated that the site can be delivered immediately.

No evidence of developer involvement.

Site Overview

5.16 The Council's HELAA concludes that, in isolation, the two sites would not be large enough to merit consideration for a new settlement. Consequently, the Council has indicated that the two sites together can be considered for one new settlement.

5.17 Would require a mixed development. On garden village principles site has capacity for 1,640 homes, 11ha of employment, 4.6ha for education, retail and community, 36ha for open space.

5.18 Development would create a significant amount of traffic and there is no public transport infrastructure serving the site. Public footpaths run through the site. There is limited access to services and facilities, St Neots is 4km away. Provision of utility services and infrastructure would be necessary

5.19 There is potential for archaeological findings and development would have an adverse impact upon the setting of grade II listed Eynesbury Hardwicke House; the house is located within the site boundary. Any decisions relating to listed buildings and their settings and conservation areas must address the statutory considerations of the Planning (Listed Buildings and Conservation Areas) Act 1990 (see in particular sections 16, 66 and 72) as well as satisfying the relevant policies within the National Planning Policy Framework and the Local Plan (PPG, Paragraph: 002 Reference ID: 18a-002-20140306). A development of the proposed size would have a significantly adverse impact on the setting of the Listed Building and appropriate mitigation is very unlikely.

5.20 There is potential for surface water flooding and there is a need to establish waste water flow prior to development (Pre-planning enquiry with Anglian Water). Site would require open space and community facilities**.**

5.21 The sites owner has indicated that development can be delivered immediately. However, there is no indication that a developer is involved in the promotion of the site. Given the size of the site it is very unlikely to be capable of delivering the necessary infrastructure. Additionally, the lack of access to public transport the site is considered unsuitable in terms of its ability to deliver sustainable development. With regard to deliverability, as is evident in the study by Glasgow University and report by PBA in section 3 of this report, given the competition from the development of other sites within this area it is likely to take much longer to develop out this site.

5.22 Given the size and location of the site, it would not meet the requirements of the NPPF in terms of suitability, deliverability or developability and soundness of the Local Plan if taken forward (paragraphs 47 and 182).

5.23 **Lodge Farm, Huntingdon**

5.24 Results of the HELAA

Constraints
• Development will generate a significant amount of traffic. • The scale and open nature of the site means that development will have a significant impact on the landscape and would give rise to noise and light pollution. • A flood risk assessment will be required. • Owing to scale of development a range of services and community facilities will need to be created. • Before development can take an agreement between the Environment Agency and Anglian Water will need to be made to ensure that they are satisfied with waste water flows. • Potential for archaeological finds. • Northern boundary of Hartford Conservation Area is situated approximately 130 metres south of the site. A scheduled monument, the moat is located approximately 750 meters north east of the site.
Suitability
• Site consists of valuable grade 2 agricultural land. • Opportunity for site to meet social infrastructure needs such as primary schools and sports provision. • Would have a significant impact on the setting of Huntingdon. • Not considered suitable for development due to transport infrastructure constraints. • Estimate development capacity: 5,400 dwellings, 35ha for employment, community and educations uses
Availability
Promoted by Pegasus Planning on behalf of Linden Homes Ltd (James Ainsworth)
Achievability
Site's agent has indicated that the site can be delivered within the next 5 years. They are working in conjunction with Huntingdon Town Council to put the site forward for consideration. Not considered suitable by the Council. Not considered deliverable due to transport constraints/viability.

Site Overview

5.25 The site at Lodge Farm comprises of some 305 hectares of agricultural land. A residential-led mixed use proposal has been put forward by the site's promoters. From the total site area 35ha is deducted for employment, community and educational uses. This gives a balance of ha for potential mixed density residential

development at 50% net developable area. This results in an estimated capacity of 5,400 dwellings.

5.26 The site's agent has stated that the site can be delivered within the next 5 years. They are working in conjunction with Huntingdon Town Council which also put forward the site for consideration. The Huntingdonshire Strategic Transport Study (2017) considered the achievability of a major improvement scheme for the A141 from the A141/ B1090 Sawtry Way junction westwards to its connection with the A14. Allowing for design and construction costs alone estimates for a single carriageway route were over £31 million and for a dual carriageway route over £80 million; additional costs would be incurred for land acquisition, environmental mitigation, taxes, compensation and a range of other factors. These costs would require substantial funding beyond that which the development scheme could contribute.

5.27 With regard to deliverability, as is evident in the study by Glasgow University and report by PBA in section 3 of this report, given the competition from the development of the adjoining site it is likely to take much longer to develop out this site. The Council has indicated that the site is not considered deliverable within the time period of the Local Plan to 2036. Given the significant constraints associated with infrastructure delivery/costs, if taken forward for allocation, it would not meet the requirements of the NPPF in terms of the need to boost housing delivery/supply and soundness of the Local Plan (Paragraphs 47 and 182).

East of Romans Edge, Godmanchester

5.28 Results of the HELAA

Constraints
• Development will be expected to provide a sustainable transport network • Due to the scale of the site and location in open countryside development would likely give rise to significant negative landscape impacts. • Location of site would likely give rise to significant noise and light pollution. • The scale of development will create the need for a range of services and community facilities. • Due to the geology of the site a flood risk assessment will be required. • Site may have protected species on site. • Potential for archaeological finds. • Need to establish waste water flow prior to development (Pre-planning enquiry with Anglian Water)
Suitability
• Site is made up of grade 2 and grade 3 agricultural land. • Few physical constraints on sites suitability. • Site would form a substantial extension into the open countryside, the scale of growth would represent approximately a 40% growth over the dwelling stock in 2016 for Roman's edge. • Significant environmental impacts will be generated by the volume of traffic from the [proposed development. • The site is considered unsuitable for development sue to the environmental and social impacts on the existing community. • The site is also considered unsuitable on transport infrastructure grounds until evidence is provided that a re-rerouted A1198 can be delivered. • The sites estimated capacity: 58 ha for mixed density residential development of 1,160 dwellings, 3 ha of employment and 8ha for retail and community uses.
Availability
Promoted by The Fairfield Partnership (Mr Paul Belton)
Achievability
The site's agent has stated that the site can be delivered within the next 5 years. Developer involvement but the Council conclude that the site is unsuitable/undeliverable within the Plan period (2036) due to the impact on the existing community.

Site Overview

5.29 This site is situated to the east of Godmanchester, immediately south of the A14 and east of the A1198. It comprises a mixture of grade 2 and grade 3 agricultural land and is of low flood risk.

5.30 If taken forward, the site would form a further substantial extension into the open countryside beyond the Romans' Edge scheme which is currently being developed. The southern edge of the site would be some 1.2kms to the retail facilities in Romans' Edge and around 2.5 kms to services in the traditional core of Godmanchester. The Council has indicated that the scale of growth capable of being accommodated on the site would represent approximately a 40% growth over the dwelling stock in 2016, prior to any completions at the adjoining Romans' Edge and 65% when combined with this to which it is proposed as an extension. This would give rise to substantial impact on the character of the existing settlement. The Council concludes, difficulties in physically, environmentally and socially integrating development in this location and of this scale into the established settlement severely impede its suitability.

5.31 Whilst considered unsuitable by the Council, they have estimated capacity as follows: the total site area is 69ha and a residential-led mixed use proposal has been put forward by the site's promoters. From the total site area 3ha for employment use and 8ha for retail and community uses which should provide sufficient land for the permitted free secondary school. This gives a balance of 58ha for potential mixed density residential development at 50% net developable area which results in an estimated capacity of 1,160 dwellings.

5.32 With regard to deliverability, as is evident in the study by Glasgow University and report by PBA in section 3 of this report, given the competition from the development of the adjoining site it is likely to take much longer to develop out this site.

5.33 Given these significant constraints, it will not meet the requirements of the NPPF in terms of the need to boost housing delivery/supply and soundness of the Local Plan (Paragraphs 47 and 182).

East of Alconbury Weald, Abbots Ripton

5.34 Results of the HELAA

Constraints
• Development will generate a significant amount of traffic. • The sites location in open countryside means that impact on surrounding landscape is a development constraint. • Potential for protected species on site. • Need to establish waste water flow prior to development (Pre-planning enquiry with Anglian Water). • Potential surface water flood risk. • Before development can take an agreement between the Environment Agency and Anglian Water will need to be made to ensure that they are satisfied with waste water flows. • Site currently has no access to health, community, cultural, transport and education infrastructure, or shopping facilities.
Suitability
• Site is situated between Alconbury Weald and the East Coast mainline railway which forms a substantial; landscape buffer. • Would need to take into account local heritage assets. • Site considered suitable for mixed use development for 2,180 homes, a community hub, 3ha of interchange facilities, a primary school and 2.3 ha of land and community facilities.
Availability
Promoted by Strutt & Parker (Kenny Durrant).
Achievability
The site is currently in use as a solar farm and has previously been considered as part of a larger site. The site's owner/ agent has stated that the site can be delivered within the next 5 - 10 years although previous submissions have indicated that the solar farm would have at least another 15 year lifespan.

Site Overview

5.35 The site is situated between proposed development at Alconbury Weald (comprising 5000 homes of mixed size; 700 acres of green open space; and investment in a range of transport, energy and community facilities to support both the new residents and the surrounding town and villages) and the East Coast mainline railway which forms a substantial landscape buffer to the site. Alconbury Weald is expected to take 20 years to complete.

5.36 It is considered by the Council to be potentially suitable for mixed density mixed use development across a net developable area of 50% of the site. The mix of uses should comprise: approximately 2180 homes, a community hub of approximately 3ha relating to the proposed interchange facilities within the Alconbury Weald masterplan

to include retail floorspace (class A uses), a primary school, which would require approximately 2.3ha of land and community facilities to meet needs arising from the development, in addition strategic green infrastructure would be required incorporating publicly accessible natural green space and other open space appropriate to the scale of the development and transport infrastructure provision including linkages to the proposed extension of the Cambridgeshire Busway, which is part of the Alconbury Weald site.

5.37 The site is currently in use as a solar farm and has previously been considered as part of the larger site (Alconbury Weald). The site's owner/ agent has stated that the site can be delivered within the next 5 - 10 years although previous submissions have indicated that the solar farm would have at least another 15 year lifespan.

5.38 The site currently has no access to health, community, cultural, transport and education infrastructure, or to shopping facilities. Development at this site is therefore considered to be dependent on the successful delivery of development at Alconbury Weald.

5.39 County Council comments to the Call for Sites consultation indicate that it is unlikely to meet the requirements for secondary education:

5.40 “The site secured for the secondary school at Alconbury Weald has been negotiated on the basis of an 8 form entry (FE)/1200 place school and is effectively land locked in terms of master planning so the scope to build a bigger school, if necessary, is limited. This is particularly relevant when we consider the likelihood of an increase in dwellings on the site.”

5.41 Further to this, there is no evidence of developer involvement in the site.

5.42 Given the uncertainty regarding infrastructure delivery, in particular with regard to secondary education, and a lack of developer involvement, it does not meet the requirements of the NPPF in terms of the need to boost housing delivery/land supply and the soundness of the Local Plan (Paragraphs 47 and 182).

6.0 CONCLUSIONS

6.1 The NPPF is very clear on the need to ensure that local plans are deliverable. Paragraph 182 indicates that plans should be positively prepared, based on a strategy which seeks to meet objectively assessed development and infrastructure requirements; justified, being the most appropriate strategy, when considered against the reasonable alternatives; and effective, deliverable over the plan period

6.2 This report has reviewed the deliverability of sites under consideration as new settlements and spatial planning areas, included in Huntingdonshire District Council's Housing Land Availability Assessment which is currently out to consultation (ending on 3rd November 2017).

6.3 Evidence on housing delivery suggests that larger sites with a capacity of over 1500 dwellings take much longer for development to be delivered. One of the main reasons for this is the need to deliver infrastructure to support development. However, evidence also indicates that competition from sites within close proximity tends to suppress the delivery of development.

6.4 The majority of sites under consideration appear to be being promoted by landowners and agents. The lack of developer involvement in their promotion provides a strong indication that it will take much longer for them to be brought forward.

6.5 Extensive work has been undertaken by Larkfleet Homes with regard to demonstrating the deliverability of a new settlement at Sibson Aerodrome. Development can commence on site in 2019/20 and be built out over a 12 year period. This proactive approach demonstrates that the allocation of this site would meet the requirements of the NPPF with regard to the test of soundness, as set out in paragraph 182.

6.6 **Conclusions on the Deliverability**

Sibson Aerodrome (201)
• Sibson Aerodrome is under full control of a local housebuilder Larkfleet Homes and therefore is entirely available without being constrained by any fragmented ownership that is common with strategic sites. • Larkfleet Homes, awarded 2016 House Builder of the Year, is a local housebuilder delivering a range of high quality homes. • The site could accommodate up to 2500 homes and associated infrastructure. • A multi-disciplinary team of specialist consultants have undertaken a comprehensive series of surveys and appraisals for the aerodrome and its environs. From this work, no significant constraints for bringing forward a new Garden Village at this location have been identified. • Development of the village would be led by Larkfleet Homes in conjunction with three other independent housebuilders, in addition to Swift Homes, Larkfleet's own affordable housing registered provider. • In accordance with Larkfleet's trajectory, it is anticipated that 200 dwellings per annum will be delivered from year 3 onwards. This is achievable given

the number of developers proposed to be involved in the scheme.

- Larkfleet Homes is proactively seeking to deliver infrastructure requirements/improvements. Positive discussions have been held with Cambridgeshire Highways Authority and Highways England and it is anticipated that highway issues can be resolved.
- The scheme includes proposals for improvements to the A1 / Old Great North Road junction which is a key thread of a wider, far-ranging vision for an integrated transport solution for Sibson that will sustain quality of life and well-being for all the community.
- There is also potential for Sibson to utilise the Nene Valley Railway (NVR) to provide an upgraded rail service between Sibson and Peterborough city centre. There is a unique opportunity to provide a direct rail link into a principal city within 20 minutes travel time.
- The site can fully meet the requirements of the NPPF in terms of delivering the objectively assessed housing needs and associated infrastructure. Allocation of the site would ensure that the Local Plan meets the tests of soundness (NPPF, paragraph 182) and significantly boosts housing delivery in Huntingdonshire District.

RAF Molesworth (138)

The landowner is not seeking allocation at this time. It is therefore unavailable and undeliverable.

West of A1 between Buckden and Brampton (208)

- Sites owner has confirmed availability of the site (Savills on behalf of Church Commissioners).
- The HELAA concludes, based on garden village development principles the anticipated capacity of this site would be approximately 9,200 homes plus supporting infrastructure.
- As is evident in the study by Glasgow University and report by PBA in section 3 of this report, given the competition from the development of the adjoining site it is likely to take much longer to develop out this site. There is no evidence of developer involvement and the site also contains areas of safeguarded land which are reserved for the expansion of the A14. It is not known at this time if all of the land is available.
- There is no evidence of supporting studies which demonstrate the deliverability of development on the site.
- Given the constraints regarding unavailable safeguarded land, the lack of developer involvement and in the absence of evidence which demonstrates how infrastructure will be delivered, the site is not considered capable of delivering development to meet the needs of the District within the Plan period. Consequently, it would not meet the requirements of the NPPF in

terms of the need to boost housing delivery/supply and ensuring the soundness of the Local Plan (Paragraphs 47 and 182).
Abbotsley Squash Club and Cromwell Golf Course (051) and Abbotsley Golf Course (052)
• The HELAA concludes, on garden village principles this site and the adjoining site (Abbotsley Golf Course) has capacity for 1,640 homes plus associated infrastructure. • The sites owner has indicated that development can be delivered immediately. However, there is no indication that a developer is involved in the promotion of the site. Given the size of the site it is very unlikely to be capable of delivering the necessary infrastructure. • There is no evidence of supporting studies which seek to demonstrate the deliverability or developability of the site. • With regard to deliverability, as is evident in the study by Glasgow University and report by PBA in section 3 of this report, given the competition from the development of other sites within this area it is likely to take much longer to develop out this site. • Due to the lack of access to public transport the site is considered unsuitable in terms of its ability to deliver sustainable development. • development would have an adverse impact upon the setting of grade II listed Eynesbury Hardwicke House; the house is located within the site boundary. Any decisions relating to listed buildings and their settings and conservation areas must address the statutory considerations of the Planning (Listed Buildings and Conservation Areas) Act 1990. • Due to the constraints identified, the site is not considered to be deliverable within the Plan period. • Given these constraints, it would not meet the requirements of the NPPF in terms of the need to boost housing delivery/supply and ensuring the soundness of the Local Plan (Paragraphs 47 and 182).
Lodge Farm, Huntingdon (141)
• The site is not considered suitable by the Council. • It is not considered deliverable due to transport constraints/viability. • The site comprises of some 305 hectares of agricultural land. A residential-led mixed use proposal has been put forward by the site's promoters for an estimated capacity of 5,400 dwellings plus associated infrastructure. • The site is being promoted by Pegasus Planning on behalf of Linden Homes Ltd • Linden Homes claim that the site can be delivered within the next 5 years.

They are working in conjunction with Huntingdon Town Council which also put forward the site for consideration. The Huntingdonshire Strategic Transport Study (2017) considered the achievability of a major improvement scheme for the A141 from the A141/ B1090 Sawtry Way junction westwards to its connection with the A14. Allowing for design and construction costs alone estimates for a single carriageway route were over £31 million and for a dual carriageway route over £80 million; additional costs would be incurred for land acquisition, environmental mitigation, taxes, compensation and a range of other factors. These costs would require substantial funding beyond that which the development scheme could contribute. • With regard to deliverability, as is evident in the study by Glasgow University and report by PBA in section 3 of this report, given the competition from the development of the adjoining site it is likely to take much longer to develop out this site. The Council has indicated that the site is not considered deliverable within the time period of the Local Plan to 2036. • Given the significant constraints associated with infrastructure delivery/costs, if taken forward for allocation, it would not meet the requirements of the NPPF in terms of the need to boost housing delivery/supply and ensuring the soundness of the Local Plan (Paragraphs 47 and 182).
East of Roman Edge, Godmanschester (123)
• Whilst there is developer involvement (The Fairfield Partnership), the Council conclude that the site is unsuitable/undeliverable within the Plan period (2036) due to the impact on the existing community. • The site's agent has stated that the site can be delivered within the next 5 years. • Whilst considered unsuitable by the Council, they have estimated capacity for an estimated 1,160 dwellings plus associated infrastructure. • With regard to deliverability, as is evident in the study by Glasgow University and report by PBA in section 3 of this report, given the competition from the development of the adjoining site it is likely to take much longer to develop out this site. • Given these significant constraints, it will not meet the requirements of the NPPF in terms of the need to boost housing delivery/supply and ensuring the soundness of the Local Plan (Paragraphs 47 and 182).
East of Alconbury Weald, Abbots Ripton (151)
• The site is situated between proposed development at Alconbury Weald (comprising 5000 homes of mixed size) and the East Coast mainline railway which forms a substantial landscape buffer to the site. Alconbury Weald is expected to take 20 years to complete. • The site currently has no access to health, community, cultural, transport and education infrastructure, or to shopping facilities. Development at this site is therefore considered to be dependent on the successful delivery of

development at Alconbury Weald.

- It is considered by the Council to be potentially suitable for mixed density mixed use development across a net developable area of 50% of the site. The mix of uses should comprise: approximately 2180 homes plus associated infrastructure.
- There is no evidence of developer involvement
- There is no evidence of supporting studies which demonstrate the deliverability/developability of the site.
- The site is currently in use as a solar farm and has previously been considered as part of the larger site (Alconbury Weald). The site's owner/ agent has stated that the site can be delivered within the next 5 - 10 years although previous submissions have indicated that the solar farm would have at least another 15 year lifespan.
- County Council comments to the Call for Sites consultation indicate that it is unlikely to meet the requirements for secondary education. There are capacity constraints on the existing school site which are unlikely to be capable of mitigation.
- Given these significant constraints, it is not considered deliverable within the Plan period and, as such, it will not meet the requirements of the NPPF in terms of the need to boost housing delivery/supply and soundness of the Local Plan (Paragraphs 47 and 182).

APPENDIX 1

A1.1 Housing Delivery on Strategic Sites Research Study, Colin Buchanan (2005)

Housing Delivery on Strategic Sites

Research Study

Countryside Properties

December 2005

Housing Delivery on Strategic Sites
Research Study

Project No: 100661
December 2005

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Contents

Page

1. Introduction

1.1 Purpose of Report

1.1.1 This study was commissioned by Countryside Properties to examine how planned rates of housing growth proposed in draft RSS14 (December 2004) might be best delivered. This research does not contemplate alternative rates of growth (housing targets). Instead it considers how the housing targets and distribution proposed might best be achieved in terms of site size and location and emerging development site areas that are being promoted by developers and local planning authorities.

1.1.2 As such this study collates an evidence base of past housing development within the region, and with regard to strategic sites investigates the length of time required to obtain planning permission and begin construction, the time required to fully develop sites, and maximum delivery rates at specific locations. Results from this analysis are considered in order to identify policy implications for delivery of housing in the future. Finally this study compares this evidence base with emerging allocations and strategy to deliver housing growth proposed in draft RSS14.

1.2 Scope

1.2.1 This study relies upon data supplied to us by local authorities including both district and county councils, East of England Regional Assembly, Government Office for the East of England, and Office of the Deputy Prime Minister. Data sets provided have not been verified. For the purposes of case studies, and gathering information on completions and future allocations, local authorities, county councils and developers/housebuilders have been contacted.

1.3 Context

PPG3: Housing (2000)

1.3.1 Government policy on housing and housing delivery is primarily contained within PPG3. On housing land supply the PPG sets the objective of ensuring that everyone has the opportunity of a decent home and indicates that there should be a greater choice of housing. Further guidance is provided on the manner in which sites should be selected, but this approach does not detract from the primary purpose of seeking to ensure that adequate land is allocated to meet housing needs. One of the roles of the planning system is to ensure that new homes are provided in the right place at the right time (paragraph 3).

1.3.2 Paragraph 28 of PPG3 advises that at the regional level, Regional Planning Guidance (now RSS) should identify major areas of growth in the region and determine where housing provision is sought by local planning authority area. Paragraph 34 advises that it is essential that the operation of the development

process is not prejudiced by unreal expectations of the developability of sites nor by planning authorities seeking to prioritise sites in an arbitrary manner.

Planning for Housing Provision – Consultation Paper (July 2005)

1.3.3 This paper sets out the Government's objectives for delivering a better supply of housing through the planning system. A new policy approach is proposed with the overall objective of contributing towards sustainable development and delivering land in the right places. The objective is to meet the need for housing and thereby take better account of the housing market and be responsive to changing circumstances. Key elements of the new approach include assessments of need and demand, ensuring that allocated provisions are evidence-based and the introduction of the need for local authorities to proactively maintain a rolling 5-year supply within a 15 year time horizon.

1.3.4 The Government intends to publish a draft PPS 3 (Housing) in autumn 2005 which will update PPG 3 to reflect this new guidance. Regional planning bodies and local authorities will be expected to follow the new approach as soon as practicable after new draft PPS 3 is published.

1.3.5 The paper identifies that Government policy must narrow the time gap between land being allocated, being given planning permission and being developed. Intervention can take the form of infrastructure provision, remediation activities or compulsory purchase. This can ensure that allocated land will genuinely be available for development. A flexible supply of housing provided through plans forms part of the justification aiming to decrease the time gap. This is particularly important in respect of strategic sites because these procedures are implemented as granting permission more quickly will ensure that the overall contribution of strategic sites will increase.

1.3.6 Within each region the RSS will continue to establish the required overall level of new housing provision. Further guidance on assessing housing needs and market pressure will be published by the Government later in 2005. Housing provision levels are to be based on sub-regional housing market areas, and underpinned by a robust analysis of the housing market, of housing land availability assessments and also sustainability appraisals, having particular regard to environmental and transport considerations. Research and evidence should be developed in partnership with key stakeholders.

1.3.7 Decisions about future levels of housing are based on considerations of the housing market rather than administrative boundaries. Thus, policy will be better equipped to consider affordability and market information on housing need, as well as wider social, economic and environmental issues.

1.3.8 At the local level local, authorities are to allocate land to be delivered over the first 5 years of the plan as well as identifying a further 10 years land supply for future use. Sites within the first 5 year bracket should offer the most sustainable and developable option. The purpose of this approach is to ensure new housing is delivered in accordance with plans and addresses the current shortfall between plans and delivery.

Other Documents

1.3.9 A number of recent documents provide a context to the issues relating to the delivery and supply of housing and provide the basis on which this study has been undertaken.

1.3.10 The Barker Report (Delivering stability: Securing our Future Housing Needs) which was published in March 2004 has essentially noted that there is no clear relationship between economics and house building and that one of the main constraints to growth in England is the planning system, notably, the lack of allocations or adequate provision of land that is available to be built upon.

1.3.11 In October 2005, Barker commented on additional development proposed in her report. Of the extra 140,000 homes a year which is confined to the south east, less than 2% of available land for this development is anticipated to be used over the next 10 years. This highlights that strategic site allocations need to be rapidly granted permission so that more development can take place. She explains the main obstacle to development is cited as being local opposition. Barker also points out that planning for housing should be informed by the market, not driven by it.

1.3.12 Draft RSS14 also known as the Draft East of England Plan was published in December 2004 and provided housing and employment growth by district and also by sub region. The Governments policies on housing growth, contained within the Communities Plan, following advice from Lord Rooker, were accommodated within the Plan so that increased rates of housing growth were planned to be accommodated within Thames Gateway and also in the London-Stansted-Cambridge-Peterborough growth area.

1.4 Structure

1.4.1 This report is structured as follows:

- Chapter 2 – Methodology
- Chapter 3 – Delivery of housing 1980 to 2004
- Chapter 4 – Delivery of housing up to 2021
- Chapter 5 – Economics
- Chapter 6 – Conclusions

2. Methodology

2.1 Introduction

2.1.1 This study has focused on the rate of housing development where strategic sites have been grouped into three categories:

- Comprising 1,000 – 1,999 dwellings
- Comprising 2,000 or more dwellings

2.1.2 Sites comprising 3,000 or more dwellings were also assessed in as part of formulating for a future housing trajectory.

2.1.3 Data has been collected, firstly for the period 1980 to 2004 (the most recent dwellings completions data set available) and secondly for of the RSS14 plan period 2001 to 2021.

2.1.4 Six case studies from the study area have been examined in further detail to help develop understanding as to how strategic sites have developed as they have.

2.1.5 This study focuses on the East of England, but data has been included on some strategic sites identified but which are located outside of the East of England.

2.2 Data Sources

Strategic Sites – developed and under development

2.2.1 All local development plans and structure plans within the East of England were reviewed. Where possible, old plans were reviewed as well as current and emerging local plans. However, no plans published before 1990 were available. Emerging plans or the technical papers that underpin them were reviewed to identify strategic sites that will be developed (or could be developed) in the period 2001 to 2021.

2.2.2 All county councils and local planning authorities within the East of England region were asked to provide the following information:

1. Strategic housing (or mixed use) developments that have been or are currently developed achieved in the district/borough since 1980? Include any emerging strategic sites that are currently being considered either as a planning application or as an allocation in an emerging local plan.

2. When was the site first allocated in the local plan?

3. When was planning permission granted?

4. When was the application minded to be approved and when was the s.106 agreement signed?

5. List of land uses and quantum of development (i.e. number of dwellings, employment floor space and other uses)?

6. What rate of housing development has been or is being achieved (in dwellings per annum)?

7. Is the development now built out? Does it match the original planning consent?

2.2.3 This information was requested to authorities via e-mail under the Freedom of Information Act. Next, planning departments were contacted by telephone with follow-up e-mails to request further, more specific, information.

2.2.4 In addition, for identified strategic sites, information was sought on previous land use, proposed mix of uses and future proposals through internet searches. Web sites of councils, house builders and developers as appropriate were reviewed. However, web searches and reviews of developer web sites were generally sparse but did provide some useful background information.

2.2.5 The Eastern Region departments of the Home Builders Federation and English Partnerships were also contacted. The Home Builders Federation were unable to assist in data collection because they do not monitor or keep records of large sites. English Partnerships have not responded.

2.2.6 A Compass search was undertaken of all strategic sites in England which were subject to an inquiry/appeal since 1980. Data on the exact quantum of development sought was not always available and the number amount of inquiries/appeals held on the data base for the period 1980 to the late 1980's appeared to be limited or incomplete. Nevertheless the number of sites comprising more than a 1,000 dwellings was surprisingly small, 21 in all, of which only 3 were granted planning permission.. Of the 21 sites, 8 comprised sites of more than 2,000 dwellings and only 1 of these was approved. Within the East of England region, the Compass search provided information on 7 sites of which one was approved. The list of Compass sites is set out in Appendix 1.

Strategic Sites – potential permissions and allocations

2.2.7 Data on allocations that will or could be developed within the Draft RSS 14 plan period was collected at the same time as the above information. Most development plans in the Eastern Region, plan for at least part of the forthcoming RSS plan period. Hence, some strategic sites are already allocated and are under development, or are allocated and are planned to commence development in the RSS plan period. For these sites the same information as shown at paragraph 2.2.1 was requested.

2.2.8 For forthcoming sites, i.e. those that need to be allocated in order to meet the new targets in the period to 2021, information is less robust and councils do not have definitive plans upon which they can rely. Advice on potential strategic sites is contained in draft RSS14 and this has proven to be a

(reasonably sound basis) upon which additional information requests to local planning authorities could be made.

Housing Completions

2.2.9 Housing completions data for all tenures was obtained from the Office for Deputy Prime Minister's Housing Statistics Department, who were able to provide housing completions data by district by year from 1980. It is noted that the East of England Regional Assembly has housing completions data from 2000 which is different to that supplied by ODPM. The reason why there is a difference appears to be because ODPM data is gross and represents new build only, whereas EERA data is net. Due to the fact that the ODPM data extends back to 1980 it was used for the basis of this study.

2.3 Economics

2.3.1 Historic data on economic performance and on population in England was obtained from Office for Deputy Prime Minister, NOMIS and ONS.

3. Delivery of housing 1980 – 2004

3.1 Overview of Completions

3.1.1 Annual housing completions by local authority since 1980 is provided in Appendix 2.

3.1.2 A comparison of rates of development with planned rates and also that which is proposed to be developed within Draft RSS14 is provided in Appendix 3. Over the last 25 years, the majority of districts have met planned rates of development. Historic annual completion rates provide crucial figures to demonstrate that those planned within draft RSS14 can be achieved. Over the region, historic annual average rates and planned targets are both approximately 22,000 dwellings per annum. However, in over the last five years completions have averaged approximately 17,000 dwellings per annum. As a result, there is a backlog in housing which has not been built in terms of regional targets. Therefore future rates are required to exceed annual requirements to ensure that the backlog is overcome and RSS14 target achieved.

3.1.3 Appendix 4 provides details of planned development rates sought over the period 1980 to 2005, average allocation site size including the amount of sites and details of actual completion rates.

3.2 Strategic Sites

3.2.1 Appendix 5 provides a table showing details of development of all strategic sites identified, including completions data (where known), details of the main stages in the planning determination process and the build period. Six case studies are provided at the rear of the appendix.

3.2.2 In total 36 strategic sites were identified (including 4 sites located outside of the East of England). For the purposes of examining the historic strategic sites, schemes which have very recently been granted planning permission, and have only up to one year of completions, have been excluded from the analysis. These sites include The Garrison in Colchester and Red Lodge in Forest Heath. Findings with regards time between application submission and first build year (lag time) and development rate can be summarised as follows:

TABLE 1 : SUMMARY OF STRATEGIC SITES (BUILT OR UNDER CONSTRUCTION)

	All strategic sites	**1,000 to 1,999 dwellings**	**2,000 to 2,999 dwellings**	**3,000 dwellings or more**
Annual rate				
Average annual rate of development	188 dwellings pa	101 dwellings pa	189 dwellings pa	330 dwellings pa
Fastest average annual rate	677	324	500	677
Slowest average annual rate	2	3	10	2
Lag time				
Average time between application submission and first build year	5. years	4.7 years	5 years	5.5 years
Fastest lag time	1 year	1 year	1 years	3 years
Slowest lag time	13 years	13 years	11 years	10 years

Source: Derived from ODPM completions data and information supplied by East of England Local Authorities
Note: Lag time data available for 21 sites.

3.2.3 Of the 32 large sites, only 13 comptised developments of between 1,000 and 1,999 dwellings. 19 sites comprised development of over 2,000 dwellings, of which 10 comprised over 3,000 units. On average lag time is longer for sites greater for larger than smaller sites.

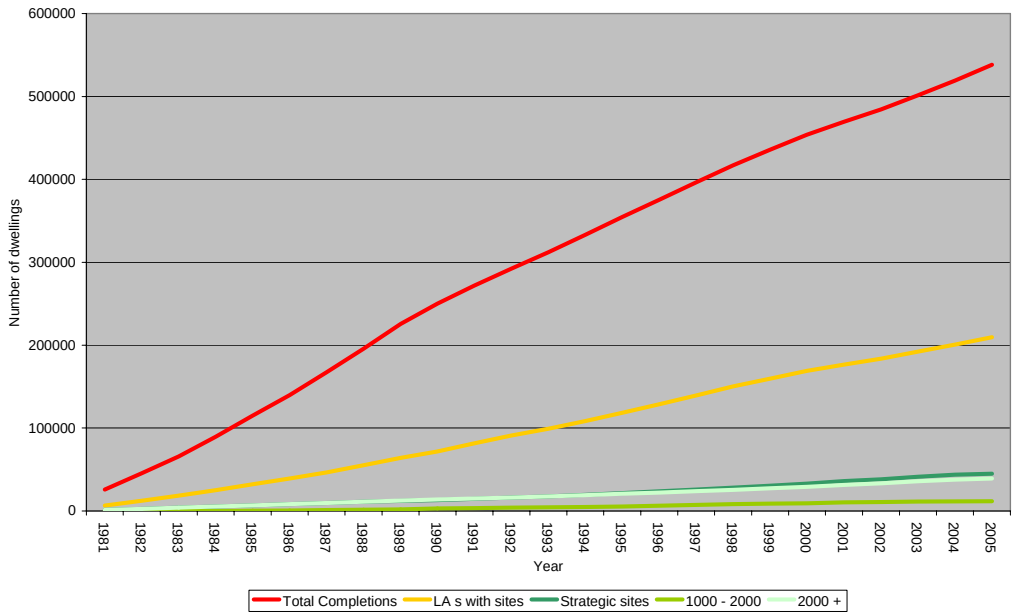
3.2.4 The vast majority of local authorities contacted commented that whilst there were very many residential developments comprising several hundreds of dwellings, development sites comprising more than 1,000 dwellings were rare.

3.3 Analysis

Contribution

3.3.1 Figures 1 and 2 below show the overall contribution of strategic housing development as a proportion of overall housing completions.

FIGURE 1: HOUSING COMPLETIONS IN EAST OF ENGLAND (CUMULATIVE TOTALS)

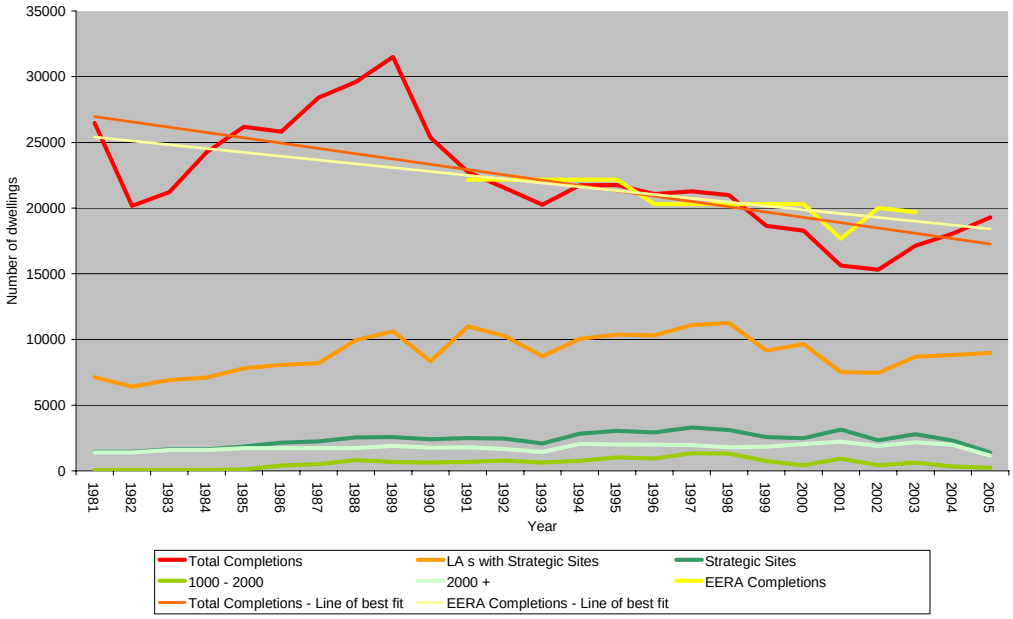


Source: Derived from ODPM completions data and information supplied by East of England Local Authorities

3.3.2 Figure 1 above shows that in aggregate strategic sites have made only a limited contribution to housing development in the past 25 years within the East of England. Since 1980 the proportion of houses developed on strategic

sites to total dwellings built has gradually increased from 4.5% (in 1980) to 8.6% by 2005. Into the future, the level to which strategic sites are proposed to contribute towards total completions is planned to increase (see Figure 3).

FIGURE 2: HOUSING COMPLETIONS IN EAST OF ENGLAND (ANNUAL RATES)



Source: Derived from ODPM and EERA completions data and information supplied by East of England Local Authorities

3.3.3 Figure 2 above shows that in terms of annual rates, the number of dwellings completed per annum fluctuates widely but has generally decreased over time. Overall completions generally range from approximately 500 to 3,000 dwellings. In comparison, the contribution of strategic sites is relatively constant and this indicates that there is no direct relationship between total dwellings completed and those completed on strategic sites. Also the delivery of strategic sites makes a small but constant base contribution to overall levels of new housing stock per annum.

3.3.4 Figure 2 also recognises EERA housing completions. Exact figures have been able to be ascertained from 2001-2003, whereas averages have only been able to be gathered from 1991 onwards. Lines of best fit have been drawn for both ODPM completions and EERA completions which show that overtime completion rates are relatively similar.

3.3.5 Details of completions as a proportion of a total district's housing development is provided at Appendix 6.

3.3.6 Table 2 below provides an overview of the contribution of strategic sites to local planning authority outputs over various time periods and by strategic site size.

TABLE 2 : STRATEGIC SITES AND TOTAL COMPLETIONS (ALL LOCAL AUTHORITIES)

	Period		
	1980/81 – 1989/90	**1990/91 – 2004/5**	**1980/81 – 2004/5**
Total Completions	**250,031**	**288,296**	**538,327**
Strategic site completions	18,101	35,426	53,527
1,000 – 1,999 dwellings	3,543	9,054	12,597
2,000 + dwellings	14,558	26,372	40,930
Proportion of total completions			
Strategic sites	7%	12%	10%
1,000 – 1,999 dwellings	**1%**	**3%**	**2%**
2,000 + dwellings	**6%**	**9%**	**8%**

Source: Derived from ODPM Completions and East of England Local Authorities

3.3.7 Table 3 below shows that local authorities that benefit from strategic sites attain on average, slightly higher rates of completions per annum and that whilst strategic sites can comprise a substantial proportion of the annual average within a particular locality, up to 40% (14% + 26%), the overall contribution over time is only as high as 10% as shown in table 2 above.

TABLE 3 : ANNUAL CONTRIBUTION OF LARGE SITES AND OTHER SITES

	Period		
	1980/81 – 1989/90	**1990/91 – 2004/5**	**1980/81 – 2004/5**
LA s WITH LARGE SITES			
No of LA s	11	19	19
Total completions	80,563	143,330	223,893
Average Completions per LA	7,324	7,544	11,784
Annual Average per LA	**732**	**503**	**471**
1,000 – 1,999 dwellings			
No of LA s	6	9	9
Total completions	3,377	11,209	14,586
Average Completions per LA	563	1,245	1,621
Annual Average per LA	**56**	**83**	**65**
% of Total LA Completions	**8%**	**17%**	**14%**
2,000 + dwellings			
No of LA s	6	14	14
Total completions	15,063	27,555	42,618
Average Completions per LA	2,511	1,968	3,044
Annual Average per LA	**251**	**131**	**122**
% of Total LA Completions	**34%**	**26%**	**26%**
LA s W/O LARGE SITES			
No of LA s	37	29	29
Total completions	178,412	150,379	328,791
Average Completions per LA	4,822	5,185	11,338
Annual Average per LA	**482**	**346**	**454**

Note: Above annual averages are per local authority who may benefit from 1 or more strategic sites, have annual averages are not per site. Local authorities may benefit from the two size ranges of strategic site.

Source: Derived from ODPM Completions data and information supplied by East of England Local Authorities

Impact of Local Plan Allocation

3.3.8 The potential relationship between lag time and development plan status of strategic sites at the time of application submission has been investigated. Due to inaccessibility of previous plans, and an incomplete set of lag times, not all of the sites have been able to be thoroughly investigated. Findings suggest that there is no obvious relationship between local plan allocation and lag time.

Achieving Planned Development Rates

3.3.9 There is no statistically significant relationship between the standard deviation of site size and those authorities who meet their planned growth targets and those who do not, i.e. local authorities with a broad range of site sizes and those with a limited range of site sizes appear to perform equally well. By examining local authorities with large sites there is a stronger statistical relationship (but not yet statistically significant) between authorities with strategic sites and those who achieve their planned targets, i.e. local authorities who have a strategic site tend to be more likely to achieve their planned rates of growth. It is important that this evidence is not taken out of context. This is because if the latter analysis was undertaken by itself then the conclusion, by itself, would indicate no relationship. Results of this analysis are provided in Appendix 7.

3.3.10 Table 4 below shows the number of local authorities with strategic sites and those without compared with achieving planned rates of growth.

TABLE 4 : LOCAL AUTHORITIES WITH AND WITHOUT STRATEGIC SITES COMPARED WITH PLANNED TARGET RATES OF DEVELOPMENT

	No of districts with large sites	No of districts without large sites
No of districts who met planned targets	11	21
No of districts who did not meet planned targets	7	9

Source: Derived from ODPM Housing Completions, East of England Local Authorities and Draft RSS14

3.3.11 The results from the table must be read with caution as many local factors govern the rate of development at potential locations such as local housing markets, and location (urban or rural), accessibility (to transport interchanges, jobs and services and facilities).

Locational Analysis

3.3.12 Mapping of annual completions per district and strategic site is provided in Appendix 8. In general the rate of housing development at strategic sites is slower in the period 1991 to 2005 than the period 1980 to 1990.

3.3.13 Appendices 8.1-8.3 illustrate that the majority of strategic sites in the East of England are located within the London-Stansted-Cambridge-Peterborough (LSCP) Growth Area / M11 Corridor and within Essex. The rates of delivery of strategic sites is not related to overall rates of housing delivery by district.

3.3.14 Appendices 8.4-8.6 show district totals excluding strategic site contributions. They highlight that even without strategic sites the variation between annual rates throughout the East of England is similar to the rates including strategic sites. Most significantly, they show that high completion rates have been achieved without strategic sites.

Impact of Environmental Assessment

3.3.15 Environmental issues have become increasingly complex and methods have been developed to measure the impacts of development. Cost benefit analysis evolved into environmental assessment (EA) which was first introduced into the British planning system in 1985 through an EC Directive. An EA is undertaken for major development projects, including large housing sites, and assesses a range of qualitative and quantitative impacts that the development will have on the environment. As a result, the undertaking of the various EA procedures has had the effect of lengthening the planning process for strategic sites, particularly the lag time.

3.4 Case Studies

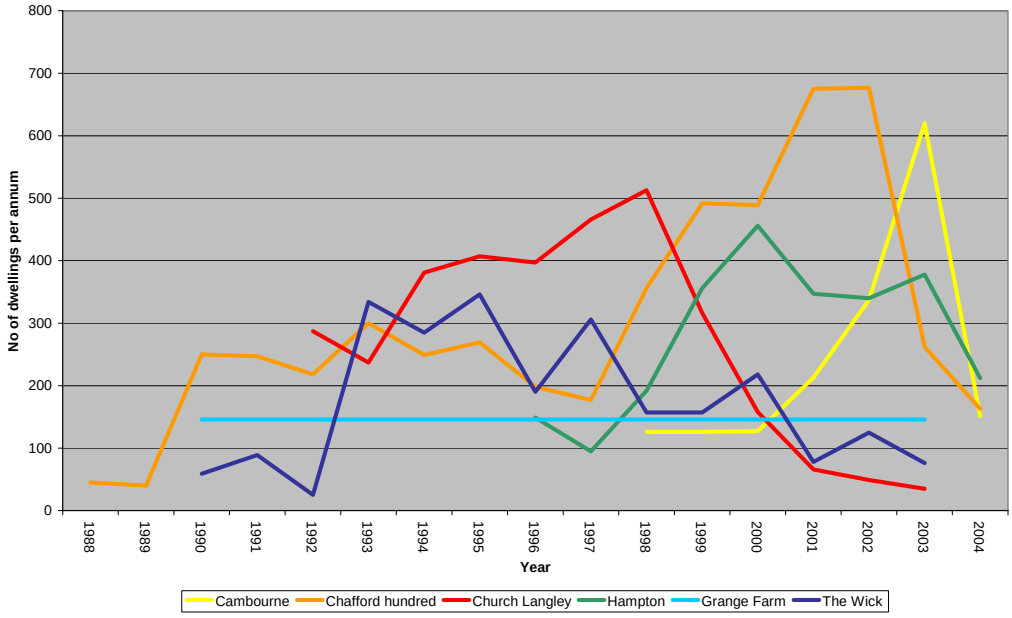
3.4.1 Six schemes have been investigated in detail to generate a clearer understanding of into the development processes involved in developing a strategic housing site. The case studies comprise the following schemes:

- Cambourne, South Cambridgeshire
- Chafford Hundred, Thurrock
- Church Langley, Harlow
- Grange Farm, Suffolk Coastal
- Hampton Southern Township, Peterborough
- The Wick, Basildon

3.4.2 Each case study is discussed in detail in Appendix 5. These schemes have been selected because they represent a broad range of types, sizes and locations within the context of the full list of strategic sites. They also cover a wide timescale and are at different construction stages. All sites, apart from Chafford Hundred which started in 1988, started during the 1990s. Selecting recent sites ensures site records are more accessible and enables case officers or developers who actually worked, or are still working, on the sites to be contacted, thus presenting an accurate and up-to-date understanding of each development.

3.4.3 Figure 3 below shows completion rates of each case study. It highlights that the sites have developed in a similar way. Apart from Grange Farm, the five remaining sites tend to start slowly and then rise and fluctuate over the course of development. All of the sites have included a broad mix of uses. All sites comprise a range of physical infrastructure as well as retail and employment uses, and healthcare, education, community and open space services and facilities.

FIGURE 3: COMPLETION RATES OF CASE STUDIES



Source: Derived from ODPM completions data and information supplied by East of England Local Authorities

3.4.4 Strategic sites receive outline planning permission granting the overall development of the site. The site is then sub-divided into smaller plots of land which are released over the development period. These plots are then sold of off to a number of house builders who develop individual parcels of land.

Factors Affecting Rate of Development

3.4.5 Analysis of case studies highlights each scheme is different from the other and that there are a range of factors which affect the pace at which a strategic site can develop. The degree in which an individual factor occurs as well as the number of factors occurring varies. Case studies identify factors, as set out below, which affect delivery, and need to be considered as they can either speed up or slow down the development process:

- Joint working – partnership between local authorities, the Government and developers/housebuilders is crucial to ensure effective and efficient delivery;
- Site conditions – environmental issues, site remediation;
- Local market – demand for and supply of local housing;
- Residential density – higher densities lead to increased completions rates;
- Type of developer / house builder – national organisations can build at faster rates than local firms. Having a variety of house builders who have different markets (products) will enable faster rates of development to be achieved;

- Land owner – rate at which the landowner releases land to housing market. Faster rate of release will lead to more completions;
- Level of guidance – clear design and master planning concepts and principles that are adopted by all parties;
- Quality of design – sub-standard design submissions require substantial revision and negotiation;
- Changes to proposals – re-submission of proposals due to site being developed over a considerable period of time and changing circumstances;
- Infrastructure requirements – physical and social infrastructure such as roads, services and facilities maybe required to be implemented before residential development can commence; and,
- Section 106 agreements – negotiations between development and the local Council and other parties can slow down the development process.

3.4.6 From the consultants own experience, there is evidence to suggest that given suitable site shape and size and if there are no infrastructure constraints then multiple parts of sites can be commenced at the same time, thereby increasing rates of delivery.

3.5 Conclusions

3.5.1 Whilst strategic sites can provide a valuable contribution towards meeting housing targets and help achieve higher rates of growth, they cannot be relied upon to achieve higher or increased rates of housing growth over time. Their contribution has historically only achieved an average of 10% of housing completions over 1980-2005. There appears to be no statistically significant relationship between districts who have met their planned growth targets and those who have not, and the existence of strategic sites. The contribution of strategic sites to housing stock is relatively constant whereas the contribution of small sites (less than 1,000 dwellings) fluctuates widely. This shows that strategic sites provides a small but important base contribution to the housing stock per annum.

3.5.2 The overall rate of development that has historically been achieved from strategic sites overall is only as high as 200 dwellings per annum for individual sites. This is the average that has been achieved since 1980 in the region.

3.5.3 Locational analysis indicates that the delivery rates of strategic sites tends not to be related to completion rates of districts in which they are situated. Completion rates on strategic sites has generally decreased over time except those sites being delivered at faster rates in the LSCP Growth Area.

3.5.4 Interestingly, sites of between 1,000 and 1,999 dwellings have made a limited contribution towards overall development and have also been developed at much slower rates than larger developments. This may be reflective of the scale of investment required to service larger developments and the ability of larger developments (comprising 2,000 of more dwellings) to offset these costs, or to secure better investment.

3.5.5 The average time between application submission and the first year of build is 5 years. Local plan allocation does not directly affect lag time.

3.5.6 The Compass search (see paragraph 2.2.7) yielded very few strategic sites that were subject to any form of inquiry indicating that strategic sites tend to have the support of the planning system. This also indicates that generally planning authorities handle strategic sites differently. Due to the size and complex nature of such schemes, pre-application discussions are expected to have occurred, authorities would also secure missing information and seek to resolve issues to enable planning permission to be granted. Therefore, as a result of this time and cost preparing the application developers are unlikely to appeal. It also indicates the willingness of the developers to ensure that applications are supported by all relevant and necessary information.

3.5.7 The main finding from the six case studies is that each strategic site is different from the next. In general, sites appear to develop in a similar manner in that production rates gradually increase and then fluctuate over the course of development. However, all sites vary in that the rate of development and lag time is affected by a range of factors which can occur throughout the planning process. The degree to which these factors impact lag time and production rates can be influenced by the Government, local planning authorities and developers.

3.5.8 It is not clear what the effect of the new planning system will have on the average lag time (the time between application and submission). However, given the need for pre-application discussions and the need to support strategic applications with rigorous and comprehensive information and the complexity of securing on-site and off-site improvements, including provision of infrastructure (community, social, utilities and transport) it is difficult to envisage that the time between an allocation in a local development framework and first year of build reducing. It does not seem to be sensible to assume that any speeding up of the planning process, on the basis that issues are complex and ramifications are potentially considerable.

4. Delivery of housing up to 2021

4.1 Supply

4.1.1 Appendix 9 provides an overview of housing land completions and commitments for the forthcoming RSS14 plan period. The information has been provided by the East of England Regional Assembly (EERA).

4.1.2 Table 5 below provides an overview of the amount of land that is needed to be found by 2021 by locality.

TABLE 5 : LAND SUPPLY FOR RSS 14 PLAN PERIOD (2001-2021)

County/Unitary	Draft RSS Target (total)	Commitments plus completions	Residual
Peterborough	21,200	14,461	6,739
Cambridgeshire	68,100	60,028	8,072
Suffolk	58,600	35,407	23,193
Essex (inc UAs)	123,400	54,641	68,759
Hertfordshire	79,600	34,164	45,436
Norfolk	72,600	35,438	37,162
TOTAL	423,500	234,139	189,361

Source: Derived from draft RSS 14 and EERA

4.1.3 Appendix 10 provides a breakdown of previously developed land that is considered to be available for residential development. This information was provided by the ODPM. The residual element comprises both greenfield and brownfield land. Assuming sites are constructed at 35 dwellings per hectare, analysis of Appendix 10 shows that approximately 128,450 units could be built on previously developed land. This equates 68% of the total residual set out in Table 5.

4.2 Strategic Sites

4.2.1 Appendix 11 provides a list of all strategic sites that are either currently under development, are committed or otherwise being contemplated by local planning authorities.. Taking into account strategic sites that are currently being developed (as identified in the previous chapter) and the number of strategic sites that are proposed to be developed in the forthcoming plan period, the total capacity of these sites is, as follows:

TABLE 6 : CAPACITY OF EXISTING AND FUTURE STRATEGIC SITES (FROM 2001)

	Cumulative capacity
Strategic sites in which construction ended 2001-2005	3,292
Strategic site completions ongoing (beyond 2005) 2001-2005	6,213
Strategic Sites under construction 2005 onwards	14,004
Strategic Sites committed in Local Plans / Identified in RSS14 at 2005	75,440
TOTAL	98,949
Draft RSS 14 Target	478,000
Remainder	379,051
Potential contribution of strategic sites assuming fully developed by 2021	22%

Source: Derived from East of England Planning Authorities, Local Plans and draft RSS 14
Note: Target for draft RSS14 excludes MKSM SRS elements of growth, which if included would increase the RSS 14 target and also the amount of proposed strategic sites.

4.2.2 There are a total of 25 strategic large sites which have yet to obtain planning permission and are being relied upon to be delivered in the period to 2021. Average site size is greater that 3,000 dwellings.

4.2.3 2% of the RSS target has already been achieved over the period 2001-2005. This Given the current draft RSS dwelling target for the remaining period strategic sites could provide approximately 22% of the remaining target. This is substantially higher (double) than has been achieved in the past. This shows the relatively greater importance and larger contribution that strategic sites are planned to have in the future on overall house building.

4.3 Potential Trajectory

4.3.1 Taking into account commitments, strategic sites under development and estimated development of identified strategic sites, an estimate of the total contribution of strategic housing sites can make to RSS14 targets is provided in Appendix 12.

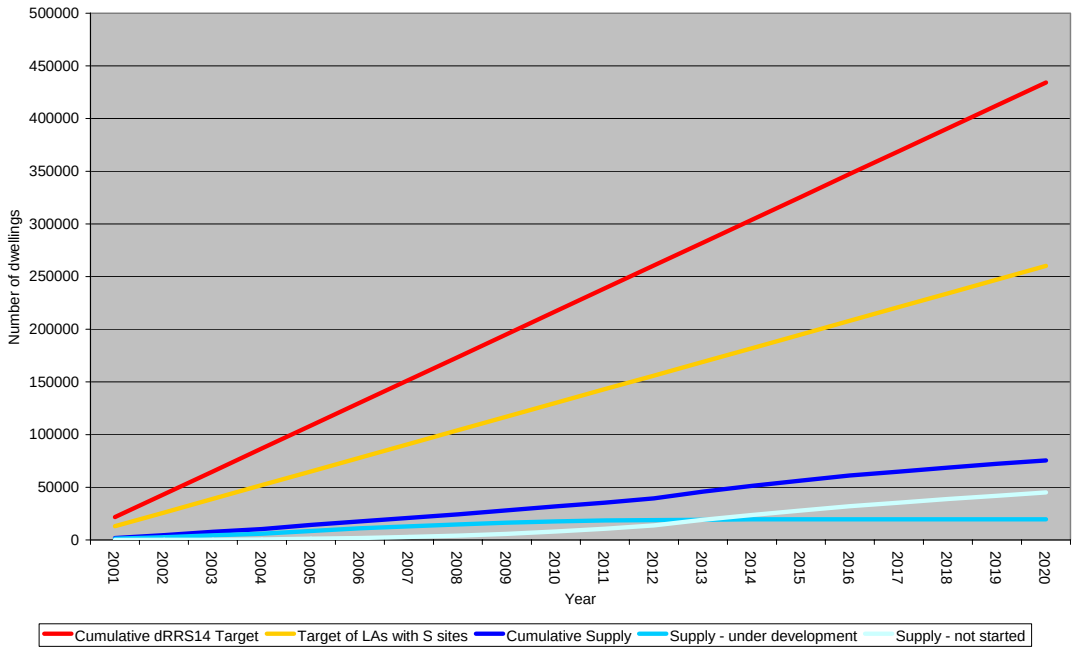
4.3.2 Estimates as to when strategic sites might commence development are based on our estimates of when an application might be made. Average lag time and average completion rate are based on historical performance (see chapter 3 of this study). Trajectory assumptions are set out in table 7 below.

TABLE 7 : LAG TIME AND ANNUAL RATE TRAJECTORY ASSUMPTIONS

Site Capacity	Lag Time	Annual Completion Rate
1000-1999 dwellings	4 years	200
2000-2999 dwellings	5 years	250
3000 + dwellings	5 years	350

4.3.3 Figures 4 and 5 show potential housing land supply trajectories comparing regional targets with future housing supply on strategic sites.

FIGURE 4 : HOUSING TRAJECTORY FOR EAST OF ENGLAND AND CONTRIBUTION OF STRATEGIC SITES (POTENTIAL AND ACHIEVED) (CUMULATIVE TOTALS) 2001-2021

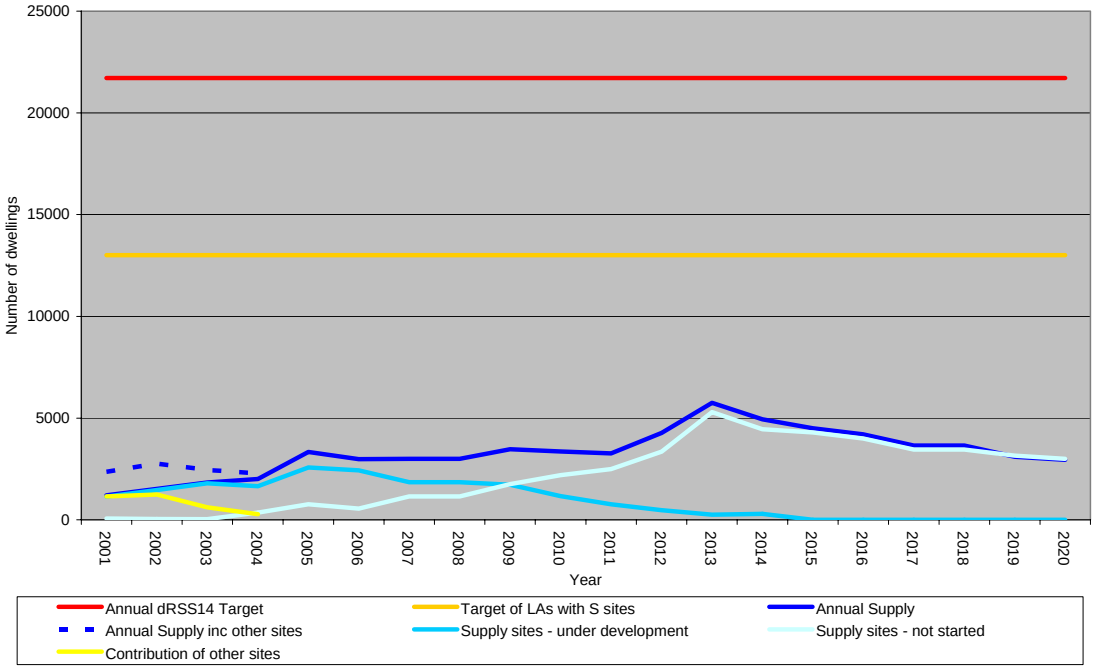


Source: East of England Planning Authorities, Local Plans and draft RSS14.

4.3.4 Applying these lag times and completion rates shows that strategic sites have the potential to contribute 72,989 dwellings in the plan period covering 2001-2021. This equates 15% of the total target and this level of contribution higher that the 10% which has been achieved historically. This figure is still significantly lower than the 22% which is targeted. Higher rate trajectories are set out in Figures 6 and 6 below.

4.3.5 Figure 4 shows a steadily increasing supply of new housing development can be anticipated from strategic sites. This is a similar pattern of contribution of strategic sites to housing targets as was achieved in the period 1980 – 2004. Sites which do not yet have planning permission will only begin to make a significant contribution from 2012/13.

FIGURE 5 : TARGET HOUSING TRAJECTORY FOR EAST OF ENGLAND (ANNUAL RATES) 2001-2021



Source: East of England Planning Authorities, Local Plans and draft RSS14.

4.3.6 Figure 5 shows that the delivery of future strategic sites peaks at approximately 6,000 per annum in the period 2013 – 2016.

4.3.7 Appendix 13 provides the table which underpins the above trajectories and shows where districts, through development of strategic sites alone, are assumed to exceed annual housing targets for individual districts as currently set out in draft RSS14. This occurs within Cambridge City, Harlow, Stevenage and Welwyn Hatfield. This pattern has occurred in the past. It should be noted that these sites are set out in RSS14, and that further strategic sites could be brought forward in the future.

4.4 Achieving RSS14

4.4.1 This section investigates what would need to occur to achieve RSS14 housing targets. A range of scenarios involving changes to lag time and completion rates have been tested.

4.4.2 Table 8 below examines what might occur if alternative rates of development were achieved. Even under the scenario when rates of development are increased up to 700 dwellings per annum the overall contribution of strategic sites currently required by draft RSS9 is not achieved.

TABLE 8 : HIGHER ANNUAL RATE SCENARIOS OVER 2001-2021 (5 year lag time)

Annual completion rate	Total completed dwellings on strategic sites	% of strategic sites	% of RSS 14 target
200	60,809	59	13
300	70,409	68	15
400	75,849	74	16
500	79,549	78	17
600	83,249	82	18
700	85,749	85	19

Source: Derived from East of England Planning Authorities, Local Plans and draft RSS 14

4.4.3 Table 9 below is similar to table 8 however lag time has been decreased to 3 years, as opposed to 5 years.

TABLE 9 : HIGHER ANNUAL RATE SCENARIOS OVER 2001-2021 (3 year lag time)

Annual completion rate	Total completed dwellings on strategic sites	% of strategic sites	% of RSS 14 target
200	65,259	63	14
300	74,799	72	16
400	80,299	77	17
500	85,199	82	18
600	89,699	86	19
700	94,199	91	20

Source: Derived from East of England Planning Authorities, Local Plans and draft RSS 14

4.4.4 The table above shows that increasing the contribution of strategic sites to meet draft RSS14 target requires the simultaneous action of (i) decreasing the period between planning application being submitted and planning permission being granted and homes built; and, (ii) a substantial increase in completion rates of those sites. Achieving both is entirely unrealistic given historic performance. Notably, achieving very high rates of development is likely to be undesirable.

4.4.5 It is not assumed that lag times will be reduced as the new planning system frontloads the process, so that whilst determination of applications may occur quicker, the actual process of preparing proposals and supporting documentation (including undertaking consultation) before submission has been lengthened. There is no evidence to suggest the new planning system will achieve an overall reduction in the time required to bring sites forward for development will reduce. There is no evidence to suggest that the process will be faster than it has been historically. See also paragraph 3.5.8.

4.4.6 Analysis shows that it is the number of sites which constrains the contribution towards total supply. No evidence suggests that concentrations of strategic sites affects the market and thus supply. Doubling the number of strategic sites would double the contribution that the sites can make towards supply.

4.4.7 Overall, if contribution of strategic sites is to be increased the number of sites should be increased. This is the only realistic mechanism to meet RSS14 targets.

5. Economics

5.1.1 The Barker Review of Housing Supply, Interim Report 2003 examined the link between housing supply, demand and prices. As house prices rise one would expect housing supply to increase. This has tended to be the case in most European countries and previously in the UK. However, over the last decade the relationship between house prices and housing supply has broken down. Over this period as house prices have risen, the number of dwellings completed per annum decreased. Markedly in the early 1990's and in comparison to historic rates. Note these figures relate to the UK.

5.1.2 The relationship between between house building and a wide range of economic indicators has been investigated. This has included GDP, real interest rates, earnings, saving ratios, unemployment levels, GDP differentials in the UK *vis a vis* Europe (migration impacts). The analysis has included an assessment of house building against these economic variables singly, in combination and by lagging data by up to 5 years, absolute values and in terms of annual changes.

5.1.3 In all cases there is no statistically robust relationship between either the annual volume or the rate of change of house building and any economic variable.

5.1.4 It is apparent that the factors driving house building are not principally economic but relate to a whole range of other factors. The Barker Review highlighted that land supply issues were the main factors driving house building. These factors related to an unwillingness to build out large sites quickly in order to reduce risk, the complex nature of sites (especially brownfield), land ownership and land assembly problems, the planning system and the political problems associated with land use issues i.e. nimbyism.

5.2 Infrastructure

5.2.1 The East of England Regional Assembly has a standing objection to the proposed levels of housing proposed to be developed as part of Draft RSS14, on the basis that insufficient infrastructure exists or is proposed to be introduced to ensure that new development is sustainable. This infrastructure shortage pertains not only to transport infrastructure but also to other types of infrastructure.

5.2.2 Notably, anecdotal evidence from Kent Council indicates that whilst land is available to be developed and has planning permission to be built, development cannot take place until key infrastructure has been put in place to support the new communities. This issue is, for example, preventing continued growth at Ashford.

5.2.3 Strategic sites, economically, able to provide a wider range of infrastructure, including strategic infrastructure than brownfield sites. Strategic sites can also accommodate new facilities, which are required as part of the scheme or needed as part of the overall growth of a settlement, such as medical centres, schools, retail centres, formal open space and leisure and community facilities.

5.3 Labour Supply

5.3.1 Previous studies by Colin Buchanan have assessed the availability of labour supply in the London-Stansted-Cambridge-Peterborough Growth Area and considered whether it would be a constraint to development.

5.3.2 The results from that work suggest that house builders and developers do not consider that labour supply would constrain growth. By confirming growth levels and ensuring an even rate of development then volume house builders could respond to an increase in rate of development. Confirming RSS14 would be an important first step in this process.

5.3.3 It is not clear what the ramifications of the successful bid to stage the 2012 Olympics will have on the capacity of the construction industry, but there are already increasing concerns indicating that development capacity may be directed towards this national development at the expense of other areas.

6. Conclusions

6.1.1 Historically rates of strategic site development is 200 per annum. Further analysis highlights that completion rates increase for larger sites. Sites with 2,000 - 2,999 units have the potential to develop up to 250 dwellings per annum, and sites with 3,000+ units at 350 dwellings per annum.

6.1.2 Lag time is approximately 5 years. The recent Government consultation paper Planning for Housing Provision identifies that this time gap needs to be shortened. It is not clear how this is to be achieved. The requirement for provision of appropriate supporting documentation and evidence and also the need to ensure community consultation is meaningful and appropriate appears to conflict with this objective.

6.1.3 Case studies show that rate of development and lag time can be affected by a range of factors. The degree to which these factors impact lag time and production rates can be influenced by the Government, local planning authorities and developers.

6.1.4 Strategic sites are an important part of the formulae to achieving high rates of growth but are not the entire solution. Completions achieved by strategic sites has historically represented a small but important contribution, equating approximately 15% of total completions.

6.1.5 Draft RSS14 requires the delivery of all strategic sites by 2021. Our evidence shows that it is highly unlikely that much more than two thirds of the capacity of strategic sites within the East of England will be developed in the period to 2021; these sites will continue to contribute for the ensuing period.

6.1.6 Meeting the draft RSS14 strategic sites target requires identification, allocation and development of more strategic sites. Put simply, to meet the strategic sites target identified within draft RSS14 requires allocation of a third more strategic sites than are currently identified.

6.1.7 Strategic sites can contribute towards infrastructure required to serve the new community and help create a sustainable environment. It is important that greenfield land is brought forward in tandem with brownfield land because of the limited contribution that brownfield land is likely to be able to make towards strategic infrastructure. In any event urban capacity sites is believed to be a diminishing supply.

APPENDIX 2:

A2.1 …Factors Affecting Housing Build-out Rates, A report by Professor David Adams and Dr Chris Leishman, Department of Urban Studies, University of Glasgow

CLG Housing Markets and Planning Analysis Expert Panel

Factors Affecting Housing Build-out Rates

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The expert panel related to housing markets and planning enhances the CLG evidence base and facilitates the receipt of independent commentary from leading experts on issues relevant to policy formulation. The views expressed in this paper are the views of the authors and do not necessarily represent CLG views or policies.

EXECUTIVE SUMMARY

This report seeks to explain housing 'build-out' rates, by drawing on relevant academic and practice literature, national survey work among 18 housebuilders and a particular local example, where one large site has been developed by ten separate companies. Its main findings are:

- Where land is in short supply and competition between developers is intense, housebuilders must assume the highest possible sale prices in order to make winning bids for land. Such bids are viable only because the release of land is restricted in aggregate terms by the planning system, while the release of houses is managed on a site-by-site basis by builders themselves to achieve the target sales rates underpinning earlier bids for land. Government policy and industry practice have thus combined to encourage developer caution about the ability of local housing markets to 'absorb' new-build supply. This finds expression in unambitious build-out rates.

- Developers with cautious build-rate assumptions will benefit from an advantage in terms of the price they can offer landowners assuming that house prices are rising faster than construction costs and the cost of borrowing. If housing demand changes after the point of site acquisition, most developers are generally reluctant to alter their planned production rates. Whether demand rises or falls, most prefer to alter prices or incentives. Companies generally see production rates as a marginal factor that cannot be varied very far from what was originally planned.

- Housebuilding companies see themselves as interdependent because local markets are viewed as having finite capacity. They therefore engage in extensive 'competitor surveillance' but seem to limit the impact of the information they collect to pricing and minor design decisions.

- Even if substantially more land were to be released by the planning system, it is likely that housing developers will take a considerable length of time before responding by bidding at lower land acquisition prices and building out more quickly.

- A tension may exist between design coding and the normal practice of the housebuilding industry to subdivide and swap large sites. The purpose and nature of design codes probably need to be better communicated if their advantages are to be reconciled with the desire to increase the supply of new-build housing by increasing the number of developers present on large sites.

1. INTRODUCTION

1.1. What determines the speed at which approved housing sites are developed? This is an important policy question, nationally and locally. At the national level, the Government's commitment to see 3 million new homes built in England by 2020 requires the private sector to produce and sell its output at a certain speed. If sites are developed more slowly than this, the Government's target will not be met. At the local level, planning authorities are expected to allocate enough land to enable the houses to be built within the required timescale. But if each allocated site is developed more slowly than the planning authority had assumed, more housing sites may need to be allocated to achieve the required level of development within that timescale. It is therefore essential for the Government to have a much stronger evidence base on 'build-out' rates to inform the decisions it needs to take on the delivery of new housing.

1.2. This research seeks to investigate and explain 'build-out' rates, by drawing on relevant academic and practice literature, national survey work among 18 housebuilders and a particular local example, where one large site has been developed by ten separate companies. In economic theory, a firm determines its optimal rate of production (or level of output) not on the basis of mere logistics (how quickly can inputs be assembled etc?) but critically in relation to the demand for its products. Thus, price adjustments are crucial in bringing optimal average sales rates and optimal average production rates into alignment. This means that to explain 'build-out' rates, we need to look closely at the way in which new homes are priced and marketed, and not concentrate exclusively on the construction process.

1.3. What drives this alignment process between price and quantity? We can immediately think of three competing influences, each of which can be expressed as a formal proposition. These influences are:

- Corporate strategies **within** each firm. Here we can set the proposition that "The price and quantity of output are determined by the interaction of marginal revenue and marginal cost, reflecting firm and market level economic factors." We investigate this proposition in Sections 2 and 3 of the report, where we look in turn at how optimal sales and production targets are determined, and then at how builders react if sales are better or worse than expected.

- Competitor behaviour. Here we can set the proposition that "The price and quantity of output are determined by expectations and knowledge of competitors' behaviour." We investigate this proposition in Section 4 of the report, where we look at the information housebuilders gather on their competitors and their reaction to knowledge that a competing development may soon start close to one of their own developments.

- Government policy. Here we can set the proposition that "The price and quantity of output are determined by public policy and by expectations/ knowledge of future public policy and other institutional factors." We investigate this proposition in Section 5 of the report, where we look at the extent to which public policy constrains the immediate capacity of housebuilders to respond to market changes and the way in which the broader policy context structures their entire approach to price and output setting.

1.4. Section 6 summarises and integrates the evidence from these propositions to reveal the most important factors determining the speed at which approved housing sites are developed and to indicate ways in this might be influenced by government policy.

1.5. The report is based on three main sources of information, each of which feeds into the various sections. Academic and practice-based literature was our first information source. However, while much has been written about the industry in recent years, very little is specifically concerned with explaining 'build-out' rates. So, as our second information source, we decided to conduct a national survey of all 45 housebuilders operating in England and building 250 or more units in 2005 (using the 'Wellings' league tables to identify them). We distributed a standard questionnaire by email and received 18 replies (or a 40% response rate). These replies were broadly representative of the structure of the industry as a whole since they comprised six volume builders (each with an annual output in excess of 2,000 units) seven medium-sized builders (each with an annual output between 501 and 2,000 units) and five smaller builders (each with an annual output between 250 and 500 units). Respondents therefore ranged from, at the top end, two out of the UK's three 'super-builders' (those producing in excess of 10,000 units annually) down to a small private company producing a little over 250 units annually.

1.6. We then undertook detailed telephone interview with 8 of the respondents as well as a face-to-face interview with the HBF in London. The telephone interviewees were again evenly spread by size across the 45 housebuilders operating in England. Our

third information source was the investigation of a specific local example, namely Fairfield Park in Bedfordshire, where from 2004, some ten different companies have worked to develop a large former hospital and its site for almost 1,200 new homes. We undertook telephone interviews with seven of these companies and gathered substantial contextual data on the development from the internet. A brief summary of the Fairfield Park development is included in Appendix 1, but otherwise information from this source, as with the other two sources, is integrated throughout the report.

2. COMPANY STRATEGIES: OPTIMAL SALES & PRODUCTION RATES

2.1. Some economic commentators see fierce competition among housebuilders, while others doubt whether companies really compete at all with each other. Such uncertainty reflects the surprising lack of published material on the microeconomic structure of UK housebuilding, particularly at local market level. Leishman *et al.* (2000)[1] is a rare exception to this, while Ball *et al.* (2000)[2] explain the profitability of publicly quoted construction firms in relation to macroeconomic conditions. There is not much else written academically about competition between housebuilders[3]. This may be because the unusual characteristics of industry, such as the domination of supply by second-hand units, make it hard to analyse. Whether developers really follow 'price signals' is thus worth investigation.

The drivers of housebuilders' initial prices

2.2. We asked the 18 housebuilders surveyed nationally to specify the importance they attached to seven potential sources of information in setting sale prices, on the scale from 1 for 'no importance at all' to 5 for 'absolutely important'. The results (shown in Table 1) indicate that developers pay most attention to past sales evidence, recent market research, and the views of local estate agents. In contrast, relatively low importance is placed on information from local authorities and others in the industry. It is perhaps surprising that housebuilders do not make greater use of the key position of planning authorities in understanding local supply.

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[1] Leishman, C., Jones, C. and Fraser, W. (2000) The influence of uncertainty on house builder behaviour and residential land values, *Journal of Property Research*, Vol. 17, No. 2, 147-168.

[2] Ball, M., Farshchi, M. and Grilli, M. (2000) Competition and the persistence of profits in the UK construction industry, *Construction Management and Economics*, Vol. 18, No. 7, 733-745.

[3] We note in this context the study currently underway by the Office of Fair Trading.
See: http://www.oft.gov.uk/advice_and_resources/resource_base/market-studies/home

Table 1: Mean Developers' Ratings of Factors Used to Set Prices				
	Importance Attached on Scale from 1 to 5			
Potential information source	*All respondents*	*Volume developers*	*Medium-sized developers*	*Smaller developers*
Recent sales experience on company's own sites	4.6	4.8	4.1	4.8
Market research specifically commissioned by company	4.6	4.0	5.0	4.8
Sales data about competing developments	4.3	4.2	4.0	5.0
Reports from, and discussion with local estate agents	4.0	3.3	4.4	4.2
Online price databases, such as Hometrack	3.2	3.3	3.0	3.2
Information from local authority, e.g. on potential competing developments	2.6	3.0	2.3	2.6
Informal discussion with industry colleagues, including those in other companies	2.3	1.7	2.3	3.2

Optimal build and sales rates

2.3. How do developers use this information to set prices? Are price changes applied as a means to speed up or slow down sales rates? In the questionnaire, we asked housebuilders to tell us the optimal average sales rates for two typical large developments, one greenfield and one brownfield. The results, shown Tables 2 and 3 below, generally confirm the anecdotal and literature evidence that the typical housebuilder aims to build and sell one unit a week

Table 2: Optimal Average Sales Rate: Greenfield

Typical 200 unit Greenfield Development comprising mainly 2, 3 & 4 Bedroom Houses

Sales rate	*All respondents*	*Volume developers*	*Medium-sized developers*	*Smaller developers*
1 per 2/3 days	2	0	0	2
1 per week	8	2	5	1
1 per 10 days	5	1	2	2
1 per fortnight	0	0	0	0

***Note**: Not all respondents answered this question but all who did not offered a written response to an open-ended question element. Table.4 considers all 18 responses.*

Table 3: Optimal Average Sales Rate: Brownfield

Typical 200 unit Brownfield Development comprising mainly 2, 3 & 4 Bedroom Apartments

Sales rate	*All respondents*	*Volume developers*	*Medium-sized developers*	*Smaller developers*
1 per 2/3 days	1	0	0	1
1 per week	7	2	3	2
1 per 10 days	3	0	2	1
1 per fortnight	0	0	0	0

***Note**: Not all respondents answered this question but all who did not offered a written response to an open-ended question element. Table 4 considers all 18 responses.*

2.4. Although inferential statistics cannot be drawn from only 18 responses, we were able to impute annual sales rates, using the open field information given by respondents who did not choose one of the pre-defined answers in Tables 2 and 3. These figures, (summarised in Table 4) suggest an average optimal sales rate of about 59 units per annum for greenfield houses and 67 for brownfield apartments. The practicality of apartment construction normally makes it impossible to 'drip feed' the market or to achieve a slow trickle of sales. With more capital employed, speedy construction and sales are essential to contain exposure to borrowing. Interestingly, volume developers seem to build apartments faster than smaller and medium-sized developers, though sample size prevents testing this for statistical significance.

Table 4: Imputed Annual Optimal Sales Rates				
Optimal annual rate	*All respondents*	*Volume developers*	*Medium-sized developers*	*Smaller developers*
Greenfield housing	58.61	55.83	45.71	80.00
Brownfield apartments	67.18	81.33	54.14	68.75

2.5. Most builders generally appear to set a target of between 40 and 80 units built and sold from each outlet annually. One volume builder thought that annual rates of 150-200 would not impose significant inefficiencies. However, he added that it would be impossible to sell houses at this rate without building in a well-defined urban market and offering a range of well-differentiated products. Later on, we explain why builders become 'locked in' to relatively unambitious build targets.

Market capacity and absorption

2.6. The research confirmed that the main reason why large development sites are split between builders is to improve the sales rate, rather than to make construction more efficient. As one interviewee put it: *"It's less about build rates and more about sales rate. By putting more than one builder on a site, you are offering more choice to the consumer, therefore opening the site up to more potential customers."* Most interviewees attributed the consequent improvement to the additional overall spend on marketing (with the benefit of critical mass effects) along with the attractions of product differentiation. Some thought the practice of splitting or trading sites between developers also achieved a faster return on capital employed. Furthermore, as Fairfield Park showed, splitting can be a risk reduction strategy that limits exposure to particular locations. Splitting a large site between different brands of the same company was generally thought to achieve some, but not all, of these advantages.

2.7. Most companies thought market areas have finite weekly sales rates, which can make developers more cautious about targets on split sites. One smaller developer felt that: *"Too often the different brands/products are aiming at the same market sector so diminishing returns arrive rapidly."* He highlighted a 1,200-unit scheme in southern England, where several developers all built similar family-type housing, arguing that *"The market was swamped and sales virtually ground to a halt. To gain maximum advantage from splitting, products on adjacent sites should be quite distinct"*

2.8. Some interviewees considered that the finite nature of sales at any one location makes developers there more aware of their immediate competitors. But others thought that individual builders can be imprudent when setting targets in growth areas, if they do not fully appreciate how the combined production of several companies at a single location can exceed the absorption capacity of the local market. Although a mixed picture emerged, it revealed some important aspects of market operation: (a) housebuilders recognise some interdependence in terms of their output levels; (b) they regard local housing markets as having a limited capacity to absorb new-build supply and; (c) they can be cautious about too many builders operating at one time in a locality.

2.9. The theory of oligopoly, with its notion of 'kinked demand curves', can shed some light on these insights. It is assumed an industry comprises a small number of large competing firms: maybe 5-10. If no firm's product is unique, they will all compete for market share on the basis of price alone, so making their pricing strategies interdependent. This gives the appearance of collusion because firms follow each others' price changes. The market for the supply of petrol illustrates this well. Suppliers generally resist price changes until one company imposes a cost-driven price increase, then most other suppliers follow suit.

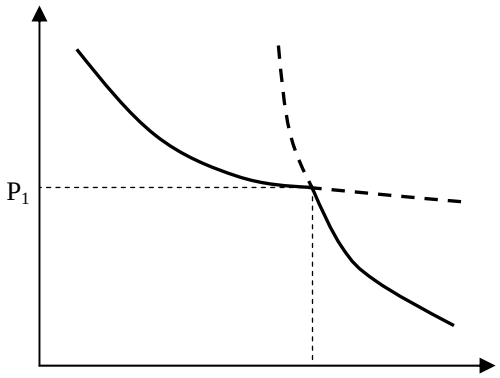

Figure 1 – The kinked demand curve

2.10. As a result, a kinked demand curve is derived from two different demand curves, each of which summarises the industry response to a single firm's price change. This is shown in Figure 1. A rise in prices is not mirrored by other players in the industry and so is associated with a significant loss of market share. Meanwhile, a price cut causes a price war and results in only a small rise in market share for the price-cutting firm.

2.11. The predictions of the kinked demand curve hypothesis appear closely to mirror the attitudes revealed by many of the housebuilders interviewed. These recognise that the dominance of the second-hand market limits an area's ability to absorb new-build supply. This sets up a 'zero sum game' in which developers compete on price to take market share, but the total size of the new-build market is effectively pre-determined by the size of the second-hand sector. It follows that an uneasy equilibrium emerges, in which developers cannot raise prices very much without losing substantial market share (either to competitors or to the second-hand sector). Cutting prices simply leads to retaliatory action from competitors, while the size of the new build sector remains largely unchanged.

2.12. Fairfield Park reveals more about this. Housebuilders there saw some economies of scale from the involvement of several companies (more prospective buyer visitors, shared marketing and so on). However, some respondents thought the prescriptive design guidance had narrowed the developers' market offering (see Section 5). This implies that major developments cannot sustain too many builders when firms have insufficient control over development mix and specification. Fairfield Park also reaffirms the idea that local markets are associated with finite capacity or potential maximum weekly sales rates. As more developers are introduced to a given locality or site, sales rates may suffer if developers do not retain the ability to differentiate their product through control over design and specification.

2.13. Several developers indicated that larger developments do not have any real efficiency advantage compared with smaller ones. Other respondents saw limited advantages in spreading the fixed costs or overheads over the larger number of units associated with larger sites. These mixed results may suggest that the economies of scale are modest, and only a marginal influence on overall production costs. The qualitative results did contain some recognition that smaller sites are riskier because construction costs, sales revenue or mistaken sales rate assumptions are, by definition, more difficult to remedy when the development is small in scale.

Summary of evidence on optimal sales and production rates

2.14. The evidence above is one of an uneasy equilibrium in which developers see themselves constrained by local market capacity. Crucially, a rise in housing demand can lead to a rise in prices but not necessarily an increase in the rate of new-build absorption. While developers appear to be competitive to a point, they show evidence of tacit interdependence. When too many developers are operating in one area, then

their collective supply begins to approach the finite rate of absorption and each developer's actions may become influenced by those of competitors. Significantly, the main prediction from this research is that developers will compete for market share based on output pricing. As the next section thus demonstrates, when demand changes, companies are thus generally keener to adjust price than output. Each developer may lose share by raising prices but fail to gain by cutting prices.

3. COMPANY STRATEGIES: REACTING TO MARKET CONDITIONS

Pricing behaviour

3.1. This section examines how developers respond to unexpected or changing market conditions. Simple economic theory might predict that market price will fall if demand is weaker than expected, as firms compete more fiercely to sell output. Since the second hand market is far larger than the new-build sector, if housing demand falls generally, this will impact disproportionately on the new-build sector, since builders will need to make significant price cuts to ensure market clearing. However, the lengthy development process also means that price responses may differ between projects still in preparation and those already on site. Developers' decisions about production rates are not as easily predicted as pricing decisions but a simple theoretical expectation would suggest that production rates will increase when demand rises and decrease when it falls. Exceptions to this basic rule may arise if producers look closely at how fast or slowly demand is changing in any direction, in order to anticipate market conditions by the time development is actually completed.

3.2. The research examined developers' pricing and output decisions in some detail. Most developers claim to review prices and incentives weekly or fortnightly. They generally release a small number of houses at a time, with actual sales evidence then used to fine-tune pricing. One interviewee also suggested that releasing units in small phases psychologically encourages buyer commitment before possible price rises. Deliberate under-pricing appears rare, although it can be used to stimulate initial demand. However, substantial discounts may be offered for bulk investor purchasers of urban apartments, which reduce the developer's risk by providing immediate cash and a pre-sale of up to 20% of units.

3.3. If market conditions and sales prove worse than expected, developers tend first to rethink their product specification and marketing strategies. One developer at

Fairfield Park commented: *"We spec up our houses: we put in the granite worktops, really nice kitchens and we look at what other competitors do. These are the crucial things, kitchens and bathrooms - upgrade them and up-spec them and you'll be in front of the pack."* Alongside this, sales teams may be changed or monitored more closely. Crucially, incentives (such as paying stamp duty for the buyer) will be offered and well advertised. As a last resort, actual prices may be cut. Significant changes to the rate of construction are avoided, unless all efforts to stimulate demand fail. In any case, one interviewee suggested the speed of construction is really only variable by around 10% either way for houses and hardly at all for apartments.

Production rate behaviour

3.4. We probed the potential constraints upon developers' ability to respond, in the short term, to a rise in housing demand, by asking the 18 housebuilders surveyed nationally what factors might prevent them speeding up construction of a 200 unit development in response to better than anticipated market conditions. For each factor, respondents were asked to select a number from 1 for 'likely to be virtually insignificant as a constraint upon increased production' to 5 for 'likely to be highly significant as a constraint upon increased production'. The overall results are shown in Figure 2

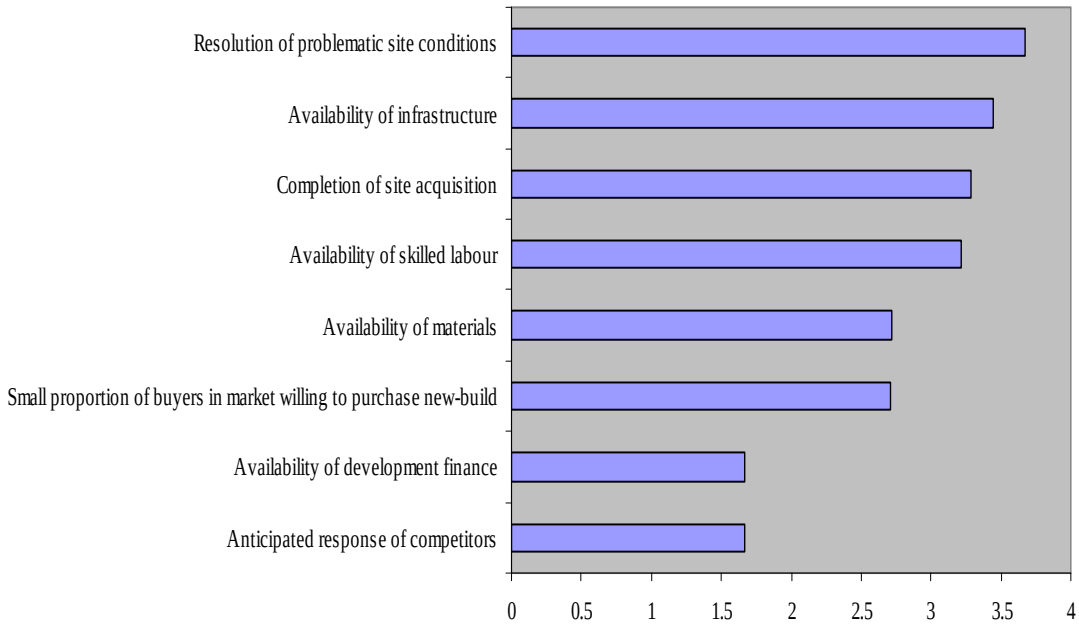

Figure 2: Importance of constraints to raising build rates in the short-term

3.5. These are important findings because they suggest that, although there are some logistical constraints on short-term increases in production, they are certainly not overwhelming. The results are shown in more detail in Table 5. 'Completion of site acquisition' was the most frequent (modal) response, although 'resolution of problematic site conditions' had the highest mean score. Responses to the latter were thus more consistent. Although many developers rated 'completion of site acquisition' highly as a constraint, some thought it quite unimportant, reducing its mean score. Other potential constraints of note were 'availability of infrastructure' and 'availability of skilled labour', though none approached a highly significant level.

Table 5: Significant Constraints on Raising Build Rates

Constraint	*Mean*	*Mode*			
	All developers	*All developers*	*Volume developers*	*Medium-sized developers*	*Smaller developers*
Resolution of problematic site conditions	3.67	3	3	5	4
Availability of infrastructure	3.44	4	1	4	4
Completion of site acquisition	3.29	5	1	5	5
Availability of skilled labour	3.22	3	2	3	4
Availability of materials	2.72	2	1	2	3
Small proportion of buyers in market willing to purchase new-build	2.71	1	1	2	1
Anticipated response of competitors	1.67	1	1	2	1
Availability of development finance	1.67	1	1	3	1

Balancing production and price changes

3.6. A key reason why developers are generally unwilling, or unable, to vary production rates is that the assumed (or target) sales rate is of critical importance in determining each developer's land acquisition bid. Once land is purchased, the assumed rate become essential to deliver, so action is centred on ensuring that set targets are met. Developers are particularly sensitive to debt and appear much more willing to reduce prices or offer incentives than build more slowly. Equally, when sales rates are better than anticipated, prices are quickly increased or incentives dropped to bring the sales rate back on target, with the benefit of additional income beyond that forecast at the time of land purchase. Table 6 indicates builders' reactions when sales rates are better than expected. Interestingly, no developers would simply increase the construction rate, when the market improves. Some raise prices alone, but most do this alongside an increase in the construction rate. Although the research did not allow us statistically to test the relative weight of these two responses, previous analysis would indicate the prices are likely to be raised proportionately more than the construction rate. Indeed, the detailed interviews strongly indicated that, of these responses, price is universally seen as the more flexible. Developers willing to speed up construction generally saw this as a marginal reaction and secondary to price.

Table 6: Developers' Stated Responses to Higher than Expected Sales Rates

Stated likely response	*All respondents*	*Volume developers*	*Medium-sized developers*	*Smaller developers*
Increase prices	6	1	3	2
Increase construction rate	0	0	0	0
Increase both prices and construction rate	11	5	4	2
None of the above	1	0	0	1

3.7. As Table 7 shows, developers' responses are less homogeneous in relation to likely reactions when sales rates turn out worse than expected, but again, changing the rate of construction alone is a rare response.

Table 7: Developers' Stated Responses to Lower than Expected Sales Rates				
Stated likely response	*All respondents*	*Volume developers*	*Medium-sized developers*	*Smaller developers*
Decrease prices	6	1	3	2
Decrease construction rate	2	2	0	0
Decrease both prices and construction rate	9	3	4	2
None of the above	1	0	0	1

3.8. Further insights are gained from an analysis of the responses to the associated open-ended part of the questionnaire. The responses to this question were not limited, i.e. a given respondent could list several different courses of action. As Table 8 confirms, changing marketing efforts is the most frequently cited example of other forms of action likely to be taken in response to poorer than anticipated sales rates. This is followed equally by changing the specification and incentives. These responses very much reinforce the emphasis of interviewees on improving sales during difficult times rather than slowing down construction or adjusting target sales rates.

Table 8: Developers' Open-Ended Responses to Lower than Expected Sales Rates				
Stated likely response	*All respondents*	*Volume developers*	*Medium-sized developers*	*Smaller developers*
Change marketing	10	5	3	2
Change specification	7	4	1	2
Change incentives	7	3	1	3
Improve or test sales staff	4	3	1	0
Sell plots to RSL or increase affordable housing	3	1	1	1

3.9. Fairfield Park provides further evidence of developers' responses when the pricing and sales rate assumptions prove to be unfounded. One developer had misjudged the local market, despite having apparently carried out significant market research prior to purchase. When the actual sales rate fell well below the anticipated sales rate, the developer effectively financed a reduction of asking prices through the sale of land parcels. This logic suggests two possible scenarios: (a) that land prices rose during the development (despite demand not rising enough to grant a higher sales rate to this developer); and (b) that reduced sales revenue much better than failing to achieve sales rates. The logic applies more to houses, which are generally released several units (5-12) at a time, than to flats, which are often released on a larger scale (up to 300 in a single release).

3.10. So far, it may appear that developers respond paradoxically to unexpected or changing market conditions. Simple theoretical analysis suggests an improvement in demand should cause production to rise. Yet, developers appear most reluctant to vary planned build rates and, instead, work very hard to deliver the build rate assumed at the point of land acquisition. The simple model, however, omits two critical factors: (a) housing developers operate jointly in at least two markets (housing and land markets) and; (b) while land prices are set the time of acquisition, construction projects play out over potentially much longer time periods and key development variables (such as house prices) can change markedly over these periods.

3.11. If we assume that house prices grow faster than construction costs, and also cover any additional borrowing, then there is a net financial pay-off in adopting a lower planned build rate. Or to put this another way, builders assuming low (but still technically efficient) production rates will be able to win sites in the land bidding process. To demonstrate, Figure 3 sets out an index of simulated development net present values (NPVs) assuming a 200 unit site, price growth of 15%, cost growth of 3% and 9% cost of borrowing per annum. Although these are assumed or hypothetical figures, the simulation demonstrates the likely effect when rates of house price growth exceed cost inflation and the cost of borrowing – there is an incentive for developers to assume lower production rates. In a competitive land market, developers with a low (but still efficient) assumed build rate should tend to win sites more often.

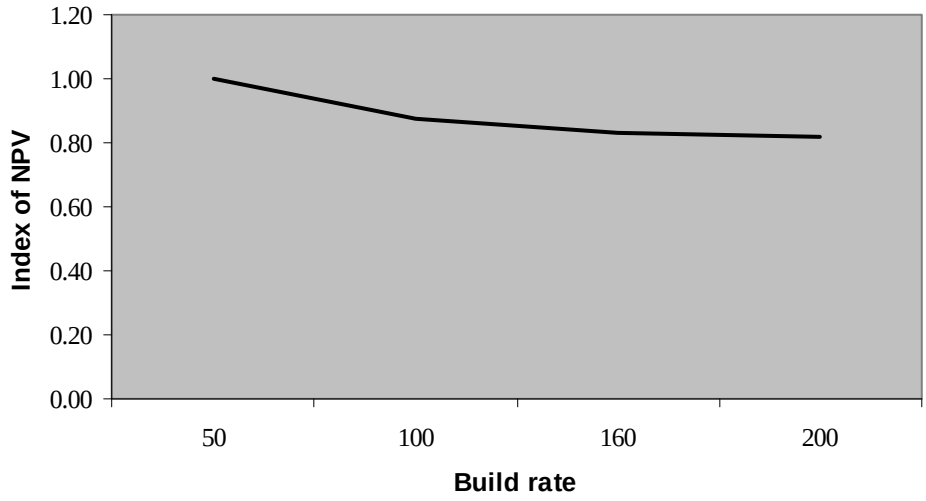

Figure 3: Simulated NPVs (a proxy of land value) in relation to build rate

Impact of reduced credit availability

3.12. The recent difficulties in the availability of finance (including mortgage finance) yield an interesting opportunity for gauging the reactions of housing developers to a sudden change in demand. This interview question also made it possible to explore developers' views about their own ability to change production rates both of projects in progress and of those still in preparation. Reactions to the 'credit crunch' questions reaffirm the idea that the construction process is difficult to stop or alter once in progress. Many responses suggest that developers will continue with developments that have started, but may have to review pricing. Developments yet to begin may be delayed or suspended if market conditions become worse.

3.13. One respondent indicated that a large proportion of their buyers were armed with significant equity and considered that this would dampen the effects of the credit squeeze. Other responses highlight the importance of the first time buyer market (although they buy relatively small / less expensive houses / flats, it effectively kick starts the house buyer chain). One of the respondents suggested that developers are now asking for larger deposits (25%) from first-time buyers, particularly on urban developments. There is a suggestion that this reduces risk to the developer, but exacerbates the credit squeeze, because it means a requirement for more liquidity from those at the bottom of the ladder. This respondent estimated a 15-20% drop is sales compared with a year ago.

4. REACTING TO COMPETITOR BEHAVIOUR

4.1. Competition between housebuilders is at its most intense in the acquisition of land. Yet to compete effectively for land, housebuilders must be confident that the price and specification of their intended products will enable them at least to match the revenue performance of similar housebuilders. As a result, the industry is characterised by extensive 'competitor surveillance' in which each company monitors its rivals not merely on the basis of annual results but also in relation to the comparative performance of neighbouring developments.

4.2. This is well illustrated by the comment of one of the Fairfield Park housebuilders, when asked how much interest they took in the sales rates achieved by other builders on the development:

"It's really just gauging the competition on the park. Simplistically if you're on a large development, and we're on a couple, if there's eight show houses and on a weekend everybody has had fantastic visitors and you've had none, your sales team will be saying what are we doing wrong? Is the signage right, have we got the right product, is our advertising right? We'd look at things like that. And again on reservations, if at a weekend everybody had taken reservations and you hadn't, is it that you haven't got the same product, is it that your price is too high, is it your specification that's wrong?"

4.3. Over what distance does 'competitor surveillance' of rival developments extend? We asked the 18 housebuilders surveyed nationally to specify the typical distance in miles to what they would normally consider the furthest likely competitor for seven different types of development. The results are set out in Table 9, which shows a clear distinction between urban and greenfield sites. It is apparent that within cities, housebuilders generally see potential competition as contained within a distance of two to four miles as compared with six to eight at greenfield locations. In both cases, this suggests that housebuilders may define local housing markets more narrowly than in previous research.

Table 9: Perceived Competition Limits for Individual Developments		
Development Type	***Miles***	
	Mean	*SD*
Apartments in outer London	2.40	2.79
Apartments in outer London	3.88	3.48
Apartments in major provincial city centres	2.73	2.48
Apartments within major provincial cities but beyond the city centre	3.37	2.54
Houses on greenfield sites on the edge of major provincial cities	6.00	3.96
Houses on greenfield sites on the edge of small and medium-sized towns	5.62	2.78
Houses on greenfield sites in mainly rural areas	7.97	4.09

4.4. Within this distance, developers keep a continuous watch on potentially competing sites to ensure that their own developments are advantageously placed in the local market. All 18 housebuilders collected data on three important aspects of rival developments, namely:

- Total house/unit production
- Subdivision by house/unit type
- Selling prices

4.5. Additionally, two-thirds of the housebuilders gathered information on production rates at competing developments and slightly under half did so for sales rates. Some went even further, obtaining schedules and measuring up the square footage or analysing the various incentives offered by competitors. We investigated the extent such detailed knowledge of competitor behaviour persuades developers to re-think their own strategies. Specifically, we asked the 18 housebuilders for their likely reaction to the news that that a competitor had secured planning permission in the locality for a similar development to their own. Although builders were asked to consider this under two different scenarios (first, if they were already on site and secondly, if they were almost ready to start on site) the answers given did not vary significantly between these circumstances.

4.6. The overall picture was one of only limited immediate reaction to news of additional competition. As one of the UK's largest housebuilders commented: "*We would gather*

competitor information and continuously monitor the situation. In practice, our response would be dependent upon the type of development receiving planning permission and its timescale and degree of similarity to our own product and service offering." Overall, on the scale from 1 for 'not at all likely' to 5 for 'highly likely', few housebuilders believed the prospect of more competition would cause them to delay starting on site (mean score of 1.76), to change their development mix (mean score of 1.82 under the first scenario and 1.94 under the second) or to build faster (mean score of 2.17 under the first scenario and 2.24 under the second).

4.7. Two main explanations were offered for this apparent complacency. First, the timescales from receipt of planning permission to house completions were seen to provide a certain 'breathing space' of perhaps six months before the competitor would begin marketing and nine to twelve months before any houses would be ready for occupation. Secondly, and perhaps more significantly, several companies expressed strong confidence that their own products would appeal more to customers than those of any competitors.

4.8. As one major company explained: *"Each housebuilder tends to think their products are better than the competition."* Another's general reaction to increased local competition would be generally "*to get on with the job*" in the view that "*its product is superior"*. A medium-sized housebuilder put this view perhaps more colourfully, saying that he would be *"somewhat smug that the area is sufficiently strong to take another development and that my scheme will take the 'cream' of the demand."* Behind these comments may lie the industry's widespread reluctance to depart markedly from construction programmes, once agreed and underway. Additionally, some firms see real marketing advantages in greater competition, especially where large sites are split up among several builders. As one commented: *"The overall number of units will increase because there is more than one company selling, multiple lots of advertising and more customers getting into the site. Marketing factors are central and by dividing up a site you get a greater exposure to the public"*

4.9. There was thus no evidence in the research to support the contention, mainly from the American literature on real estate option pricing, that uncertainty about competition causes firms to wait until more information is available. Indeed, almost the reverse was true - illustrated by the one firm whose reaction to increased potential competition would be to accelerate the production of show units and by another who would focus on speeding up the rates of sales. Thus, on the scale from 1 for 'not at all likely' to 5 for 'highly likely', the most likely action housebuilders take to news that a

competitor has secured planning permission in the locality for a similar development to their own would be to change prices, which received a mean score of 2.44 if the builder was already on site and 2.53 if work was almost ready to start. Even so, at these scores, the likelihood of immediate price change in response to the threat of competition is still low. This suggests that when competition is perceived to be distant in time or space, it has little immediate impact on the plans of other housebuilders.

4.10. Fairfield Park presents a distinct contrast to this general picture, as competition there has been immediate in both time and space. Although originally conceived as a development by five or six builders, this number grew to ten (one of which sold under two different brands), as slow early sales persuaded one of the original companies to sell off large areas to other builders. Some of the builders responsible for relatively small parts of the overall development claimed not to have been unduly worried by the increased competition. One commented: *"From our side because we only had a small number of units and because the site was so tight, we could only really build it in one way. So it didn't really affect us."* Another involved in the refurbishment of the original hospital itself considered that *"Mostly, other people were building large detached units, (ours) were little ones, small site with new builds and refurbs on it. So we didn't think we'd be competing with the rest of the development really."*

4.11. A contrasting view came from one of the larger contributors to Fairfield Park, who developed around 130 homes over a four-year period. This particular developer who had been involved in the early planning for the development and who achieved a consistently good annual sales rate, watched with some dismay as the development was parcelled out into more than twice the number of companies than originally intended. The developer commented that as a result *"It just became a bit more competitive. You've obviously got ten or twelve developers on the site fighting for the same sales basically. And it tends to make the properties less unique. In some cases, and we didn't do this because we retained our spec and we hung fast to the concept for the development we had at the beginning, but a lot of people stripped out the spec and dealt on price and I felt that was a shame."* So, at least some of the larger developers at Fairfield Park appear to have become more 'hungry' as a result of increased local competition and to have sought ways to trim prices. As the next section indicates, where specification changes would have had an external impact, builders met resistance from the local planning authority. It is therefore likely that specification changes induced by competitive pressure on price primarily affected internal quality and layout.

4.12. While the research suggests extensive 'competitor surveillance' in the housebuilding industry, its immediate impact appears to be limited to marginal changes to price and quality rather than to output. What is unclear, however, is the extent to which 'competitor surveillance' feeds through in the longer term to builders' strategic decisions on product design, output levels and location preferences. Indeed, whether or how firms make any strategic use at all of tactical information collected on competitors on the local level is a matter yet to be resolved.

5. GOVERNMENT POLICY

Housing land release

5.1. There is an extensive literature on the relationship between house prices and the amount of land released for new housing by the planning system. Many of the housebuilders who responded to the research took the opportunity to argue for the planning system to release substantially more land for housing development. One medium-sized builder expressed this view vociferously:

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

5.2. How would production rates really respond to expected or actual shifts in land supply? Since predicting actual behaviour in the abstract is notoriously difficult, the findings below should be regarded as no more than indicative of how builders think they might react to changed policy circumstances. To this end, five specific scenarios were constructed to encapsulate possible policy changes

- Scenario A: The Government reduces the national brownfield target from 60% to 50%. Respondents were asked what impact they thought this would have on the speed at which the 3 million new homes the Government wants to see built in England by 2020 are actually constructed.

- Scenario B: It is known that a particular local planning authority intends to allocate significantly more land for housing development over the next ten years. Respondents were asked how they thought this might affect the rate of production on those sites in its area where housing development by their company is already underway or is about to start.

- Scenario C: It is known that a particular local planning authority intends to allocate significantly less land for housing development over the next ten years. Respondents were asked how they thought this might affect the rate of production on those sites in its area where housing development by their company is already underway or is about to start.

- Scenario D: The company's regional land bank increases as a result of planning approvals or land acquisitions elsewhere. Respondents were asked how they thought this would affect the rate of production on those sites within the region where housing development by the company is already underway or is about to start.

- Scenario E: The company's regional land bank decreases. Respondents were asked how they thought this would affect the rate of production on those sites within the region where housing development by the company is already underway or is about to start.

5.3. The 18 housebuilders completing the national survey were given a choice of five alternative responses to each scenario, as the results in Table 10 show.

Table 10: Perceived Impact of Alternative Policy Scenarios on Housing Production

Perceived impact on production	***Scenario***				
	A	*B*	*C*	*D*	*E*
Significantly speed up rate of production	5	2	0	3	0
Marginally speed up production	6	8	2	3	1
No impact	5	8	15	12	14
Marginally slow down rate of production	1	0	0	0	1
Significantly slow down rate of production	0	0	1	0	2

5.4. The results suggest that only two of the five scenarios (A and B) are considered likely to have any real impact on production rates. Scenario A would significantly shift the balance of housing development to greenfield sites by reducing the national brownfield target to 50%. Respondents were asked to ignore any difference in the speed of planning decisions between brownfield and greenfield land. It is therefore likely that the responses to Scenario A primarily reflect the perception that development as a whole is less complex at greenfield than brownfield locations.

5.5. Scenario B involves a significant increase in overall land supply rather than in the proportion captured by any one company (which is dealt with by Scenario D). Although most respondents thought production rates would increase if there was significantly more land made available in a locality, it is noticeable that very few felt this would be significant. This suggests a more complex relationship between overall land supply and production rates than implied by some commentators. For example, if significantly more land is made available in any locality, competition among builders for each site should become less fierce. It may, however, take some time for landowners to accept that such a fundamental shift has taken place in the balance between demand and supply and accept lower real land prices.

5.6. One housebuilder interviewed for the research certainly considered that planning policies had raised landowners' expectations, even to the detriment of housing quality. He thought that local planning authorities should seek to reduce landowners' expectation of value. He added: *"To boost land value we try and get as many houses on a site as possible which automatically brings us into conflict with the local planning authority. By increasing land supply, land values would drop and be able to generate layouts that were more compliant with LPA's in the first place."* This reinforces the earlier comments that where land is in short supply and competition between developers is intense, housebuilders must assume the highest possible sale prices (and thus gross development value) in order to make winning bids for land.

5.7. Ironically, such bids are viable only because the release of land is restricted in aggregate terms by the planning system, while the release of houses is managed on a site-by-site basis by the builders themselves to ensure the achievement of the target sales rate underpinning the earlier bid for land. Even if substantially more land were to be released, some considerable time may need to elapse before housebuilders were confident enough to bid for sites at the lower gross development values needed to sustain increased production rates site by site over the long term.

5.8. Alongside specific complaints about overall land supply, other aspects of the planning system perceived by housebuilders to have a constraining effect on the rate of production included the level of professionalism of officials and councillors, insufficient delegation to officials, resources or staffing levels in local government generally, and cultural attitudes or values of planning officials. These matters were all beyond the ambit of the research and were not explored in any detail.

Changing the development mix

5.9. On large estates, a common past practice among housebuilders was to review the market performance of earlier phases and to 'remix' later phases according to the house type which appeared most in demand. One of the interviewees neatly summarised how this happened:

"When I started in this industry 20 years ago, if the market wasn't as expected you could quickly do a remix in a couple of weeks, but now you just aren't allowed to do this. You don't get any preferential treatment in the planning system and it could take six months and by the time you've got your remix, the market might have changed again back to the original mix, so it's something we don't do as a company."

5.10. There appear to be three important policy issues here. First, virtually all the housebuilders who commented on current remix practice reported that local authorities now generally require a new planning application for even the smallest change, rather than a variation to an existing permission. It was unclear whether this was the result of change to planning law or practice. Most housebuilders, however, thought it was connected to the need for planning authorities to maximise their fee income or achieve speedy decision targets.

5.11. Secondly, and as a direct result of the more formal approach now taking by planning authorities to remixing, it is evident that once housebuilders are on site, they generally cannot afford the decision time now required for any variation. As one interviewee explained, since housebuilding is a 'cashflow' business, no interruption to the continuity of construction can be tolerated. As there is no time to wait around for planning authorities to agree variations, few requests are made to change the mix or density of development once work has started.

5.12. Thirdly, and again associated with the more formal approach to variations, if requests are made by developers, they tend to be concentrated on less controversial aspects of

remixing, such as reducing rather than increasing density in response to changed market conditions. A related comment concerned the new urban design agenda, which housebuilders believed now required so much information at outline stage, that production on large sites was effectively locked into a particular development form for many years ahead, irrespective of any change in market conditions.

Design codes

5.13. One fascinating aspect of Fairfield Park is its development to a strict design code, which has ensured a 'Victorian-style' appearance throughout the whole estate. By coincidence, the application of this code at Fairfield Park has already been the subject of CLG commissioned research[4]. Our concern here is with the sales and production aspects of this design code.

5.14. On the sales side, housebuilders reported that the design code has, in one sense, widened, but in another, narrowed, the target audience. On the positive side, the 'Victorian-style' created what separate builders described as a *"lifestyle feel"* with a strong *"overall brand"*. This made the development more attractive to those buyers who would not normally consider newly-built property. As one company discovered: *"We did have a lot of people who had only lived in older houses who got to Fairfield and they were quite impressed with the fact that they had actually felt they had been able to change their minds on it - because we offer something of the qualities and the properties of Victorian properties but without the maintenance aspects."* Another commented that: *"Normal second hand buyers are more attracted by it because they can see the finished established development. The Victorian architectural style which was imposed by the planners actually helps because we developed houses that actually look old and come with character."* However, on the negative side, the same builder added that *"I think the concern is that by having a defined product almost designed by the planners across the development, it meant that each of the builders was building very similar products to each other."* In other words, the design code removed one of the marketing advantages of splitting a large development site into different outlets by limiting the opportunity for the various developers to offer quite different products to the market.

[4] Department of Communities and Local Government (2006) *Design Coding in Practice: An Evaluation*, Report prepared by the Bartlett School of Planning, University College London and Tibbalds Planning and Urban Design, DCLG, London.
Available at http://www.communities.gov.uk/publications/citiesandregions/designcoding2

5.15. One of the early developers overestimated the sales advantages of the estate's 'Victorian-style' appearance and underestimated the cost implications, discovering that *"The styles were extremely expensive and difficult to build."* Land was sold on to other builders, who appeared not to have understood the full implications of the design code. One company who as a result bought land in Fairfield Park already with full planning permission and constructed units as previously designed encountered real problems in adapting to a very different type of construction than normal. It reported:

"*We bought the package as I said from the other company and we didn't look at them as we probably should have done before we started. And so there were a lot of design faults and errors that we had to overcome. And they weren't straightforward typical boxes there; there was a lot of detailing in the brickwork and in the roofs and how they all joined together. I'm sure you've seen the plan of the site but they are all terraces and different storey heights and they're all that sort of detailing which we were lacking when we started the job. And so then we only really found that out when we hit the issues and our time to resolve them took longer than we needed them to."*

5.16. Other new entrants tried, mostly in vain, to secure departures from the design code (the full implications of which they claim not to have appreciated on purchase). When such attempts proved unsuccessful, they appear to have turned to cutting internal costs to compete on price. One of the original developers bemoaned the diminution of the overall Fairfield Park brand as the estate was split into more than twice the numbers of builders originally envisaged. This company's representative commented that:

"I felt that a lot more developers had come in and were working to their own brand and their own agendas and therefore the overall brand of Fairfield Park we had set out to achieve had been lost. And for me this cheapened the brand i.e. a lot of the controls we set up right at the beginning at the early outset as to how we saw it running, how it was being managed so as to maintain that nice quality feel had been lost. The more house builders that come in, they've got loads of agendas. If they're not part of the initial consortium buying into what we are all about then they're not interested."

5.17. In summary, then, while the design code has marketing advantages and disadvantages, its cost implications appear not to have fully appreciated by developers bidding for (parts of) the site. Moreover, the integrated vision for Fairfield Park, described by one of its pioneers as an overall brand, came under threat as the developable areas were

split into more parcels than originally anticipated. A tension may therefore exist, at least in the short to medium term, between design coding and the normal practice of the housebuilding industry to subdivide and swap large sites between different builders. The purposes and nature of design codes probably need to be better communicated if their advantages are to be reconciled with the desire to improve 'build-out' rates by increasing the number of developers present on large sites.

6. CONCLUSIONS AND RECOMMENDATIONS

Conclusions

6.1. What determines the speed at which approved housing sites are developed? This report provides three linked answers to the central research question. The answers concern corporate strategies (Sections 2 and 3), competitor behaviour (Section 4) and government policy (Section 5).

6.2. The typical strategy of most companies who participated in the research was to aim for a build and sales rate of about one unit per week on greenfield sites and slightly higher than this on brownfield sites. Although this confirms anecdotal evidence, it should certainly not be taken as a 'natural build-out rate'. Rather it reflects the particular institutional structure of the British housebuilding industry in which fierce competition for land then requires controlled and phased release of new development to ensure that the ambitious development values necessary to capture land in the first place are actually achieved when new homes are eventually sold.

6.3. Competitor behaviour appears to have a marginal impact on the price and quality of products offered at particular development sites, though not directly on the speed of production. Although 'competitor surveillance' is certainly importance at the tactical level, its strategic impact is unclear. If individual companies become over-confident in the sales potential of their own products, increased local competition may actually lead to short-tem over production.

6.4. Government policies that restrict the supply of land encourage housebuilders to manage the release of newly-built homes to achieve maximum possible sale revenues. Housebuilders believe that the reluctance of local planning authorities to vary planning approvals once granted restricts their ability to respond to changing market conditions during the construction process and thus to some extent, acts as a

constraint on ‘build-out’ rates. The appraisal implications of more demanding urban design policies appear mixed and as yet, not well understood by the industry.

Recommendations

6.5. Action already in hand to ensure a more effective supply of housing land, if seen as a permanent shift by landowners and developers, may in time enable and encourage the industry to ‘build-out’ at a faster rate than has been the case in recent years. While we consider that such action needs to be carried through and indeed reinforced, we see no case to impose artificial ‘build-out’ rates upon the industry through planning conditions.

6.6. There are however two points where refinements to the planning system may help the industry to be more responsive to deliver new homes more quickly:

- If local planning authorities were deliberately to allocate a range of housing sites, some large and some small, this would help accelerate sales and production by creating more outlets, even for the same housing numbers. The introduction of the Community Infrastructure Levy should make this more feasible, even if extensive infrastructure provision is needed. However, such a policy will be effective only where careful thought is given to allocate sites that appeal to different sub-markets, rather than merely replicate the same product at another location.

- The Government needs to clarify the circumstances in which variations to planning approvals can be made without the need for a fresh planning application. We understood that the current Planning Bill makes provision for this, although it is not yet clear how this will operate.

6.7. Good urban design has the potential to broaden the appeal of new housing and speed its delivery. However, this will not be achieved automatically but requires greater knowledge within the industry on handling the appraisal implications of better quality design. The Government, CABE and the HBF should jointly commission research into this.

APPENDIX 1: FAIRFIELD PARK

Fairfield Hospital, which closed in 1999, was built between 1856 and 1860 and originally named 'The Ardsley Three Counties Asylum'. At the time of its closure, the hospital site occupied about 70 hectares, including the then Grade II listed hospital building. After closure, the site was sold by the NHS for housing development and renamed 'Fairfield Park'. Its location in mid Bedfordshire is shown below.

Source: http://www.fairfield-park.co.uk/

Redevelopment at the Fairfield Park commenced in 2004, according to an overall masterplan agreed between mid Bedfordshire District Council and the developers. A strict design code was imposed requiring all new housing to be built in a 'Victorian' style, reflecting the architectural history of the site. The development will eventually comprise approximately 1,200 homes, of which about 270 have been created from the refurbishment of the former hospital building. There has been substantial infrastructure investment alongside the new housing, especially in provision of roads and sewers. Other facilities will include new primary school, a local convenience store and recreational areas and extensive landscaping.

The ten housebuilders, who have been or are currently involved in the development of Fairfield Park, are Bellway, Bovis, Bryant/Wimpey, Charles Church/Persimmon, David Wilson, Fairclough, P J Livesey, Stamford/Linden and Twigden. The illustrations below shown the intended Masterplan, an early aerial view of the site, the layout by 2007 and some of the house types already developed.

APPENDIX 3:

A3.1 Sutton Coldfield Green Belt Sites, Phase 2 Report of Study, Peter Brett Associates (2014) on behalf of Birmingham City Council

Birmingham City Council

Sutton Coldfield Green Belt sites, Phase 2
Report of Study

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June 2014

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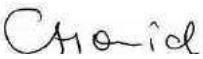
Approved by:	Cristina Howick	Partner		June 2014
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CONTENTS

APPENDICES

1 INTRODUCTION

Background to the Commission

1.1 In 2012, Peter Brett Associates LLP, in conjunction with HDH Planning & Development, was commissioned to advise Birmingham City on the numbers of homes that the market might be willing and able to provide on development areas within Birmingham's Green Belt. The Final Report was published in January 2013[1].

1.2 The study looked at a number of potential development areas in the Birmingham Green Belt on the outskirts of Sutton Coldfield. Each prospective development area was broken down into potential outlets (each outlet representing one housebuilder) and the total possible number of units calculated for each outlet.

1.3 The study considered that 5-6 outlets within one of the options (development areas) would be deliverable but that "… *release of a second site (option) irrespective of size would only increase overall delivery of housing by a relatively small amount, even if it were geographically distinct from the primary option site*."[2]

1.4 The study concluded that under a weak market scenario 20 year output might range from 3,135 to 3,779 total units; under a stronger market scenario the output might be from 3,135 to 4,985 total units.

The response by Savills

1.5 On behalf of Richborough Estates and Taylor Wimpey, Savills produced a response[3] to our earlier work. In it, Savills argued that the size of the Green Belt arc in the Sutton Coldfield area, ie the areas covered by the Options we considered, was so large and the housing market so suited to the delivery by volume housing developers, that up to three of the Options could proceed independently of each other.

1.6 Under these circumstances, Savills argued that delivery could be significantly increased in this area. The *"… Savills estimate of potential market delivery up to 2031 is* ***conservatively and comfortably 9,360 to 11,700 homes****; based on simultaneous development on three Areas for say 13 years of delivery up to 2031.* ***Upper potential credibly could be 12,000 to 15,600****."* (Savills emphasis).

1.7 Savills have not included upside capacity from starts earlier than 2018. Hence, delivery pa under their conservative scenario would be between 668 and 836 units pa. Under the more optimistic scenario it would be between 857 and 1114 units pa.

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[1] PBA Roger Tym & HDH Planning & Development, January 2013, Housing delivery on greenbelt options, study commissioned by Birmingham City Council.

[2] *ibid*, para 10.15 pp32-33.

[3] Savills, Final Report, Birmingham Strategic Growth Review, January 2013.

This Commission

1.8 We (PBA and HDH) have again been commissioned by Birmingham City Council to advise them on these issues. In our view, the principal differences between our work and Savill's response are as follows:

i. For each area (A-D) Savills considered that there could be eight outlets, whilst our view was five or six;

ii. Savills considered that three of the areas could be developed in parallel. As stated at paragraph 1.3 above, we consider that the market would only bear one area whilst release of a second site, even if it were geographically distinct, would not deliver significant additional numbers of dwellings when set in the overall context of growth.

1.9 These disagreements are about what the market can bear, as opposed to supply-side constraints. Our original views on this were based on judgment, as are Savill's views now. There is some historic evidence about delivery on sites released from the Green Belt in Sutton Coldfield, and this is presented in the following section of this report. However, the kind of development by the private developer market that Savills appear to be advocating is unprecedented there and perhaps nationwide.

1.10 Given this context, our research has now focused on examples of delivery rates in Sustainable Urban Extensions (SUEs) and other large developments in the last 15 years or so. We have researched the largest schemes across the country, showing how many homes they delivered over the years from a standing start. We have sought to identify the duration of different phases to completion. We consider how long it might take to deliver the 12,000 or so homes proposed by Savills for Sutton Coldfield on the basis of this evidence.

1.11 We also consider the implications for infrastructure delivery of more than one option proceeding at once and finally draw conclusions on the likely response of the market to the release of more than one development area in Sutton Coldfield.

1.12 This study report is set out in the following way:

1.13 In **Section 2** we present the evidence of the delivery track record of three sites released from the Green Belt in the Sutton Coldfield area since the turn of this century.

1.14 In **Section 3** we look the delivery of Sustainable Urban Extensions across the country and draw out some conclusions of relevance to the Birmingham context.

1.15 **Section 4** sets out a market commentary on the delivery of SUEs, in particular the relationship between competition and delivery.

1.16 In **Section 5** we consider the implications for the delivery of infrastructure if development is provided across up to three option areas.

1.17 And in **Section 6** we give some overall conclusions regarding our assessment of the potential pace of housing delivery across the area and the associated implications for the delivery of infrastructure.

2 PAST DELIVERY ON GREEN BELT SITES IN SUTTON COLDFIELD

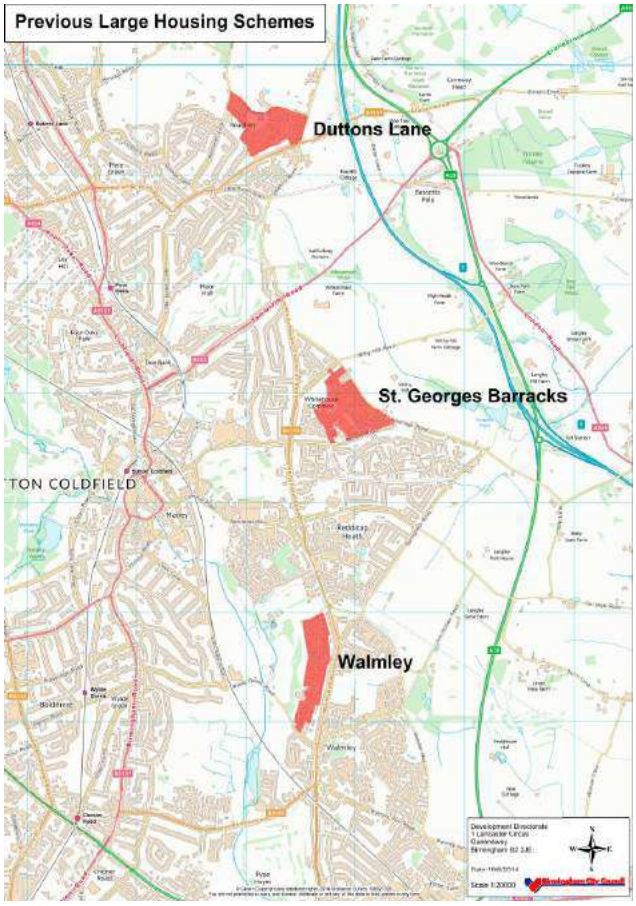
Introduction: the Sutton Coldfield sites

2.1 In order to examine the assertions made by Savills in response to our previous report, we have first looked at the closest information to hand, relating to delivery of sites in the Sutton Coldfield area.

2.2 In discussion with Birmingham City Council, we have identified three such large sites taken out of the Green Belt for development. These sites included two sites at New Hall Valley and Dutton's Lane which were released through the 1993 Birmingham UDP. The first completions on these sites began in 1999. All three sites were around 500 units in size.

2.3 A further site at St George's Barracks became available around the same time. This was a brownfield site but displayed similar characteristics to a greenfield site in that it is located on the urban edge adjoining existing Green Belt. The location of these three sites is set out in the plan at Figure 1 below.

Figure 1: Former Green Belt sites, Sutton Coldfield



2.4 It is notable that these three sites are all within the arc of potential development areas set out in our previous report and thus it is relevant to test both our and Savills' conclusions on them, through examination of the track record of delivery since they were removed from the Green Belt. We have been unable to identify the number of outlets on each site.

Delivery on the three Sutton Coldfield sites.

2.5 In Table 1 overleaf we set out the number of units delivered on each land parcel on each site since it was opened up[4]

2.6 As can be seen from Table 1, the maximum annual completion rate on the three sites was 422 dwellings in 2002 and the Dutton's Lane site (now known as Harvest Fields) is still under construction 15 years since development began). Whilst the global credit crunch and ensuing recessions undoubtedly have affected delivery significantly in the latter part of the period (see discussion in Section 3 below) the peak output of the three sites has only been greater than 300 units in two years (2001 and 2002) over the past fifteen, acknowledging that two of the sites were built out by 2006.

2.7 Of course, past delivery does not necessarily mean that the Sutton Coldfield development area(s) allocated in the BDP will perform in exactly the same way. So, in the following section we go on to consider delivery rates on Sustainable Urban Extensions nationally and examine the extent to which these Sutton Coldfield examples are representative of national trends.

[4] Data provided by Birmingham City Council.

Table 1: Housing Completions – three Sutton Coldfield sites by year

Site/Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014 (part)	TOTAL
H7 – Sutton New Hall, Walmley Road	6	174	204	126	35	8											**553**
H42 St. Georges Barracks, Rectory Road	15	57	136	77	102	107	22										**516**
H1 - Duttons Lane			29	219	64	62	83	0	0	0	0	0	0	7	41	17	**522**
Totals	**21**	**231**	**369**	**422**	**201**	**177**	**105**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**41**	**17**	**1591**

Source: Birmingham City Council, 'BLADES'

3 SUSTAINABLE URBAN EXTENSIONS: AN OVERVIEW OF DELIVERY NATIONWIDE

Introduction

3.1 Since the Second World War, there have been various attempts to institute a widespread housebuilding programme involving new settlements or significant expansions to existing towns and cities. These have included the New Towns, Expanded and Railway Towns, the LCC/GLC overspill estates programme, Growth Areas, Growth Points, eco-towns and the current phase of thinking around new Garden Cities – with the first proposed by the Government for Ebbsfleet in Kent.

3.2 Each of these initiatives has taken place in very different delivery and market conditions. The earlier programmes were almost exclusively delivered by the public sector (LAs or New Town Development Corporations) and the balance has now shifted to become very largely provided by the private sector and, with this scale of housing delivery, the volume housebuilders in particular.

3.3 In order to ensure relevance to the current market conditions and prevailing policy context, we have therefore focused our research on recent delivery experience, dating back approximately to the previous (Labour) Government's Growth Areas & Growth Points programmes of the last decade (although of course not all SUEs were designated under either of these programmes).

3.4 It is acknowledged that during that period (2008 and onwards) the UK has undergone the longest and deepest economic recession in living memory and the property industry has been particularly badly hit. Nonetheless we do have a good evidence base from the boom years immediately pre-recession. As a cyclical market, one would expect at least one more property recession between now and 2031 in any event, irrespective of any Government macro-economic or fiscal adjustments seeking to avoid such an outcome.

3.5 So, whilst there was a marked reduction in delivery across the country in the recessionary and post-recessionary period, we have enough evidence from the pre-recessionary period to put this into perspective and draw conclusions on likely delivery rates moving forward. During the immediate pre-recessionary period, the economy was of course particularly buoyant and delivery rates high.

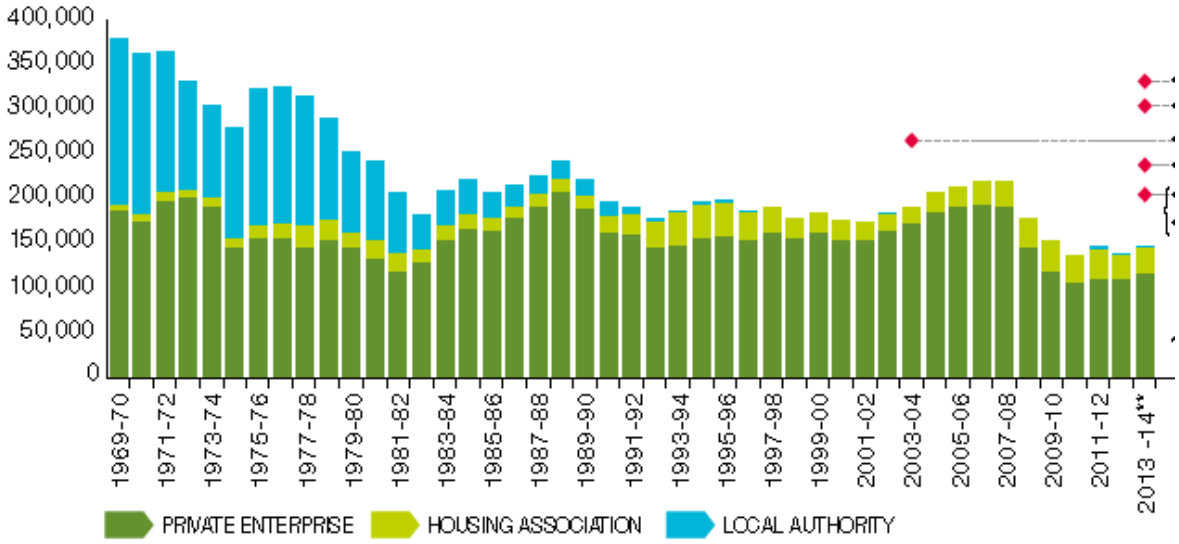
The nationwide evidence base

3.6 The mechanisms for increasing delivery of housing nationwide have been much debated of late in both the property and mainstream press. The challenges facing the industry in increasing delivery are well documented. For example, a recent report by Knight Frank[5]based in part upon a survey of the volume housebuilders, concluded

[5] Knight Frank Residential Research, *Building Momentum, Housebuilding Report*, May 2014.

that there is insufficient capacity in the property industry to increase delivery nationwide in excess of 200,000 units pa. Indeed only 6% of respondents to the Knight Frank survey thought that this would be possible.[6] The report notes that the rate of delivery has been broadly stable (allowing for fluctuations in the market) at around this figure, for the last forty years or so – see Figure 1 below.

Figure 2: Historic delivery of housing in England



Source: Knight Frank, after DCLG

3.7 Figure 2 above also gives more credence to the assertion at paragraph 2.5 that we have enough evidence to draw conclusions about likely delivery rates moving forward. It is also reasonable to assume that given the nationwide context, the volume housebuilders would not wish to get drawn into an overly competitive environment in one area – because the demand vs supply situation means that they could spread the risk by developing elsewhere.

CLG & University of Glasgow Research

3.8 This study[7], based on research undertaken in the immediate pre-recessionary period, presented the results of a literature review, survey work amongst 18 national housebuilders and an examination of one large site developed by ten separate companies. It concluded, *inter alia*:

"*Government policy and industry practice have thus combined to encourage developer caution about the ability of local housing markets to 'absorb' new-build supply. This finds expression in unambitious build-out rates."* And

[6] *ibid*, p.4.

[7] DCLG & University of Glasgow, *Factors Affecting Housing Build Out Rates*, February 2008

"Even if substantially more land were to be released by the planning system, it is likely that housing developers will take a considerable length of time before responding by bidding at lower land acquisition prices and building out more quickly."[8]

3.9 The study noted that market differentiation was important, with different developers present on a large site serving different sectors of the market, otherwise as noted by one respondent there was a risk that competition would result in diminishing returns – one respondent noting that on a 1200 unit scheme in Southern England, several developers all provided similar family-type housing and as a result:

"The market was swamped and sales virtually ground to a halt. To gain maximum advantage from splitting, products on adjacent sites should be quite distinct"[9]

3.10 Of further relevance to the Sutton Coldfield situation is the study's conclusions relating to the distance between development sites considered by developers to be competitive to their own. This varies considerably according to the type of location involved, as follows:

Table 2: Perceived Competition Limits for Individual Developments

Table 9: Perceived Competition Limits for Individual Developments

Development Type	*Miles*	
	Mean	*SD*
Apartments in outer London	2.40	2.79
Apartments in outer London	3.88	3.48
Apartments in major provincial city centres	2.73	2.48
Apartments within major provincial cities but beyond the city centre	3.37	2.54
Houses on greenfield sites on the edge of major provincial cities	6.00	3.96
Houses on greenfield sites on the edge of small and medium-sized towns	5.62	2.78
Houses on greenfield sites in mainly rural areas	7.97	4.09

Note: SD = Standard Deviation, see original source for explanation.

Source: CLG & University of Glasgow

3.11 The Sutton Coldfield options would fall within the category 'Houses on greenfield sites on the edge of major provincial cities' in the table above. This suggests that the mean distance between sites which would be considered to be competitive as 6.00

[8] *ibid*, Executive Summary, p.2
[9] *ibid*, p.8

miles. As Savills note[10], the distance north-south of the Sutton Coldfield 'arc' is 6.2 miles. Given the CLG & University of Glasgow's conclusions, it would suggest that the volume housebuilders would consider developments on more than one option to be competitive and hence be likely to dampen the developers' assumptions in respect of build-out rates.

3.12 These initial assumptions were found by CLG & the University of Glasgow to be critical. Once development had commenced external factors (such as demand) were unlikely to result in increased build-out rates:

"If housing demand changes after the point of site acquisition, most developers are generally reluctant to alter their planned production rates. Whether demand rises or falls, most prefer to alter prices or incentives. Companies generally see production rates as a marginal factor that cannot generally be varied very far from what was planned."[11]

3.13 These production rates are based upon what developers consider to be the likely sales rate. The CLG/University of Glasgow research found that sales rates varied between 40-80 units on each outlet, according to the size of developer. The volume housebuilders generally fell at slightly more than one unit per week (55.83 units pa).[12] This is consistent with our experience across the Practice.

Hourigan Connolly Research

3.14 A timely report was published earlier this year[13]. Commissioned on behalf of Gladman Developments, a development investment company that specialises in promoting SUEs through the planning system. The report is intended to:

"… be a useful tool in benchmarking assumptions for the delivery of housing on sites which already have planning permission and is likely to be useful in cases where there is a dispute over the extent to which such sites might deliver housing over a given period."

3.15 Hourigan Connolly (HC) sought to identify 100 greenfield sites across England, Scotland and Wales, of greater than 500 units, ten sites from each of the English regions plus ten sites from England & Scotland. Brownfield sites, new settlements and schemes receiving government assistance were screened out. It is thus highly relevant to this study.

3.16 In presenting their analysis, Hourigan Connelly noted that:

"Importantly, of all the case study proformas received in response to the study requests, none of the sites have been completed and all are yet to deliver the

[10] Savills, p.4.
[11] p.2.
[12] p.8.
[13] Hourigan Connolly, *A report into the delivery of urban extensions*, February 2014.

housing numbers originally forecast for the site in the timeframe originally forecast."[14]

3.17 HC found that on average that the time period in England from initial concept (ie from the site originally being proposed) to grant of planning permission is 6.67 years[15]. And in relation to the time period from commencement of preparation of an outline planning permission:

*"Based upon the foregoing analysis of the results received from Local Authorities, it is reasonable to suggest that the delivery of houses from urban extensions takes approximately **9 years**. Whilst there are instances of speedier delivery, these are in the minority whereas there are many more examples of sites that take far longer to deliver houses, with many yet to deliver any houses at all."*[16]

3.18 HC have produced a typical breakdown of the time periods for the planning and post-planning (delivery) phases. This is reproduced as Figure 3 overleaf.

3.19 In the Sutton Coldfield situation, of course, the overall clock has already started ticking (we would be in the 'concept' period leading up to allocation in the emerging BDP, and we understand that for the Langley proposal masterplanning has been commissioned and collation of the baseline evidence base is underway). One can assume that once a Community Infrastructure Levy regime is in place in the City, the timescale for negotiation of legal agreements ought to decrease a little, but significant s106/278 contributions would still need to be negotiated and agreed. **But based upon the HC research it would be reasonable to assume that a minimum of 5-7 years** would be needed post allocation for delivery from any of the new options. In the case of Langley, this is likely to be at the bottom of the range, as work is underway, however that may be optimistic, as demonstrated by the HC research.

3.20 In their research and in contrast to the earlier CLG/University of Glasgow study, HC found:

*"From analysis of those proformas received that include information on completed dwellings and from subsequent discussions with the relevant developers (including Taylor Wimpey, Barratt, David Wilson Homes, Bellway and Redrow), an **average annual delivery rate of 30 - 35 dwellings per annum** per single house builder is realistically achievable* (ie of private market housing, not affordable)*."*[17]

Additional research on specific sites identified by Hourigan Connolly

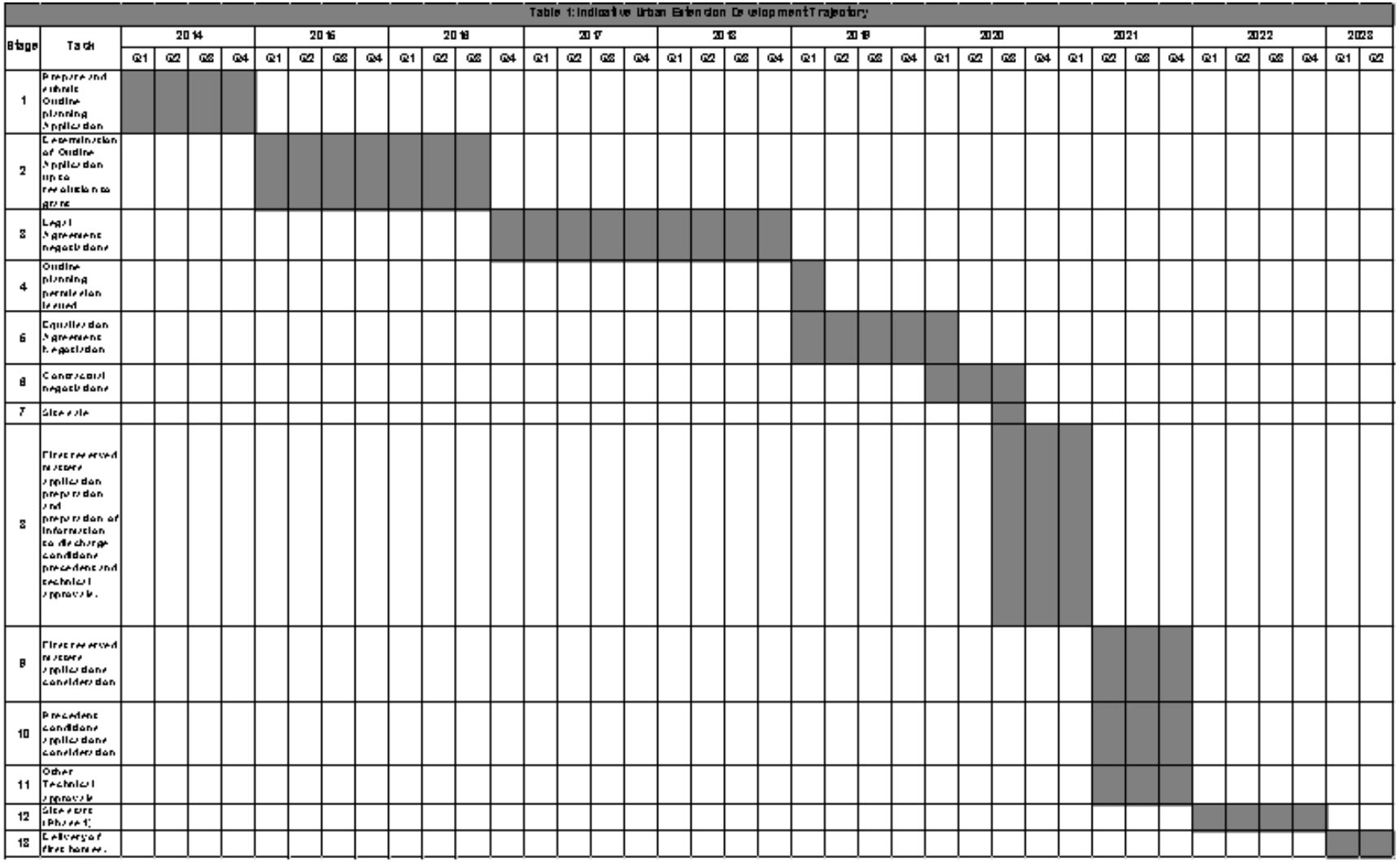
3.21 We have identified a cross section of relevant sites identified by HC and undertaken additional research, involving contacting the relevant LPA and/or developer(s) to update the information and attempt to plug any gaps. To avoid any distortion caused

[14] p.55
[15] p.56.
[16] p.63 (original emphasis).
[17] p.61 (original emphasis).

by the economic recessions, HC considered completion rates up to Q1 2008 only. We have updated this information where we have been able.

3.22 At Appendix A we set out the results of this analysis for each of the individual SUEs.

Figure 3: Indicative Delivery Trajectory for SUEs



Other potential SUEs known to us

3.23 As a multi-disciplinary development & infrastructure consultancy operating nationwide, we have been involved in the planning and promotion of a considerable number of SUEs in recent years. We have undertaken research across the Practice with a view to identifying any of them where delivery has been at the level anticipated by Savills for the Sutton Coldfield releases (between 668 and 1114 units pa).

3.24 The following SUEs were suggested as being of relevance (some of these were also examined identified by Hourigan Connolly). There is a short description of each of these SUEs set out in Appendix B.

- Lawley, Telford;
- Bradley Stoke, South Gloucestershire;
- Cranbrook, East Devon (new settlement);
- Brooklands, Milton Keynes;
- Newton Leys, Milton Keynes;
- Hampton, Peterborough;
- Filton, Bristol;
- South Worcester;
- North Whitely, Fareham, Hampshire;
- Monkton Heathfield, Taunton.

3.25 We have briefly analysed each of the schemes above as the descriptors indicate. Although we must acknowledge the impact of the 2008-12 downturns, nowhere has delivery reached the levels that Savills indicate the market would achieve in Sutton Coldfield. Since there are a range of housing markets identified including some on the outskirts of larger cities, we can only treat with caution the conclusions reached by Savills.

Conclusions on the Sutton Coldfield sites examined in Section 2

3.26 There are a number of features demonstrated by the three Sutton Coldfield sites examined in Section 2 which are consistent with the research examined in this Section. These are, namely:

- 6-7 years from release to first delivery of housing;
- Maximum delivery on any site in one year of 219 units (suggesting 2-3 developers were present);
- Peak mean delivery of 141 units pa per site across the area (422 divided by three sites); and
- Mean delivery across the three sites of 106 units pa (1591 divided by 15 years), or 35 units pa per site as an equivalent flat trajectory ironing out the peaks and troughs of the housebuilding cycle through the years in question.

4 CHANGES IN THE HOUSEBUILDING MARKET: A COMMENTARY

Dynamics post 2008

4.1 The global credit crunch and turbulent economic period between 2008-2012, followed by the gathering recovery (particularly in the residential sector of the property industry), have ushered in a number of significant structural changes to the housebuilding industry at local, regional and national levels.

4.2 In this section we outline some features of the current market which are of relevance to this study, including some aspects of original research undertaken by Simon Drummond-Hay of HDH Development & Planning.[18]:

- In the pre-recessionary period (ie pre-2008) there were around 7,000 outlets nationally of which 4,000 were sites of over three dwellings. In 2006 these outlets produced 2.7 units a month on average;
- In the post-recessionary period (around 2010-11) there were about 3,200 outlets nationally, producing 2.2 units a month on average;
- In 2014 there are 6,000 outlets nationally, producing 2.5 units a month on average;
- In 1988 there were 12,000 builders nationally building up to 100 units pa plus 250 regional and 13 national housebuilders;
- By 2010 this had reduced to 2,800 builders nationally, building up to 100 units pa plus 85 regional and 9 national housebuilders;
- Generally the national total housing stock increases by 0.53% per year.
- In the pre-recessionary period about 45% of houses were delivered on small sites, now it is just 10% nationally. In part this is due to funding constraints for small developers (and the disappearance of many of them, as noted above);
- Since April 2013 37% of new homes sales nationally have been assisted by the Help To Buy scheme; and
- Pre April 2013 21% were assisted under HomeBuy / NewBuy.

4.3 Combined, these factors show the rapid change in the sector, of particular relevance is the consolidation and reduction of developers with the financial and logistical capacity to undertake large schemes – and to use their competitive advantages including land banks to ‘squeeze’ financially smaller developers.

4.4 There are a number of ‘rules of thumb’ accepted by the Homebuilders’ Federation (HBF), as follows:

[18] Unpublished, 2014.

- Sites of up to 100 units on a site would usually be built out by one developer;
- Sites of 100 - 500 units (some would argue 300) would usually be built out by two developers;
- Sites of over 500 units would usually be built out by three developers; and
- The planning process for 1,000 houses costs about £1.5m

4.5 HDH conclude that these main factors affecting delivery are in line with the studies discussed in Section 3 above, namely:

- The need to provide for distinct markets (ie affordable to rent, affordable to buy, build to rent, and market housing); and
- Within each sector there is a need to provide different products and price points, designs and personal factors.

4.6 Other than the CLG / University of Glasgow study discussed in Section 3, there is little published research into how development sites compete and complement each other. The English housing market is strongly influenced by internal (within England) migration and on the whole development is not specifically designed to meet the requirements, preferences and demand of the local population. It is instead, in the first instance, based on the products that developers will expect to be in highest demand.

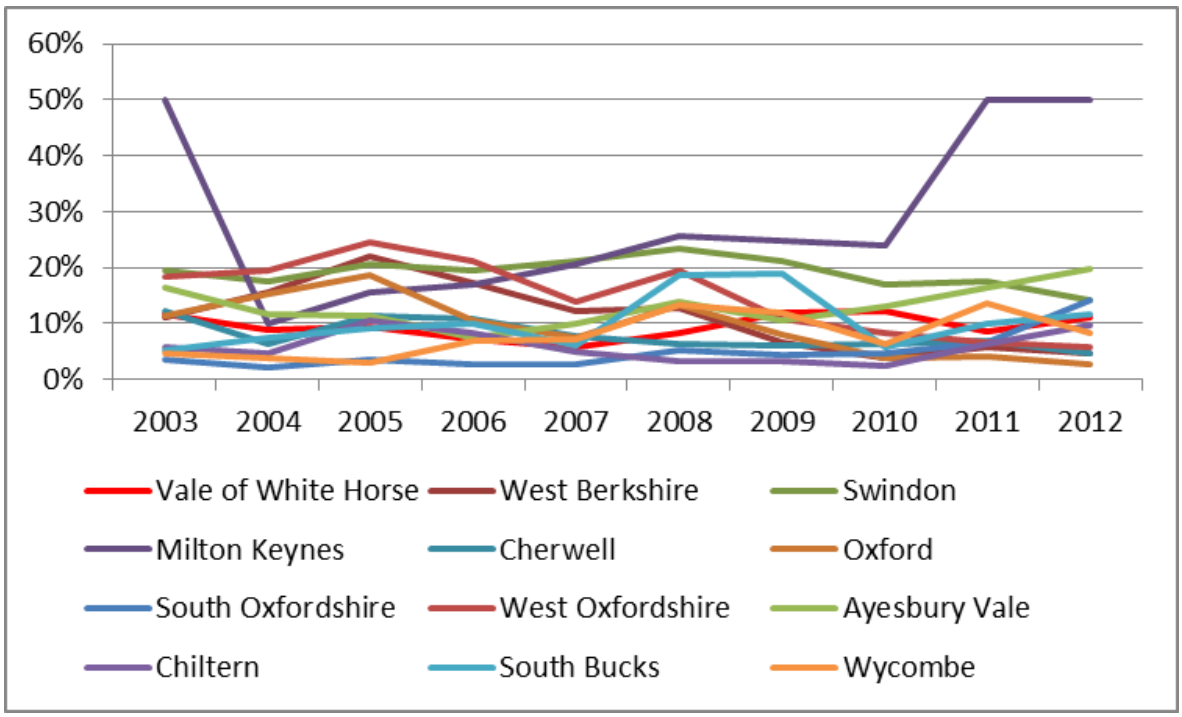
4.7 In an attempt to inform the phasing and number of outlets, we have considered development in and around two towns that are growing rapidly, those being Milton Keynes and Swindon.

4.8 In and around Swindon, in early 2014, there were 15 active outlets. Swindon's delivery rate is about 610 units pa, of which approximately 50% were from smaller sites, which equates to circa 300 units or 20 units per outlet pa;

4.9 It was notable that where a developer had more than one active outlet they are geographically separate and quite different in character. Whilst the physical product in terms of buildings is not necessarily very different, the schemes are.

4.10 A broadly comparable situation prevailed in Milton Keynes where there were 28 outlets and a similar conclusion could be drawn – although in Milton Keynes there is a greater diversity of products being offered by developers. Milton Keynes' delivery is about 1500 units pa, of which approximately 25% were from smaller sites which leaves 1,125 or so from 28 main outlets, or circa 40 per main outlet.

Figure 4: Sales turnover as a percentage of whole market turnover.



Source: HDH research 2014

4.11 What conclusions can we draw from the HDH research, of relevance to the Sutton Coldfield situation?

- In terms of competition, the market is likely to view all the potential outlets identified as being in competition with each other, because they are within the distances identified in Table 2 above. Indeed, Options B & C are immediately adjacent, separated only by roads or natural features and hence would be directly competitive; and
- The provision of more than 25% of output from the main outlets is limited to the exceptional case of Milton Keynes, where strategic growth was planned for many years through the New Town Development Corporation and special delivery mechanisms still exist. Without such mechanisms in place, reliance on significant output from main outlets should therefore be guarded against.

A market-perspective commentary on the Savills' response to the previous study.

4.12 The rates set out by Savills in its response to our earlier study are substantially above our own advice. That earlier work is nearly 18 months old – as are Savills' comments. Their section three is very out of date now, prices and transactions are both up – but it is notable that there is now talk of a cooling (albeit slight) in the housing market. However, in our experience nowhere nationally within a similar size area as the Sutton Coldfield Green Belt 'arc' has the private developer market delivered at anywhere near even the '**conservative'** rates identified by Savills.

4.13 There is no doubt that generally builders are seeing more enquiries, more offers and more reservations and on the majority of sites a significant number of units are being sold off-plan. It is important to keep this is perspective through – the builders are not building a lot of stock and putting it on the market, and to a large extent the supply is being matched with demand. That is to say, they will build a few show houses but the completion of the houses for sale is much better tuned to reservations than before the downturn. This is part of the de-risking of development to ensure that should the market turn (when it does) they are not left with built but unsold stock.

4.14 As Savills note, it is important not to rely simply on local past delivery when considering the potential output from the sites. It is correct to note that there has been a limited land supply of big greenfield sites of estate housing, although it is wrong to suggest that simply allocating land would result in the market instantly delivering at maximum theoretical capacity.

4.15 Savills have assumed that each site could bear six outlets at a consistent rate of delivery – even though some of those sites are adjacent. Their calculations are based on 4 sites x 6 outlets x 50 per year = 1200 per year. In these assumptions we do not believe proper regard has been given to the relationship of sites and outlets to each other. When access points are considered, the only way to achieve the 24 outlets would be for many to be immediately adjacent and directly competing (as in the case of Options B and C). Even in the current market with the demand for housing, we do not believe this is likely to occur. This would result in direct competition between sites which is likely to have an adverse impact on prices and the consequential impact on overall viability – as demonstrated by the research work by CLG and University of Glasgow cited in Section 3 above.

4.16 We have not been able to rationalise the phasing assumptions that Savills have used. It would appear that Savills have assumed that all the 24 potential outlets will reach an output of 50 units per year in just one year. At present there is developer interest in some of the sites, but not all are under the control of developers. Before development can commence some of it will need to be marketed, the planning process pursued (none of the land has a planning consent) and those applications, all of which will be very major applications will need to run their course. An important element of that process will be the infrastructure (services, highways, green

infrastructure, health, education etc) as discussed in the following section. We understand that this work has commenced but is not yet complete.

4.17 Even when consent is granted it will take some time before development can actually get underway. Not only will the developers need to marshal their own resources but the necessary on and off site infrastructure (spine roads, SUDS etc) will need to be put in place before housing can be delivered – all of which are reasons behind the lag identified in the research cited in Section 3.

4.18 A further concern is which developers may wish to be involved in the sites. It is difficult to name 10 housebuilders who are active building large-scale estate housing in the area – let alone 24. Whilst, due to the scale of the area, some developers may have more than one outlet it is highly unlikely that any developer would be willing to promote what are in effect competing schemes.

4.19 Whilst there is no doubt that there is a strong demand for estate housing – Savills' assumptions are unrealistic, even their 'conservative' rates. The assumptions used in our previous work are prepared on a high-level basis but consider multiple outlets, a phased work up of the sites to allow the planning system to run its course and for the industry to mobilise and start on site; and reflect the fact that it takes some time for development to reach peak output. The modelling looked at different rates of delivery to reflect that development is likely to take place across multiple economic cycles and up and downs in the housing market.

4.20 All of these comments are backed up by the research cited in Section 3, notably the CLG / University of Glasgow and Hourigan Connolly reports.

5 DELIVERY OF INFRASTRUCTURE ACROSS MORE THAN ONE OPTION AREA

Introduction

5.1 We have been asked to consider the implications in general for delivery of infrastructure across the area if more than one development area was to be released from the Green Belt for concurrent development.

5.2 If there was to be more than one option released and delivery at the pace suggested by Savills, there would need to be a significant scaling up of infrastructure across the area to support the growth. The following section focuses on utility infrastructure, but similar issues would be faced in the provision of off-site transport or community infrastructure such as schools and health facilities.

Scaling of infrastructure requirements

5.3 Table 3 overleaf sets out a series of generic infrastructure costs which could be expected to be required to support growth at increasing numbers of units. The chart at Figure 5 then plots these infrastructure costs against the number of units.

5.4 The infrastructure costs have been derived from information collected from other projects. However as all schemes are different, any infrastructure costing work will always need to consider site specific aspects and therefore be bespoke in nature. Due to time and resource constraints, we have not been able to assess the local network in terms of capacity, so the attached schedule provides on-site generic costs only and does not consider capacity issues.

5.5 The proximity of some of the option areas (eg B and C) could also mean that the cumulative burden on, for example, highway infrastructure would necessitate a greater range of interventions than if the areas were more remote from one another.

5.6 The costs have been calculated at 35dph, the midpoint between our original 40dph and Savills' 30dph.

5.7 Costs for infrastructure for large developments are significantly influenced by prevailing conditions in the open energy market, and the asset management plans of Direct Network Operators. The capacity of network corridors off-site are unlikely to be able to accommodate these demands without upgrades. Utility supplies upward of 3.5MvA are likely to require a new primary sub-station and 33kV feed.

5.8 Assuming each residential unit is worth £150K, the schedule attached puts the infrastructure cost for 5000 units at about 12.2%.

Table 3: Generic Infrastructure costs for numbers of housing units

GENERIC ON-SITE INFRASTRUCTURE COSTS

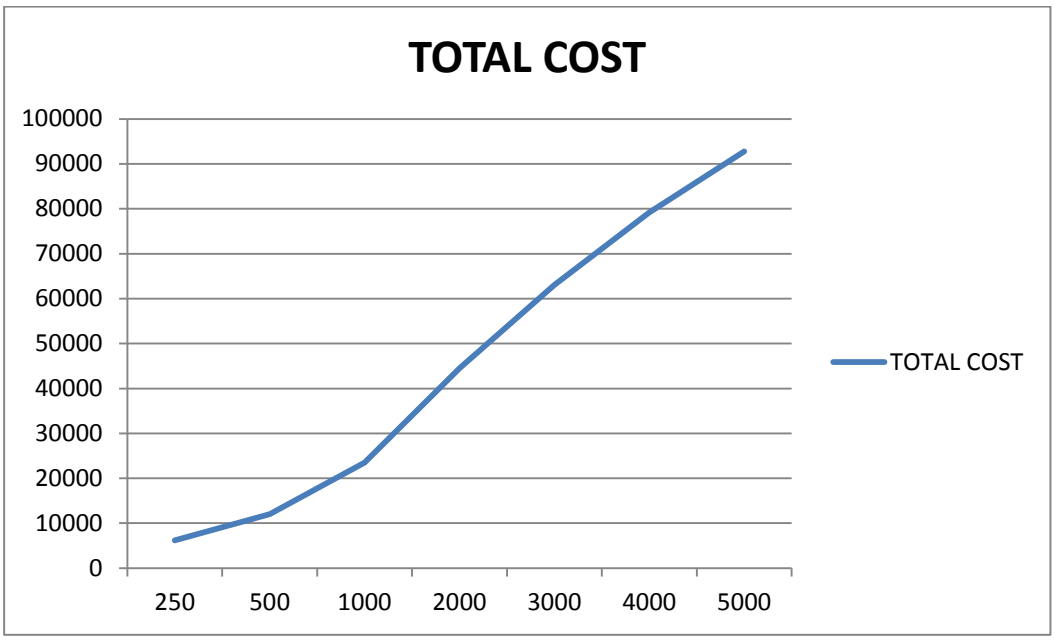
This schedule provides generic, none site specific costs for significant infrastructure elements for illustration.

Housing Units		250	500	1000	2000	3000	4000	5000
Relative development area (ha) (based on 35 resi units per ha)		7	14	29	57	86	114	143
Utility Demand	Unit							
Electricity Demand	MVA	1	1	2	4	6	8	10
Gas Demand	MWh	2.6	5	10	21	31	42	52
Potable Water Demand	l/s	7	14	28	56	84	112	140
Telecoms Demand	lines	500	1000	2000	4000	6000	8000	10000
FW Drainage Demand	l/s	12	24	48	96	144	192	240
Utility Infrastructure								
Sub Station	£ ,000	181	353	688	1303	1846	2317	2715
Electricity cable (LV)	£,000	1100	2145	4180	7920	11220	14080	16500
Electricity cable (HV)	£,000	1269	2474	4821	9135	12942	16241	19032
Gas mains (90mm to 180mm)	£,000	335	653	1272	2411	3415	4285	5022
Water mains (90mm - 150mm)	£,000	409	798	1555	2946	4174	5238	6138
Comms Cable in duct	£,000	146	285	556	1054	1493	1874	2196
Foul water pipes (150mm)	£,000	181	352	687	1301	1843	2313	2711
Drainage and water storage								
On-site SW drains/sewers	£,000	150	293	570	1080	1530	1920	2250
Attenuation storage (ponds and underground storage)	£,000	263	512	998	1890	2678	3360	3938
Roads and access								
Primary Access Road 7.3m wide	£ ,000	1,300	2535	4940	9360	13260	16640	19500
Secondary Access Road, parking, hard standing areas	£ ,000	850	1658	3230	6120	8670	10880	12750
TOTAL COST	£,000	6183	12058	23497	44520	63071	79148	92751

NOTES:

1. Costs are proportioned against the estimated costs for 250 residential units
2. The cost estimates consider on-site costs only.
3. Assessment assume 35 residential units per ha.
4. All fees, charges, consultancy costs, profits, losses, taxes, interest and inflationary influences are ignored.
5. Total estimate costs reduced by 5% for each 1000 units built to a maximum reduction of 30% overall.
6. Storage for surface water assume a limiting discharge rate of 6l/s/ha, provided for 1 in 100 year design event.
7. 30% allowance included for climate change effects to surface water storage.

Figure 5: Infrastructure costs by numbers of units



5.9 It is highly improbable that the development industry would be able to scale up to meet this scale of delivery of infrastructure, both onsite and strategic offsite. In our experience the capacity of the utility providers and their supply chains, working alongside the development industry, is quite limited and prone to delays during periods of high demand for upgrades.

Implications of slower delivery across more than one development area

5.10 Should more than one development area be released and housing delivery commence, for the reasons set out in the preceding sections we consider that the number of units produced would be slower than that predicted by Savills, such that across the area it is typical of the national average.

5.11 The inevitable consequence of this slower rate of delivery would be that trigger points for the provision of infrastructure would not be reached as per the anticipated trajectory. There is a risk that Option C (the proposed allocation in the BDP) would not deliver the critical mass of housing to trigger infrastructure provision if additional options were allocated.

5.12 This would mean that provision of new infrastructure would be delayed and the pressure on existing infrastructure, whether roads, utilities or schools, as capacity is neared would become significant. We are aware that certain elements of this infrastructure are already at capacity and reliant on the growth for additional provision.

5.13 A good example of this problem is in relation to primary school places. We understand that, in common with much of the country, there is little spare capacity in primary schools in the Sutton Coldfield area. Typically developments of around 1000 dwellings and over tend to have a new primary school provided within them, often delivered via a s.106 agreement between the developer(s) and the Local Education Authority, linked to trigger points of the number of dwellings on site.

5.14 Even where there is only one development site in the area, the programming of delivery of the new school has to be carefully undertaken; too early and many of the places will be taken by children from the surrounding urban area, forcing children in later phases of the development to commute out of the estate to other schools in the locality. Too late, and the children will already be settled in those surrounding schools and commuting patterns will be established, placing considerable additional strain on the transport system during the morning and afternoon peaks.

5.15 In the circumstances where there were a number of competing development areas in close proximity, it would render primary education provision planning even more problematic, especially where housing delivery would be difficult to predict other than at the high-level. Longer daily commutes could easily become the norm for some children, which would be undesirable in terms of transport and related environmental impact as well as their personal development.

5.16 Although this is only one example, similar challenges would be faced in the provision of other elements of physical and community infrastructure.

5.17 Conversely, concentrating development on one option would prevent this situation occurring since the housing trajectory would be much more predictable and the provision of new infrastructure can be linked to trigger points as is the current norm.

6 CONCLUSIONS

Ability of the market to provide across multiple option areas

6.1 We have set out in this study the evidence of past delivery on former Green Belt sites in Sutton Coldfield and comparisons with recent national trends. This research has shown that the three Sutton Coldfield sites examined have performed much as the national trend would suggest, producing typical numbers of units each year and with no housing at all delivered at Harvest Field the period of downturn 2006-11.

6.2 This would suggest that delivery around the levels recommended in our original study would be expected, consistent with the experience on the three sites examined in the local area.

6.3 The national research examined, backed by our further research as set out in Appendix A, suggests that the market is highly unlikely to respond to the allocation of up to three development areas by the scaling up of delivery to the levels predicted by Savills, even at the 'conservative' levels which they identified.

6.4 As noted in the research cited, the housebuilding industry (particularly the volume housebuilders) is inherently cautious and this trend has been reinforced through the recent downturn.

6.5 So, there would be inherent resistance due to the fact that each of the areas would be viewed as in competition with each other. There would be little potential for sufficient differentiation of products and price points to enable up to 24 housebuilders to operate across the Sutton Coldfield area (even if 24 volume housebuilders operated in this market, which we doubt).

6.6 Furthermore, it is worth noting that the land allocated at Langley in the emerging BDP has capacity for 6,000 dwellings. This is in excess of our original recommendation at the maximum delivery rate so in effect there is some flexibility should the market perform more strongly.

Delivery of infrastructure across more than one option area

6.7 From our high-level appraisal, we have set out the generic costs for scaling up the provision of certain infrastructure to support growth by numbers of units.

6.8 In our experience, we consider that the development industry would struggle to provide the necessary infrastructure to support growth at the pace predicted by Savills, even at the 'conservative' levels. The utilities providers, their supply chains, as well as the housebuilders themselves would be faced with considerable challenges year-on-year in rolling out the infrastructure on-site but more particularly

in providing the strategic enhancements required offsite to support the provision of so many additional housing units in one relatively small area.

6.9 Furthermore, for the reasons set out above, in our view the release of more than one development area would not be accompanied by delivery at the rates predicted by Savills. Thus the new units would be provided over a wider area and trigger points for the provision of new infrastructure would not be reached on the timescales originally predicted. This could place considerable additional strain on a range of existing infrastructure including roads, utilities and schools.

APPENDIX A DETAILED ANALYSIS OF DELIVERY AT SELECT SUSTAINABLE URBAN EXTENSIONS

A.1 Introduction

In the tables that follow, we set out an analysis of a cross-section of the SUEs identified by Hourigan Connolly, updated where we have been able through discussions with the LPA and/or the developer(s) themselves.

URBAN EXTENSION	Queen Elizabeth Park, Guildford						
CONCEPTION	July 1999, Guildford BC approved a development brief for Queen Elizabeth Barracks and 8 Map, and Chart Depot.						
PLANNED NUMBER OF DWELLINGS	450, as set in the development brief.						
SITE AREA	23 ha						
PROCESS TO DEVELOPMENT	• First application submitted in 1999 for up to 500 units – but withdrawn. • Outline submitted in 2001 for 525 dwellings and associated uses. • First reserved matters application in 2002 - 4 months between outline and reserved matters.						
START OF DEVELOPMENT	Approximately 2002						
ANNUAL DELIVERY	2002	2003	2004	2005	2006	2007	2008
	6	206	126	55	90	39	3
TOTAL DWELLINGS TO DATE	525 between 2002 and 2008. Completed in 2008.						
HOUSEBUILDER(S)	Linden Homes / Laing Homes						
DEVELOPMENT PHASES	9 phases of development: Phase 1: The Woodlands (Linden Homes) – 30 dwellings Phase 2: Hollymount (Laing Homes) – 37 dwellings Phase 3: Regent's Circus (Linden Homes) – 30 dwellings Phase 4: The Village Green (Laing Homes) – 118 dwellings Phase 5: Mulberry Gardens (Linden Homes) – 61 dwellings Phase 6 & 8: The Lanes (Laing Homes) – 110 dwellings Phase 7: Kensington Park (Linden Homes) – 46 dwellings						
Source: A report into the delivery of urban extensions (Hourigan Connolly, 2014)							

URBAN EXTENSION	Marks Farm, Braintree												
CONCEPTION	Historical site allocation												
PLANNED NUMBER OF DWELLINGS	1,000 – as put forward in planning application												
PROCESS TO DEVELOPMENT	• Outline planning application for 1,000 units submitted December 1988 • RM application was submitted June 1990 for 46 units on Phase 2 and approved 1 • month later - July 1990. • Many RM applications were submitted subsequently.												
START OF DEVELOPMENT	1989												
ANNUAL DELIVERY	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
	143	169	150	155	243	138	55	55	70	4	41	94	12
TOTAL DWELLINGS TO DATE	First dwellings completed in 1991 but no data available until 1996. Between 1996 and 2008, 1,329 completions. Completed in 2008.												
HOUSEBUILER(S)	Bovis were the main developer												
COUNCIL INSIGHT	Marks Farm as a development benefitted from having a single landowner and a one main developer (Bovis). The rates of delivery benefitted from the strong market in the 2000s and was near enough finished by the time of the economic downturn in late 2000s.												
Source: A report into the delivery of urban extensions (Hourigan Connolly, 2014) / Catherine Carpenter (Braintree District Council)													

URBAN EXTENSION	Pondholton Farm, Braintree (Maltings Lane)								
CONCEPTION	Historic site allocation. Development brief (1999) was adopted as SPG.								
PLANNED NUMBER OF DWELLINGS	1,100								
PROCESS TO DEVELOPMENT	• An application for the erection of 800 dwellings, a business park, primary school, neighbourhood centre and associated community facilities was submitted on 30.12.91. • Outline planning permission was granted 08.08.00 with the S106 being signed 08/08/2000. • Supplementary S106 agreement was signed 01/12/2004. • A masterplan was validated November 2000 and approved 28/06/01.								
START OF DEVELOPMENT	2001								
ANNUAL DELIVERY	2002	2003	2004	2005	2006	2007	2008	2009	2010
	72	206	222	119	65	85	25	-	55
TOTAL DWELLINGS TO DATE	849								
HOUSEBUILDER	Countryside Properties / Barratts / David Wilson Homes / Taylor Wimpey (but more recent)								
COUNCIL INSIGHT	Delivery has been slow on the site and was dented by the recession – Council felt that if it was not for the recession the development would have finished as the market is strong in Witham. Capacity originally set at 800 in the permission but it is now being raised to over 1,000 dwellings. In contrast to Marks Farm, delivery was also affected by several landowners taking to time to agree on profit share. Developers included Countryside Properties Barratts, Persimmon, Taylor Wimpey.								
Source: A report into the delivery of urban extensions (Hourigan Connolly, 2014) / Catherine Carpenter (Braintree District Council)									

URBAN EXTENSION	NE Carterton (Shilton Park), West Oxfordshire										
CONCEPTION	Expansion at Carterton was put forward for a consultation on the West Oxon Rural Areas Review Local Plan in 1988.										
PLANNED NUMBER OF DWELLINGS	1,499										
SITE AREA	6 ha										
PROCESS TO DEVELOPMENT	• Site allocated in Local Plan (1997) and carried through to Local Plan (2011). • Outline application in 1997 and permission granted Sept 98. • Reserved matters application submitted December '98 and approved February '99. Further reserved matters submitted February 2000, and approved September 2000.										
START OF DEVELOPMENT	2000										
ANNUAL DELIVERY	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
	12	90	124	139	330	175	237	222	84	46	40
TOTAL DWELLINGS TO DATE	Total between 2001 and 2011 was 1,499. Development completed.										
HOUSEBUILDER	David Wilson Homes; Carter Construction										
Source: A report into the delivery of urban extensions (Hourigan Connolly, 2014)											

URBAN EXTENSION	Poundbury, West Dorset									
CONCEPTION	Conceived as an urban extension to Dorchester in the 1980s.									
PLANNED NUMBER OF DWELLINGS	2,200 dwellings are expected to be built by 2025.									
SITE AREA	94.17 ha									
PROCESS TO DEVELOPMENT	• First application submitted for a mixed use development in Jan 1989. • The site has been brought forward in the 1998 adopted Local Plan and the 2006 Local Plan and the new Local Plan. • The Poundbury Development Brief was adopted in 2006. • The first planning application for residential development was granted in 1989 and the first reserved matters application was submitted in early 1995. • The Masterplan divides Poundbury into four distinctive quarters. For development purposes, each • quarter corresponds to a Phase. Construction of Phase 1 of Poundbury commenced in October 1993. Poundbury is approximately one third built and is planned to grow to 2,200 homes by 2025. • Poundbury is being phased according to market demand									
START OF DEVELOPMENT	1993									
ANNUAL DELIVERY	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
	38	31	38	28	47	34	16	64	57	63
	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	
	108	137	97	78	74	64	75	187	27	
TOTAL DWELLINGS TO DATE	Total of 1,263 dwellings between 1994 and 2013. There are 1,305 units with consent and 98 units under construction at March 2013.									
HOUSE BUILDERS, DELIVERY PHASES AND COMPLETIONS	Phase 1 Section A (P1SA) • Homes (69): 35 rented through The Guinness Trust, 34 sold privately. • Local builders, CG Fry & Son Ltd. of Litton Cheney, won the tender and started work in the autumn of • 1993. • Building was completed in the summer of 1996. All were sold and occupied at the time building works completed. Phase 1 Section B (P1SB)									

	• Homes (73): 20 rented through The Guinness Trust including one adapted for special needs, 53 for private sale. • 73 made up of 68 houses and 5 flats. • Builders: CG Fry & Son Ltd. began in February 1996 and work was completed in February 1999. • All were sold by May 1998. Phase 1 Section C (P1SC) • Homes (81): 22 flats, 59 houses. Phase 2, Sections A-D: • Phase 2 Sections A-D is approx. 14 acres (5.66 hectares). • These first four sections of Phase 2 were put to tender in August 1999. • The successful bidders CG Fry & Son Ltd. commenced work on site in June 2000 and works were completed in Spring 2004. Phase 2, Section E: • Phase 2 Section E is approx. 19.3 acres (7.81 hectares). • This section of Phase 2 was put to tender in December 2001. • The successful bidders CG Fry & Son, Morrish Builders and Westbury Homes Plc. commenced work on site in Autumn 2003. • There are 338 dwellings of which 68 are affordable. South West Quadrant • This 10acre site forming the remainder of Phase 2. • Planning approval was granted in 2006 for 190 homes (of which 59 are affordable, including a mixture of shared ownership and rented accommodation), shops, offices and restaurants. • The development is being built by CG Fry & Morrish Builders. • The development is scheduled for completion in 2013. Poundbury Phases 3 & 4 • Outline planning permission was granted by West Dorset District Council in September 2011 for the remainder of Poundbury (44 hectares), which will cover the northern and western perimeters.

	• This will include 1,200 dwellings.
Source: A report into the delivery of urban extensions (Hourigan Connolly, 2014) / Dorset County Council (2013) / Poundbury Factsheet 2014 (http://duchyofcornwall.org/assets/images/documents/Poundbury_Factsheet_2013.pdf)	

URBAN EXTENSION	Newcastle Great Park, Newcastle												
CONCEPTION	Strategic Land and Planning secured the site under an Option Agreement in the 1980s and promoted it through the Council's UDP.												
PLANNED NUMBER OF DWELLINGS	2,500												
SITE AREA	1,200 acres												
PROCESS TO DEVELOPMENT	• The site was first proposed for development in the City Council's first draft Unitary Development Plan (UDP). • The UDP was adopted in January 1998 • Outline application 1999/1300/01/OUT was submitted August 1998 for mixed use, including 2,500 dwellings. • The scheme was called in by the Secretary of State on the 14th February 1999. • SoS formally allowed the development on the 8th June 2000 and planning permission was granted 6 October 2000.												
START OF DEVELOPMENT	2001												
ANNUAL DELIVERY	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
	4	118	194	99	77	54	106	62	181	119	140	108	130
TOTAL DWELLINGS TO DATE	1,392 between 2001 and 2013. Delivery rates required to hit 250 completions a year under policy NDA6, but delivery rarely hit this target. Development is split into several 'cells' – A to I. See table below.												
HOUSEBUILDER(S)	Persimmon Homes / Taylor Wimpey												

NEWCASTLE GREAT PARK - Possible Build Out (AUG 2013) Amended by Persimmon Homes

July (2014)

	Land Resource Ref.	Net area	Capacity	2001/2	2002/3	2003/4	2004/5	2005/6	2006/7	2007/8	2008/9	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	Beyond 2030
Cell H	2640	5.7	175	4	109	61	1																									
Cell I 'Melbury'	2641	22.3	500		9	133	98	77	54	81	21	27																				
Cell G 'Greenside'	2642	19.2	326							25	41	39	57	60	43	40	21															
Cell F 'Town Centre' [1]	4569+2649	n/k	300									82									43	50	50	25	25	25						
Cell F 'East Village'	4566	3.3	82									33	39	10																		
Cell F 'Brunton Grange'	4565	9.2	282										23	70	65	90	34															
Cell F Phase 2 "South of Town Centre"	4568	10.5	332													10	60	80	80	80	22											
Cell F (Phase 3 (East of Town Centre) (Reserved Land) [2]	East of 2649 North of 4568	0.8	50																		25	25										
Cell C [3]	2646	10.5	430													60	100	100	75	70	25											
Cell E [4]	2647	5	200															50	50	50	50											
Cell D [4]	2643	28.2	800																40	70	70	70	70	70	70	70	70	70	70	60		
Cell A [5]	2644	47.3	1,200																		20	100	100	100	100	100	100	100	100	100	100	80
Western expansion area [6]	4959		1,000																					40	70	70	70	70	70	100	100	340
Totals (excluding 4706)			**5,677**	**4**	**118**	**194**	**99**	**77**	**54**	**106**	**62**	**181**	**119**	**140**	**108**	**200**	**215**	**230**	**245**	**270**	**255**	**245**	**220**	**235**	**265**	**265**	**240**	**240**	**240**	**230**	**200**	**200**	**420**
Totals (cumulative)				4	122	316	415	492	546	652	714	895	1,014	1,154	1,262	1,462	1,677	1,907	2,152	2,422	2,677	2,922	3,142	3,377	3,642	3,907	4,147	4,387	4,627	4,857	5,057	5,257	5,677

Core Strategy Planning Period

Total outturn to 1 July 2013 1,317

Annual average 117

Notes Explaining rational and logic behind increased build outs and ensure it is realistic and deliverable in accordance with the NPPF and Core Strategy Objectives:

1 Planning Permission for 40 Sheltered / 38 Affordable - Current Master plan allows detailed applications at F1/F9A and F9B to provide further 75 units to create massing + urban form

2 Safeguarded land, can be built upon once Planning issues are understood on Cells D+A

3 Expansion of Market offer allows for further outlets to be brought forward. Up to 4 outlets (Charles Church, Persimmon High Density, Persimmon Lower Density + Self Builds) Explains High Completion Rate.

4 Cells E+D will come forward alongside Cell F phase 2 later build. Higher Later build out due to move of TW + PH + CC outlets onto site.

5 Cell A will come forward alongside Cell D as Cell F build starts to "Wind Down" to allow output to be retained. Build moved forward due to earlier Cell F finish + completions increased to accommodate multiple outlets + possible land sales.

6 Western Expansion brought forward in conjunction with Cells A+ D to maintain output. (Years 2029-30 increased build to represent all outlets moved onto site.)

Source: A report into the delivery of urban extensions (Hourigan Connolly, 2014) / Core Strategy and Urban Core Plan for Gateshead and Newcastle – Proposed Submission Representations on behalf of Persimmon Homes and Charles Church / http://www.newcastlegreatpark.com/

URBAN EXTENSION	Charlton Hayes, South Gloucestershire			
CONCEPTION	Site allocated in South Gloucestershire Local Plan (adopted 2006) through Policy H1 (4)			
PLANNED NUMBER OF DWELLINGS	2,200 - 2,400			
SITE AREA	96 ha			
PROCESS TO DEVELOPMENT	Charlton Hayes – total 2,400 homes. This is now a well-established housing site with some 700 homes either complete or under construction and a further 250 homes with reserved matters planning permission. Master plans and detailed design codes for Phases 2 and 3 approved and further Reserved Matters applications already submitted and more expected early in 2014.			
START OF DEVELOPMENT	2010-11			
ANNUAL DELIVERY	2010-11	2011-12	2012-13	2013-14
	83	87	141	50
TOTAL DWELLINGS TO DATE	361			

NO. OF OUTLETS AND DELIVERY PER OUTLET

Site Location	Site Ref.	Developer(s)	Date planning consent granted	Year Site Complete	Number of years when completions recorded	Total Homes	Average Completions per annum	Number of "sales" outlets	Average Completions per "sales" outlet per annum
Sea Stores, Yate	0123	Taylor Wimpey	27/09/2010	2013/2014	3.0	228	76	1	76
Charlton Hayes, Patchway	0008h	Barratt Homes	19/06/2012	2013/2014	1.0	46	46	1	46
Hammonds Grove, Patchway	0008f	Bovis Homes	22/11/2011	2013/2014	1.5	53	35	1	35
Charlton Hayes, Patchway	0008c	Bovis Homes	25/03/2010	2013/2014	2.0	60	30	0.25	120
Land off Southway Drive, Warmley	0041	J A Pye/ Bellway Homes	05/09/2005	2013/2014	1.5	41	27	1	27
Charlton Hayes, Patchway	0008e	Bovis Homes	19/09/2011	2012/2013	1.0	40	40	0.25	160
Charlton Hayes, Patchway	0008b	Bovis Homes	14/07/2009	2012/2013	3.0	111	37	0.25	148
Charlton Hayes, Patchway	0008a	Bovis Homes	12/08/2009	2011/2012	1.5	51	34	0.25	136

Source: South Glos AMR; email request to Council

APPENDIX B: SUSTAINABLE URBAN EXTENSIONS SUGGESTED FOR COMPARISON

Lawley Village, Telford and Wrekin

Outline permission granted in 2005 for 3,300 dwellings. First phase reserved matters were approved in 2007 with first completions in 2008. But major infrastructure development halted housebuilding, and remaining units in first phase were finished in 2012.

The site has delivered 417 dwellings of 3,300 identified at inception.

(Hourigan Connolly, 2014)

Bradley Stoke, South Gloucester

From the latest AMR there were only two examples for Bradley Stoke in respect of sales outlets. The two sites totalled about 400 dwellings. These were dismissed as they were under 500 units, and because Charlton Hayes is a better case study as it planned for 2,200 dwellings and is located close to Bradley Stoke.)

Cranbrook, East Devon (new settlement)

This site was originally planned for up to 3,500 dwellings in the Devon Structure Plan (2004), but was increased in the Local Plan to 6,000.

The site was granted permission in 2005 subject to completion of s106. This took five years to resolve with planning permission granted in 2010.

First reserved matters for 1,100 dwellings was granted in 2011 with first completions in 2012.

(Hourigan Connolly 2014)

Brooklands, Milton Keynes

Brooklands is part of the Brooklands / Broughton Gate development, which was allocated in the Milton Keynes Local Plan (2005) for 4,000 dwellings.

The outline application for Brooklands (2,500 dwellings) was submitted in 2005, and was subsequently granted in 2006 with the s106 completed in 2007. First reserved matters were submitted 12 months later.

First completions were in 2008 and steady delivery has followed since.

(Hourigan Connolly 2014)

Newton Leys, Milton Keynes

Information on this site was scarce from monitoring reports. At best development was expected to come forward in late 2000s but was delayed, and would be delivered over a 10 year period. 2011-12 AMR states that 121 dwellings were completed.

Hampton, Peterborough

Hampton was granted outline permission in 1991 for 5,200 dwellings, which was subsequently increased to 6,900.

First completions were in 1997. By 2013, 4,313 dwellings have been completed. Delivery expected to continue beyond the Core Strategy plan period which finishes in 2026.

(Peterborough AMR; Housing Development in Peterborough, 2013)

Filton, Bristol

Three of six phases have been completed and the remaining are under construction. Core Strategy states it will be phased up to 2016. Detail not clear in the AMR.

(South Glos AMR / Core Strategy.)

South Worcester

Outline applications were submitted in 2013 for the urban extension as it crosses three local authority areas. The outline proposes up to 2,204 dwellings as part of a mixed-use development. The application has not been approved on the Council's application portal.

(http://www.worcester.gov.uk/index.php?id=2851)

North Whitely, Fareham, Hampshire

North Whiteley is part of a larger allocation for 1,480 dwellings in the Council's Core Strategy. Whiteley is allocated for 180 dwellings, but an outline application has not yet been submitted.

(North of Whiteley Development Forum / Fareham Core Strategy)

Monkton Heathfield, Taunton

Originally allocated for 1,000 dwellings in the Council's Local Plan (2004), it was increased to 4,500 as a strategic allocation in the RSS. Although the RSS did not progress, the Council's Core Strategy included the site as an allocation for 3,500, in addition to the 1,000 in the Local Plan.

The outline application for phase 1 (effectively the Local Plan allocation) was submitted in 2005 for 900 and refused, but granted at appeal in 2007. Development started in 2012. Phase 2 application not yet submitted.

(Hourigan Connolly 2014)

APPENDIX 4

A4.1 Start to Finish: How quickly do large scale housing sites deliver? Nathaniel Lichfield & Partners, Targeted Research & Intelligence Programme (November 2016)

TRIP
Targeted Research
& Intelligence Programme

Nathaniel Lichfield
& Partners
Planning. Design. Economics.

Start to Finish

How Quickly do Large-Scale Housing Sites Deliver?

November 2016

Executive Summary

There is a growing recognition that large-scale housing development can and should play a large role in meeting housing need. Garden towns and villages – planned correctly – can deliver sustainable new communities and take development pressure off less sustainable locations or forms of development.

However, what looks good on paper needs to deliver in practice. Plans putting forward large sites to meet need must have a justification for the assumptions they make about how quickly sites can start providing new homes, and be reasonable about the rate of development. That way, a local authority can decide how far it needs to complement its large-scale release with other sites – large or small – elsewhere in its district.

This research looks at the evidence on speed and rate of delivery of large-scale housing based on a large number of sites across England and Wales (outside London). We draw five conclusions:

1. If more homes are to be built, more land needs to be released and more planning permissions granted. There is no evidence to support the notion of systemic 'land banking' outside London: the commercial drivers of both house builders and land promoters incentivises rapid build out of permissions to secure returns on capital.

2. Planned housing trajectories should be realistic, accounting and responding to lapse rates, lead-in times and sensible build rates. This is likely to mean allocating more sites rather than less, with a good mix of types and sizes, and then being realistic about how fast they will deliver so that supply is maintained throughout the plan period. Because no one site is the same – and with significant variations from the average in terms of lead-in time and build rates – a sensible approach to evidence and justification is required.

3. Spatial strategies should reflect that building homes is a complex and risky business. Stronger local markets have higher annual delivery rates, and where there are variations within districts, this should be factored into spatial strategy choices. Further, although large sites can deliver more homes per year over a longer time period, they also have longer lead-in times.

4. Plans should reflect that – where viable – affordable housing supports higher rates of delivery. This principle is also likely to apply to other sectors that complement market housing for sale, such as build to rent and self-build (where there is demand for those products). This might mean some areas will want to consider spatial strategies that favour sites with greater prospects of affordable or other types of housing delivery.

5. For large-scale sites, it matters whether a site is brownfield or greenfield. The latter come forward more quickly.

In our conclusions we identify a check list of questions for consideration in exploring the justification for assumed timing and rates of delivery of large-scale sites.

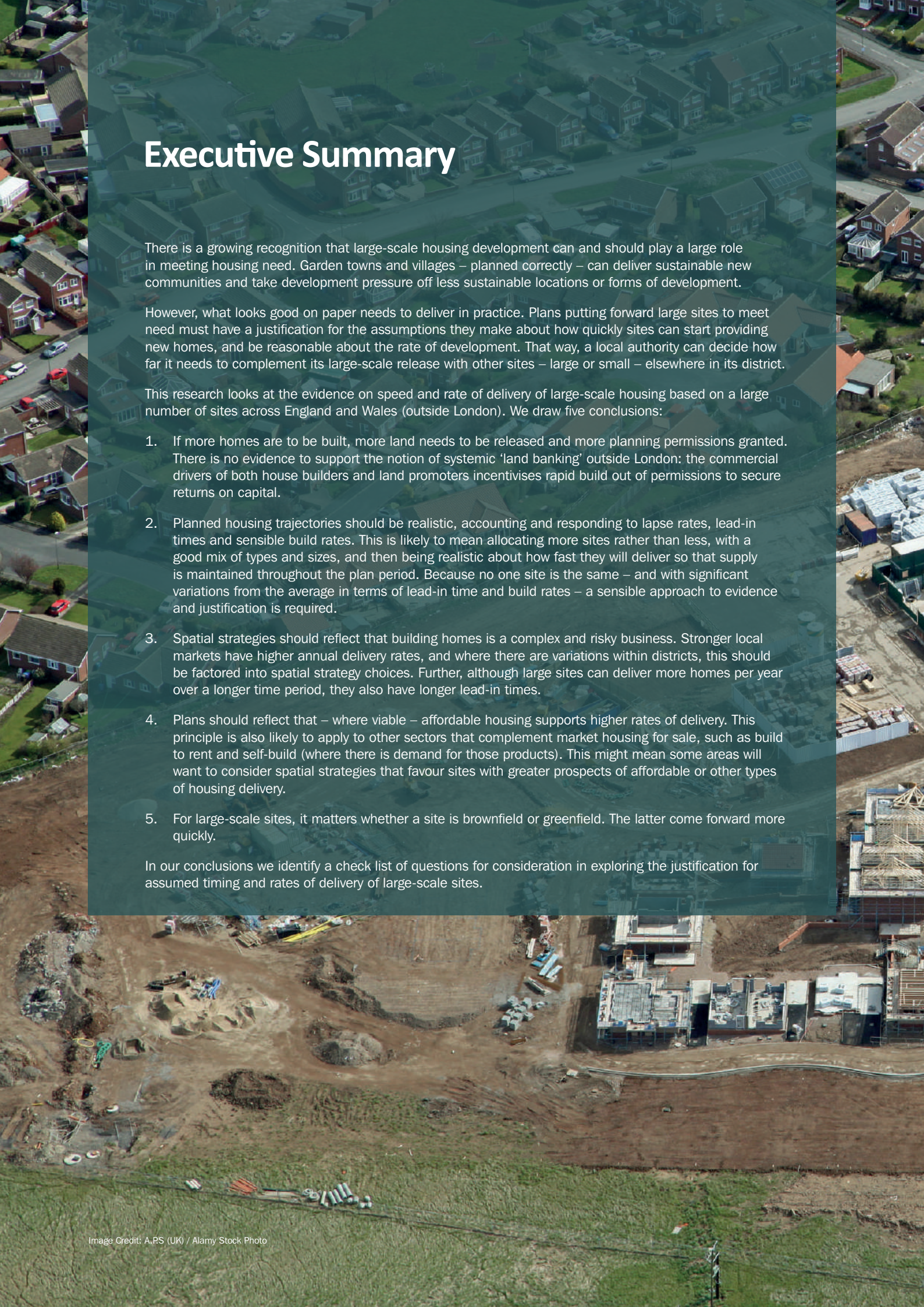


Image Credit: A.P.S (UK) / Alamy Stock Photo

The Research in Figures

70 number of large sites assessed

3.9 years the average lead in time for large sites prior to the submission of the first planning application

6.1 years the average planning approval period of schemes of 2,000+ dwellings. The average for all large sites is circa 5 years

161 the average annual build rate for a scheme of 2,000+ dwellings

321 the highest average annual build rate of the schemes assessed, but the site has only delivered for three years

40% approximate increase in the annual build rate for large sites delivering 30%+ affordable housing compared to those delivering 10%-19%

50% more homes per annum are delivered on average on large greenfield sites than large brownfield sites

Image Credit: Nick Turner / Alamy Stock Photo

Introduction

When it comes to housing, Government wants planning to think big. With its Garden Towns and Villages agenda and consultation on proposed changes to the National Planning Policy Framework (NPPF) to encourage new settlements, planning authorities and developers are being encouraged to bring forward large-scale housing development projects, many of them freestanding. And there is no doubt that such projects will be necessary if England is to boost supply and then consistently deliver the 300,000 new homes required each year[1].

Large-scale sites can be an attractive proposition for plan-makers. With just one allocation of several thousand homes, a district can – at least on paper – meet a significant proportion of its housing requirement over a sustained period. Their scale means delivery of the infrastructure and local employment opportunities needed to sustain mixed communities.

But large-scale sites are not a silver bullet. Their scale, complexity and (in some cases) up-front infrastructure costs means they are not always easy to kick start. And once up and running, there is a need to be realistic about how quickly they can deliver new homes. Past decades have seen too many large-scale developments failing to deliver as quickly as expected, and gaps in housing land supply have opened up as a result.

So, if Local Plans and five year land supply assessments are to place greater reliance on large-scale developments – including Garden Towns and Villages – to meet housing needs, the assumptions they use about when and how quickly such sites will deliver new homes will need to be properly justified.

> *"Local planning authorities should take a proactive approach to planning for new settlements where they can meet the sustainable development objectives of national policy, including taking account of the need to provide an adequate supply of new homes. In doing so local planning authorities should work proactively with developers coming forward with proposals for new settlements in their area."*
>
> **DCLG consultation on proposed changes to national planning policy (December 2015)**

The Planning Practice Guidance (PPG) offers little guidance other than identifying that timescales and rates of development in land availability assessments should be based on information that *"may include indicative lead-in times and build-out rates for the development of different scales of sites. On the largest sites allowance should be made for several developers to be involved. The advice of developers and local agents will be important in assessing lead-in times and build-out rates by year"*[2]. It also requires housing land availability assessments to include: "a reasonable estimate of build out rates, setting out how any barriers to delivery could be overcome."[3]

This research provides insights to this topic – which has become a perennial discussion at Local Plan examinations and Section 78 appeals in recent years – by focusing on two key questions:

1. what are realistic lead-in times for large-scale housing developments?; and
2. once the scheme starts delivering, what is a realistic annual build rate?

NLP has carried out a desk-based investigation of the lead-in times and build-out rates on 70 different strategic housing sites ("large sites") delivering 500 or more homes to understand what factors might influence delivery. For contrast 83 "small sites" delivering between 50 and 499 homes have been researched to provide further analysis of trends in lead in times and build rates at varying scales.

As well as identifying some of the common factors at play during the promotion and delivery of these sites it also highlights that every scheme has its own unique factors influencing its progress: there can be significant variations between otherwise comparable developments, and there is no one 'typical scheme'. This emphasises the importance of good quality evidence to support the position adopted on individual projects.

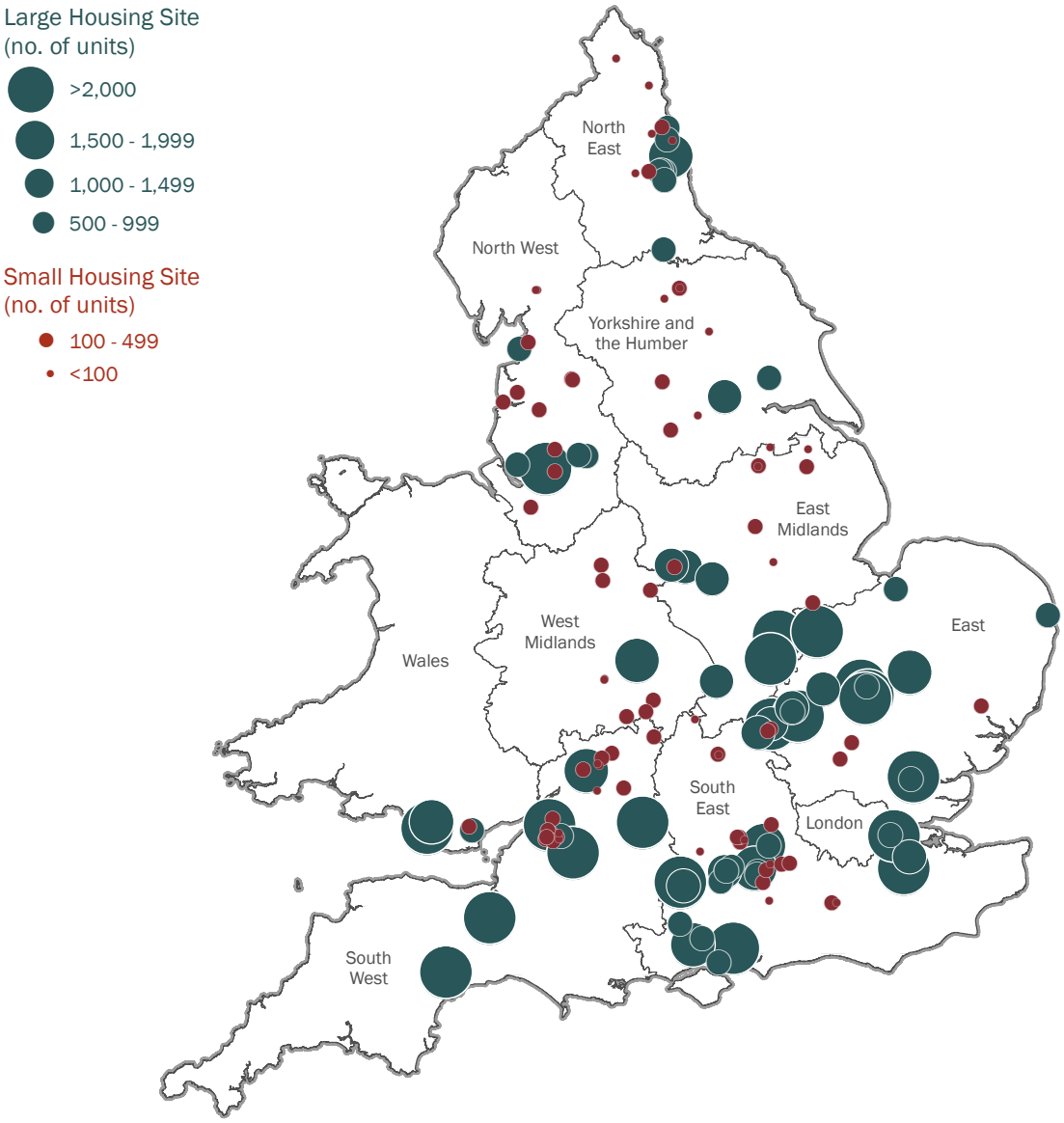
[1] House of Lords Select Committee on Economic Affairs (2016) Building more homes: 1st Report of Session 2016-17 - HL Paper 20
[2] PPG ID: 3-023-20140306
[3] PPG ID: 3-028-20140306

Data Sources and Methodology

In total NLP reviewed 70 strategic sites ("large sites") which have delivered, or will deliver, in excess of 500 dwellings. The sites range in size from 504 to 15,000 dwellings. The geographic distribution of the 70 large sites and comparator small sites is set out below in Figure 1. A full list of the large sites can be found in Appendix 1 and the small sites in Appendix 2. NLP focused on sites outside London, due to the distinctive market and delivery factors applicable in the capital.

Efforts were made to secure a range of locations and site sizes in the sample, but it may not be representative of the housing market in England and Wales as a whole and thus conclusions may not be applicable in all areas or on all sites.

Figure 1: Geographic Distribution of the 70 Large Sites and 83 Small Sites Assessed



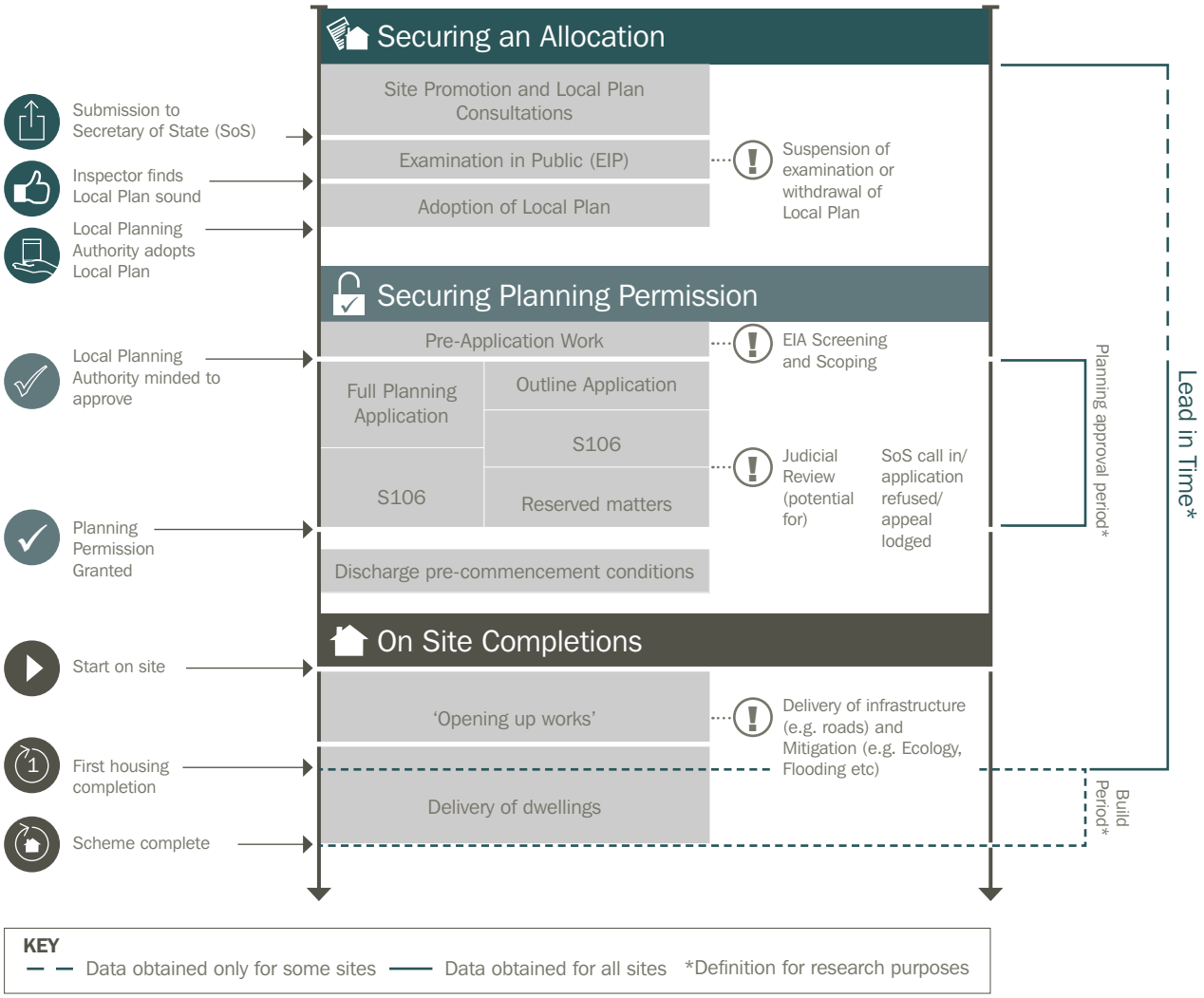
Source: NLP analysis

Methodology

The research aims to cover the full extent of the planning and delivery period. So, wherever the information was available, the data collected on each of the 70 sites covers the stages associated with the total lead-in time of the development (including the process of securing a development plan allocation), the total planning approval period, starting works on site, delivery of the first dwelling and the annualised build rates recorded for the development up until to the latest year where data is available (2014/15). To structure the research and provide a basis for standardised measurement and comparison, these various stages (some of them overlapping) have been codified.

Figure 2 sets out the stages and the milestones used to measure them. These are assumed to fall under what are defined as 'lead-in times', 'planning approval periods' and 'build periods', with 'first housing completion' denoting the end of the lead-in time and start of the build period. Not every site assessed will necessarily have gone through each component of the identified stages sequentially, or indeed at all (for example, some sites secure planning permission without first being allocated).

Figure 2: Timeline for the Delivery of a Strategic Housing Site



Source: NLP

The approach to defining these stages for the purposes of this research is set out below:

- The **'lead-in time'** – this measures the period up to the first housing completion on site from either a) the date of the first formal identification of the site as a potential housing allocation (e.g. in a LPA policy document) or where not applicable, available or readily discernible – b) the validation date of the first planning application made for the scheme.

- The **'planning approval period'** is measured from the validation date of the first application for the proposed development (be that an outline, full or hybrid application). The end date is the decision date of the first detailed application which permits the development of dwellings on site (this may be a full or hybrid application or the first reserved matters approval which includes details for housing). The discharge of any pre-commencement and other conditions obviously follows this, but from a research perspective, a measurement based on a detailed 'consent' was considered reasonable and proportionate milestone for 'planning' in the context of this research.

- The date of the **'first housing completion'** on site (the month and year) is used where the data is available. However, in most instances the monitoring year of the first completion is all that is available and in these cases a mid-point of the monitoring period (1st October, falling halfway between 1st April and the following 31st March) is used.

- The '**annual build rate'** falls within the overall 'build period'. The annual build rate of each site is taken or inferred from the relevant Local Planning Authority's Annual Monitoring Reports (AMR) or other evidence based documents where available. In some instances this was confirmed – or additional data provided – by the Local Planning Authority or County Council.

Due to the varying ages of the assessed sites, the implementation of some schemes was more advanced than others and, as a function of the desk-based nature of the research and the vintage of some of the sites assessed, there have been some data limitations, which means there is not a complete data set for every assessed site. For example, lead-in time information prior to submission of planning applications is not available for all sites. And because not all of the sites assessed have commenced housing delivery, annual build rate information is not universal. The results are presented accordingly.

Getting Started: What are Realistic Lead-in Times?

How long does it take for large-scale sites to get up and running? This can be hard to estimate. Understandably, those promoting sites are positive about how quickly they can deliver, and local authorities choosing to allocate large-scale sites in their plans are similarly keen for these sites to begin making a contribution to housing supply. This leads some local housing trajectories to assume that sites can be allocated in Local Plans and all detailed planning approvals secured in double-quick time. However, the reality can prove different.

Our main focus here is on the average 'planning approval period' and the subsequent period from receiving a detailed planning approval to delivery of the first house on site. However, another important metric is how long it takes from the site being first identified by the local authority for housing delivery to getting started on site. Unfortunately, getting accurate data for this on some of the historic sites is difficult, so this analysis is focused on a just 18 of the sample sites where information was available.

Lead-in Times

The lead-in time prior to the submission of a planning application is an important factor, because many planning issues are flushed out in advance of planning applications being submitted, not least in terms of local plan allocations establishing the principle of an allocation. In a plan-led system, many large-scale sites will rely on the certainty provided by Local plans, and in this regard, the slow pace of plan-making in the period since the NPPF[4] is a cause for concern.

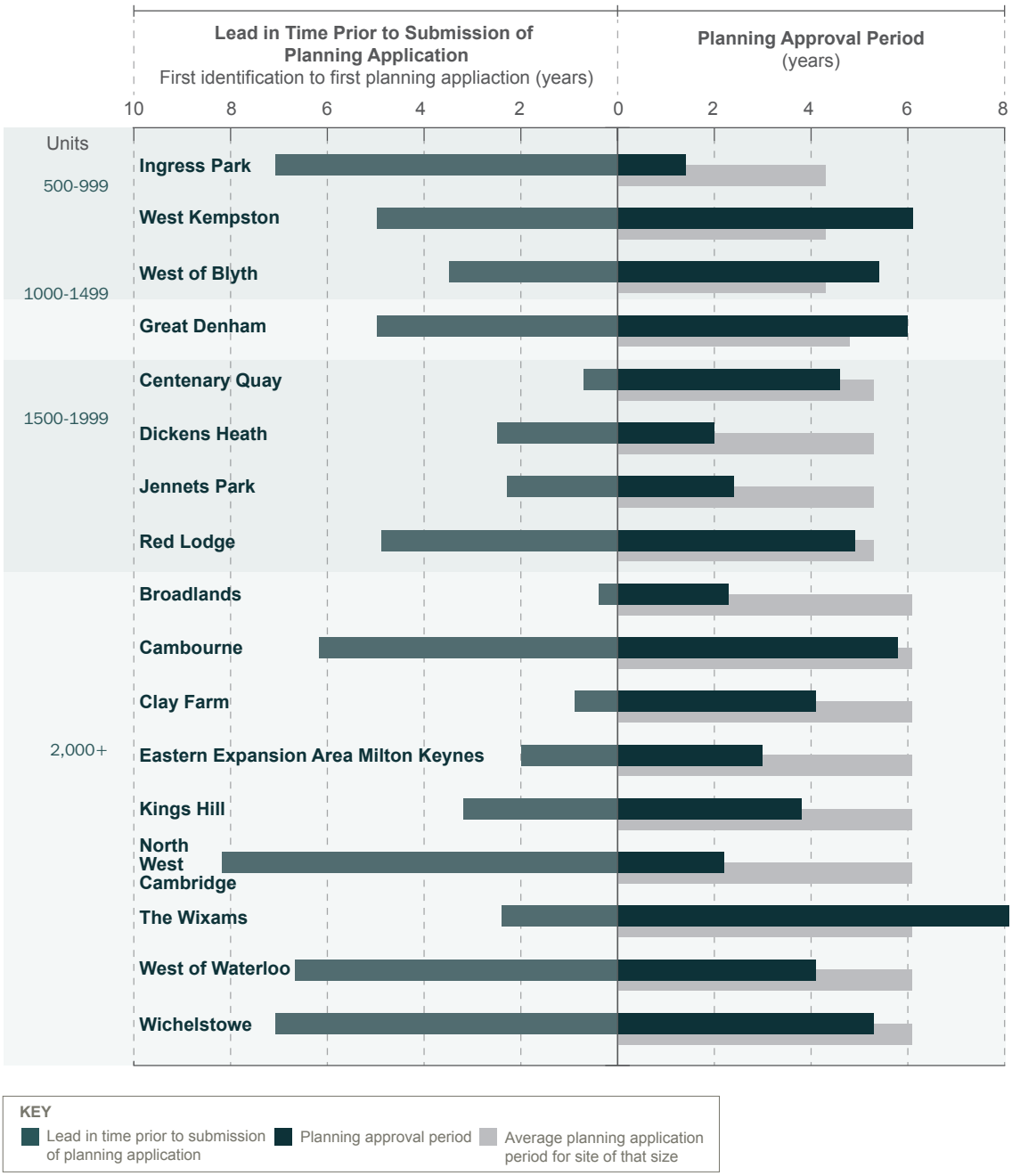
If the lead-in time prior to submission of an application is able to focus on addressing key planning issues, it can theoretically help ensure that an application – once submitted – is determined more quickly. Our sample of sites that has lead-in time information available is too small to make conclusions on this theory. However, there is significant variation within these sites highlighting the complexity of delivering homes on sites of different sizes. Of this sample of sites: on average it was 3.9 years from first identification of the site for housing to the submission of the initial planning application.

Moreover, a substantial lead-in time does not guarantee a prompt permission: 4 of the 18 sites that took longer to gain planning permission than the average for sites of comparable size and also had lead-in times prior to submission of a planning application of several years[5].

[4] As at September 2016, just 34% of Local Authorities outside London have an up-to-date post-NPPF strategic-level Local Plan. Source: PINS / NLP analysis.

[5] The sites in question were The Wixams, West Kempton, West of Blyth, and Great Denham.

Figure 3: Average lead-in time of sites prior to submission of the first planning application



KEY

Lead in time prior to submission of planning application

Planning approval period

Average planning application period for site of that size

Source: NLP analysis

The Planning Approval Period: Size Matters

The term 'planning approval period' in this report measures the period from the validation date of the first planning application for the scheme to the decision date of the first application which permits development of dwellings on site (this could be a full, hybrid or reserved matters application). Clearly, in many cases, this approval will also need to be followed by discharge of pre-commencement conditions (a focus of the Government's Neighbourhood Planning Bill) but these were not reviewed in this research as a detailed approval was considered an appropriate milestone in this context.

The analysis considers the length of planning approval period for different sizes of site, including comparing large-scale sites with small sites. Figure 4 shows that the greater the number of homes on a site, the longer the planning approval period becomes. There is a big step-up in time for sites of in-excess of 500 units.

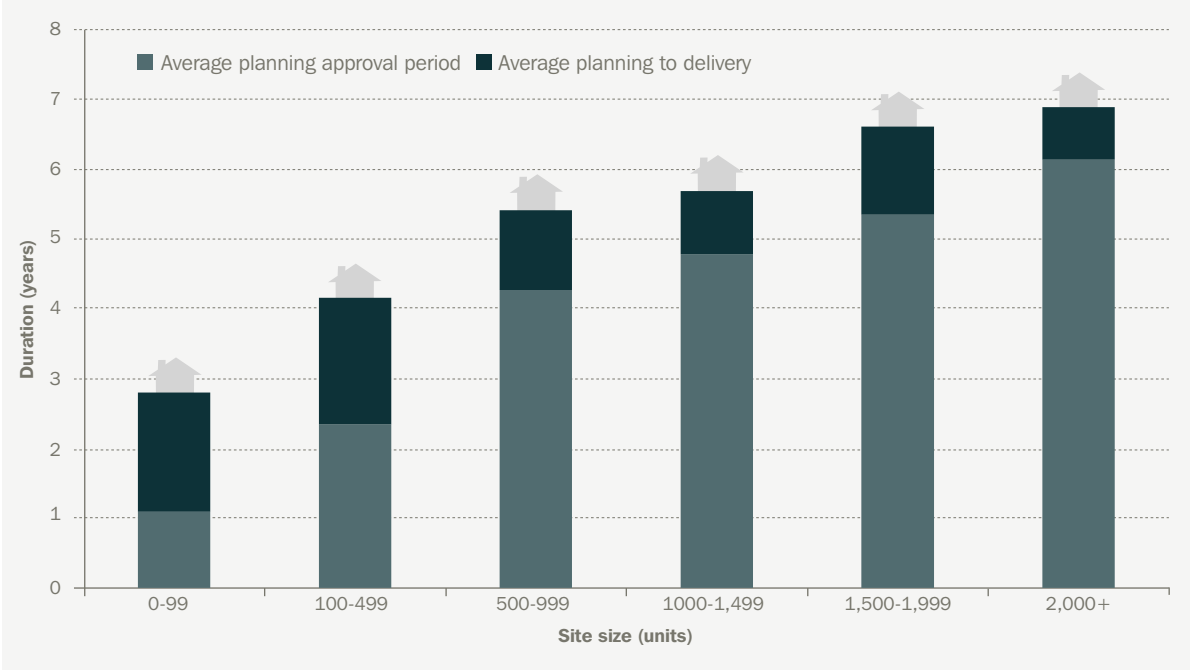
Time Taken for First Housing Completion after Planning Approval

Figure 4 also shows the time between the approval of the first application to permit development of dwellings on site and the delivery of the first dwelling (during which time any pre-commencement conditions would also be discharged), in this analysis his is the latter part of the lead in time period. This reveals that the timescale to open up a site following the detailed approval is relatively similar for large sites.

Interestingly, our analysis points to smaller sites taking longer to deliver the first home after planning approval. This period of development takes just over 18 months for small sites of under 500 units, but is significantly quicker on the assessed large-scale sites; in particular, on the largest 2,000+ dwelling sites the period from receiving planning approval to first housing completion was 0.8 years.

In combination, the planning approval period and subsequent time to first housing delivery reveals the total period increases with larger sites, with the total period being in the order of 5.3 – 6.9 years. Large sites are typically not quick to deliver; in the absence of a live planning application, they are, on average, unlikely to be contributing to five year housing land supply calculations.

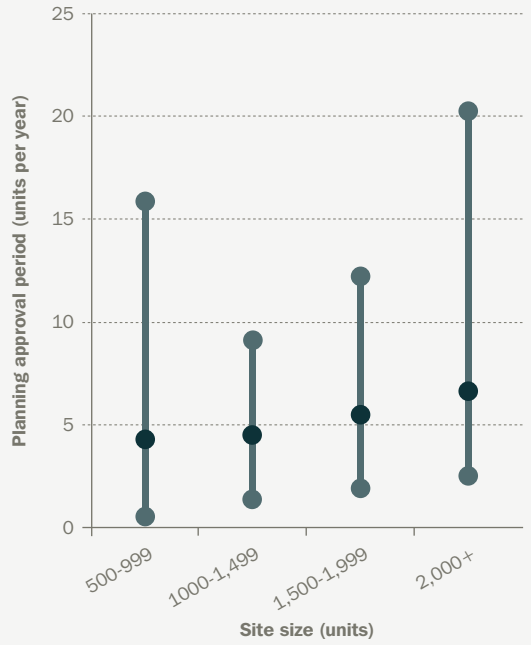
Figure 4: Average planning approval period and delivery of first dwelling analysis by site size



Source: NLP analysis

Of course, these are average figures, and there are significant variations from the mean. Figure 5 below shows the minimum and maximum planning approval periods for sites in each of the large size categories. This shows even some of the largest sites coming forward in under two years, but also some examples taking upwards of 15-20 years. Clearly, circumstances will vary markedly from site to site.

Figure 5: Site size and duration of planning



Source: NLP analysis

Case Studies

If some sites are coming forward more quickly than the average for sites of that size, what is it that is driving their rapid progress? We explored this with some case studies. These suggest that when schemes are granted planning permission significantly faster than the above averages, it is typically due to specific factors in the lead-in time prior to the submission of a planning application.

Gateshead – St James Village (518 dwellings):
Planning approval period 0.3 years[6]

This site was allocated as a brownfield site in the Gateshead UDP (2000) prior to the submission of a planning application for the regeneration scheme. A Regeneration Strategy for East Gateshead covered this site and as at 1999 had already delivered high profile flagship schemes on the water front. Llewelyn Davis were commissioned by the Council and English Partnerships to prepare a masterplan and implementation strategy for the site which was published in June 1999. Persimmon Homes then acquired the site and it was agreed in autumn 1999 that they should continue the preparation of the masterplan. East Gateshead Partnership considered the masterplan on the 08th March 2000 and recommended approval. Subsequently, the outline application (587/00) with full details for phase 1 was validated on the 6th September 2000 and a decision issued on the 9th January 2001.

It is clear that although it only took 0.3 years for the planning application to be submitted and granted for a scheme of more than 500 units, the lead in time to the submission of the application was significant, including an UDP allocation and a published masterplan 18 months ahead of permission being granted. By the time the planning application was submitted most of the site specific issues had been resolved.

[6] St James Village is excluded from the lead-in time analysis because it is unclear on what date the site was first identified within the regeneration area

Dartford – Ingress Park (950 dwellings):
Planning approval period 1.4 years

This site was initially identified in a draft Local Plan in 1991 and finally allocated when this was adopted in April 1995. The Ingress Park and Empire Mill Planning Brief was completed in three years later (November 1998).

The submission of the first planning application for this scheme predated the completion of the Planning Brief by a few months, but the Council had already established that they supported the site. By the time the first application for this scheme was submitted, the site had been identified for development for circa seven years.

The outline application (98/00664/OUT) was validated on the 10th August 1998 and permission granted on the 21st Nov 2000, a determination period of 1 year and 3 months). A full application for the First Phase for 52 dwellings (99/00756/FUL) was validated and approved in just two months, prior to approval of the outline. Clearly, large-scale outline permissions have to wrap up a wide range of other issues, but having first phase full applications running in parallel can enable swifter delivery, in situations where a 'bite sized' first phase can be implemented without triggering complex issues associated with the wider site.

Cambridge and South Cambridgeshire – North West Cambridge (3,000 dwellings and 2,000 student bed spaces):
Planning approval period 2.2 years

Cambridge University identified this area as its only option to address its long-term development needs, and the Cambridgeshire and Peterborough Structure Plan 2003 identified the location for release from the Green Belt. The site was allocated in the 2006 Cambridge Local Plan, and the North West Cambridge Area Action Plan was adopted in October 2009. The Area Action Plan established an overall vision and set out policies and proposals to guide the development as a whole.

As such, by the time the first application for this scheme was submitted, there had already been circa eight years of 'pre-application' planning initially concerning the site's release from the Green Belt, but then producing the Area Action Plan which set out very specific requirements.. This 'front-loaded' consideration of issues that might otherwise have been left to a planning application.

The outline application (11/1114/OUT – Cambridge City Council reference) for delivery of up to 3,000 dwellings, up to 2,000 student bed spaces and 100,000 sqm of employment floorspace was validated on the 21st September 2011 and approved on the 22nd of February 2013. The first reserved matters application for housing (13/1400/REM) was validated on the 20th September 2013 and approved on the 19th December 2013. Some ten years from the concept being established in the Structure Plan.

Summary on Lead-in Times

1. On average, larger sites take longer to complete the planning application and lead-in processes than do smaller sites. This is because they inevitably give rise to complex planning issues related to both the principle of development and the detail of implementation.

2. Consideration of whether and how to implement development schemes is necessary for any scheme, and the evidence suggests that where planning applications are determined more quickly than average, this is because such matters were substantially addressed prior to the application being submitted, through plan-making, development briefs and/or master planning. There is rarely a way to short-circuit planning.

3. Commencement on large sites can be accelerated if it is possible to 'carve-out' a coherent first phase and fast track its implementation through a focused first phase planning application, in parallel with consideration of the wider scheme through a Local Plan or wider outline application.

4. After receiving permission, on average smaller sites take longer to deliver their first dwelling than do the largest sites (1.7-1.8 years compared to 0.8 years for sites on 2,000+ units).

Lapse Rates: What Happens to Permissions?

Not every planning permission granted will translate into the development of homes. This could mean an entire site does not come forward, or delivery on a site can be slower than originally envisaged. It is thus not realistic to assume 100% of planning permission granted in any given location will deliver homes. Planning permissions can lapse for a number of reasons:

1. The landowner cannot get the price for the site that they want;
2. A developer cannot secure finance or meet the terms of an option;
3. The development approved is not considered to be financially worthwhile;
4. Pre-commencement conditions take longer than anticipated to discharge;
5. There are supply chain constraints hindering a start; or
6. An alternative permission is sought for the scheme after approval, perhaps when a housebuilder seeks to implement a scheme where the first permission was secured by a land promoter.

These factors reflect that land promotion and housebuilding is not without its risks.

At the national level, the Department for Communities and Local Government has identified a 30-40% gap between planning permissions granted for housing and housing starts on site[7]. DCLG analysis suggested that 10-20% of permissions do not materialise into a start on site at all and in addition, an estimated 15-20% of permissions are re-engineered through a fresh application, which would have the effect of pushing back delivery and/or changing the number of dwellings delivered.

This issue often gives rise to claims of 'land banking' but the evidence for this is circumstantial at best, particularly outside London. The business models of house builders are generally driven by Return on Capital Employed (ROCE) which incentivises a quick return on capital after a site is acquired. This means building and selling homes as quickly as possible, at sales values consistent with the price paid for the land. Land promoters (who often partner with landowners using promotion agreements) are similarly incentivised to dispose of their site to a house builder to unlock their promotion fee. Outside London, the scale of residential land prices has not been showing any significant growth in recent years[8] and indeed for UK greenfield and urban land, is still below levels last seen at least 2003[9]. There is thus little to incentivise hoarding land with permission.

The LGA has identified circa 400-500,000 units of 'unimplemented' permissions[10], but even if this figure was accurate, this is equivalent to just two years of pipeline supply. More significantly, the data has been interpreted by LGA to significantly overstate the number of unimplemented permissions because 'unimplemented' refers to units on sites where either the entire site has not been fully developed or the planning permission has lapsed[11]. It therefore represents a stock-flow analysis in which the outflow (homes built) has been ignored.

Insofar as 'landbanking' may exist, the issue appears principally to be a London – rather than a national – malaise, perhaps reflecting that land values in the capital – particularly in 'prime' markets – have increased by a third since the previous peak of 2007. The London Mayor's 'Barriers to Housing Delivery – Update' of July 2014 looked at sites of 20 dwellings or more and reported that only about half of the total number of dwellings granted planning permission every year are built (Table 3); a lapse rate of circa 50% across London.

Clearly, the perceived problem of landbanking is seeing policy attention from Government, but caution is needed that any changes do not result in unintended consequences or act as a disincentive to secure planning permissions.

A more practical issue is that Plans and housing land trajectories must adopt sensible assumptions, based on national benchmarks, or – where the data exists – local circumstances, to understand the scale of natural non-implementation.

[7] DCLG Presentations to the HBF Planning Conference (September 2015)
[8] Knight Frank Residential Development Land Index Q1 2016 **http://content.knightfrank.com/research/161/documents/en/q1-2016-3844.pdf**
[9] Savills Development Land Index **http://www.savills.co.uk/research/uk/residential-research/land-indices/development-land-index.aspx**
[10] Glenigan data as referenced by Local Government Association in its January 2016 media release (a full report is not published) **http://www.local.gov.uk/web/guest/media-releases/-/journal_content/56/10180/7632945/NEWS**
[11] This would mean that a site which has built 99% of homes will still show up as 100% of units being 'unimplemented'

Build Rates: How Fast Can Sites Deliver?

The rate at which sites deliver new homes is a frequently contested matter at Local Plan examinations and during planning inquiries considering five year housing land supply. Assumptions can vary quite markedly and expectations have changed over time: in 2007, Northstowe – the new settlement to the north west of Cambridge – was expected by the Council to deliver 750-850 dwellings per annum[12]; it is now projected to deliver at an annual rate of just 250[13].

There is a growing recognition that the rate of annual delivery on a site is shaped by 'absorption rates': a judgement on how quickly the local market can absorb the new properties. However, there are a number of factors driving this for any given site:

- the strength of the local housing market;
- the number of sales outlets expected to operate on the site (ie the number of different house builders or brands/products being delivered); or
- the tenure of housing being built. Are market homes for sale being supplemented by homes for rent, including affordable housing?

The analysis in this section explores these factors with reference to the surveyed sites.

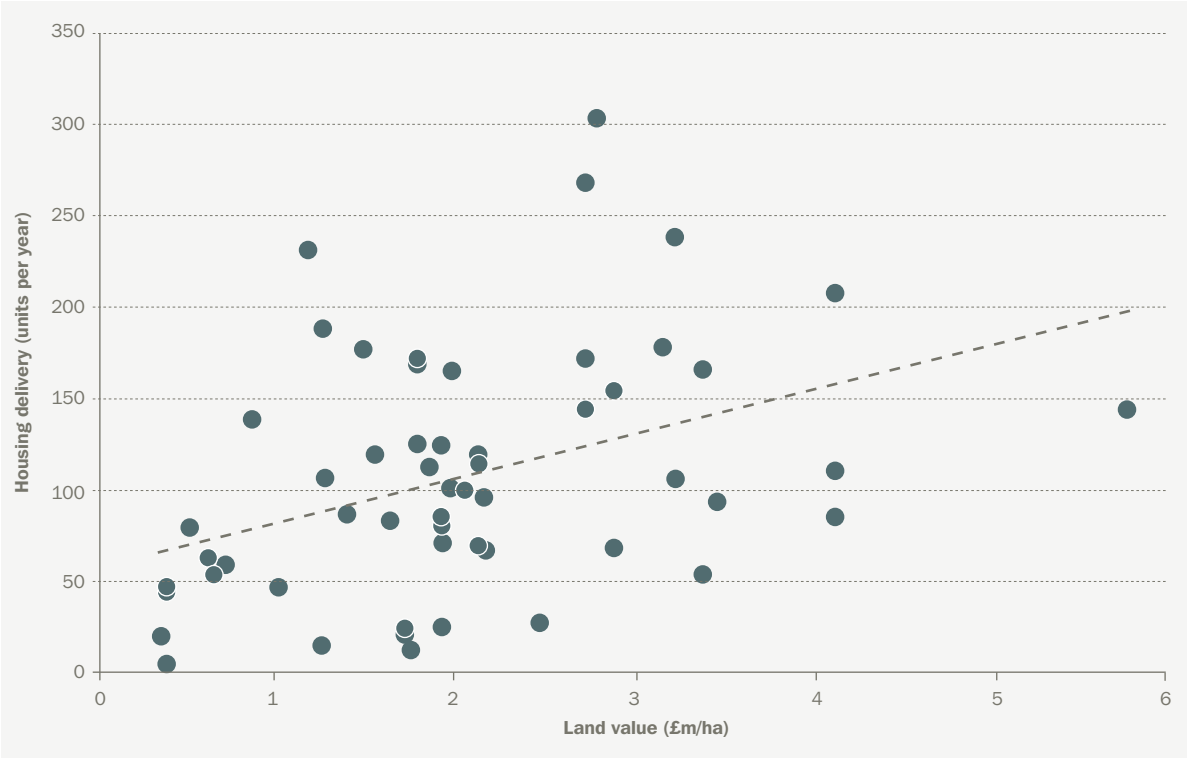
Market Strength

It might seem a truism that stronger market demand for housing will support higher sales and build rates – but how far is that the case and how to measure it?

Figure 6 below compares CLG data on post-permission residential land value estimates (£/ha) by Local Authorities in 2014[14] to the average build out rate of each of the assessed strategic sites. Unfortunately the residential land value estimates are only available for England and as such the Welsh sites assessed are excluded, leaving 57 sites in total.

The analysis shows that markets matter. Relatively weaker areas may not be able to sustain the high build-out rates that can be delivered in stronger markets with greater demand for housing. There are significant variations, reflecting localised conditions, but the analysis shows a clear relationship between the strength of the market in a Local Authority area and the average annual build rates achieved on those sites. Plan makers should therefore recognise that stronger local markets can influence how quickly sites will deliver.

Figure 6: Average Annual Build-out Rates of sites compared to Land Values as at 2014



Source: NLP analysis and CLG Post-permission residential land value estimates (£/ha) by Local Authorities (February 2015)

[12] South Cambridgeshire Annual Monitoring Report 2006/07
[13] South Cambridgeshire Annual Monitoring Report 2014/15
[14] Post-permission residential land value estimates were released in December 2015, however the end date of the build rate data obtained is 2014/15; as such land value estimates at February 2015 are better aligned to the build periods assessed in this report and have been used for consistency.

Size Matters

A key metric for build rates on sites is the number of sales outlets. Different housebuilders will differentiate through types or size of accommodation and their brands and pricing, appealing to different customer types. In this regard, it is widely recognised that a site may increase its absorption rate through an increased number of outlets.

Unfortunately, data limitations mean that the number of outlets is not readily available for the large sites surveyed within this research, and certainly not on any longitudinal basis which is relevant because the number of outlets on a site may vary across phases.

However, it is reasonable to assume that larger sites are likely to feature more sales outlets and thus have greater scope to increase build rates. This may relate to the site being more geographically extensive: with more access points or development 'fronts' from which sales outlets can be driven. A large urban extension might be designed and phased to extend out from a number of different local neighbourhoods within an existing town or city, with greater diversity and demand from multiple local markets.

Our analysis supports this concept: larger sites deliver more homes each year, but even the biggest schemes (those with capacity for 2,000 units) will, on average, deliver fewer than 200 dwellings per annum, albeit their average rate – 161 units per annum – is six times that of sites of less than 100 units (27 units per annum).

Figure 7: Average annual build rate by site size

Source: NLP analysis

Of course, these are average figures. Some sites will see build rates exceeding this average in particular years, and there were variations from the mean across all categories (see Figure 8), suggesting that higher or lower rates than this average may well be possible, if circumstances support it.

Nevertheless, it is striking that annual average delivery on sites of up to 1,499 units barely exceeds 100 units per annum, and there were no examples in this category that reached a rate of 200 per annum. The highest rate – of 321 units per annum – is for the Cranbrook site, but this is a short term average. A rate of 268 per annum was achieved over a longer period at the Eastern Expansion Area (Broughton Gate & Brooklands) site in Milton Keynes. The specific circumstance surrounding the build rates in both these examples are explored as case studies opposite. It is quite possible that these examples might not represent the highest rate of delivery possible on large-scale sites in future, as other factors on future sites might support even faster rates.

Our analysis also identifies that, on average, a site of 2,000 or more dwellings does not deliver four times more dwellings than a site delivering between 100 and 499 homes, despite being at least four times the size. In fact it only delivers an average of 2.5 times more houses. This is likely to reflect that:

- it will not always be possible to increase the number of outlets in direct proportion to the size of site – for example due to physical obstacles (such as site access arrangements) to doing so; and
- overall market absorption rates means the number of outlets is unlikely to be a fixed multiplier in terms of number of homes delivered.

Figure 8: Average annual build-out rate by site size, including the minimum and maximum averages within each site size

Source: NLP analysis

Cranbrook: East Devon

The highest average annual build out rates recorded in this analysis comes from the Cranbrook site in East Devon where an average of 321 dwellings per annum were delivered between 2012/13 and 2014/15. Delivery of housing only started on this site in 2012/13, with peak delivery in 2013/14 of 419 dwellings.

Cranbrook is the first new standalone settlement in Devon for centuries and reportedly – according to East Devon Council – the result of over 40 years of planning (this claim has not been substantiated in this research). It is the circumstances surrounding its high annual delivery rate which is of most interest, however.

Phase 1 of the development was supported by a £12 million repayable grant from a revolving infrastructure fund managed by the Homes and Communities Agency. The government also intervened again in the delivery of this site by investing £20 million for schools and infrastructure to ensure continuity of the scheme, securing the delivery of phase 2. The government set out that the investment would give local partners the confidence and resources to drive forward its completion.

The Consortium partnership for Cranbrook (including Hallam Land, Persimmon Homes (and Charles Church) and Taylor Wimpey) stated the following subsequent to the receipt of the government funding[15].

"Without this phase 2 Cranbrook would have been delayed at the end of phase 1, instead, we have certainty in the delivery of phase 2, we can move ahead now and commit with confidence to the next key stages of the project and delivering further community infrastructure and bringing forward much needed private and affordable homes".

Clearly, the public sector played a significant role in supporting delivery. The precise relationship between this and the build rate is unclear, but funding helped continuity across phases one and two of the scheme. More particularly, the rate of delivery so far achieved relates just to the first three years, and there is no certainty that this high build-out rate will be maintained across the remainder of the scheme.

Eastern Expansion Area (Broughton Gate & Brooklands): Milton Keynes

The second highest average build out rates recorded in this analysis comes from the Eastern Expansion Area (Broughton Gate & Brooklands) site in Milton Keynes where an average of 268 dwellings per annum were delivered between 2008/09 and 2013/14. As is widely recognised, the planning and delivery of housing in Milton Keynes is distinct from almost all the sites considered in this research.

Serviced parcels with the roads already provided were delivered as part of the Milton Keynes model and house builders are able to proceed straight onto the site and commence delivery. This limited the upfront site works required and boosted annual build rates. Furthermore, there were multiple outlets building-out on different serviced parcels, with monitoring data from Milton Keynes Council suggesting an average of c.12 parcels were active across the build period. This helped to optimise the build rate.

[15] https://www.gov.uk/government/news/government-funding-to-unlock-delivery-of-12-000-new-homes

Peak Years of Housing Delivery

Of course, rates of development on sites will ebb and flow. The top five peak annual build-out rates achieved across every site assessed are set out in Table 1 below. Four of the top five sites with the highest annual peak delivery rates are also the sites with the highest annual average build out rates (with the exception of Broughton & Atterbury). Peak build rates might occur in years when there is an overlap of multiple outlets on phases, or where a particular phase might include a large number of affordable or apartment completions. It is important not to overstress these individual years in gauging build rates over the whole life of a site.

Table 1: Peak annual build-out rates compared against average annual delivery rates on those sites

Scheme	Peak Annual Build-Out Rate	Annual Average Build-Out Rate
Cambourne	620	239
Hamptons	548	224
Eastern Expansion Area	473	268
Cranbrook	419	321
Broughton	409	171

Source: NLP analysis and various AMRs

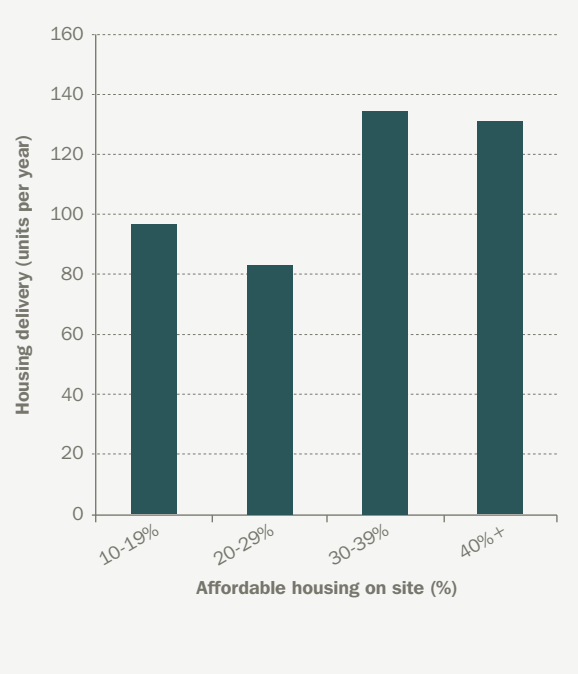
Affordable Housing Provision

Housing sites with a larger proportion of affordable homes (meeting the definition in the NPPF) deliver more quickly, where viable. The relationship appears to be slightly stronger on large-scale sites (500 units or more) than on smaller sites (less than 500 units), but there is a clear positive correlation (Figure 9). For both large and small-scale sites, developments with 40% or more affordable housing have a build rate that is around 40% higher compared to developments with 10-19% affordable housing obligation.

The relationship between housing delivery and affordable (subsidised) housing is multi-dimensional, resting on the viability, the grant or subsidy available and the confidence of a housing association or registered provider to build or purchase the property for management. While worth less per unit than a full-market property, affordable housing clearly taps into a different segment of demand (not displacing market demand), and having an immediate purchaser of multiple properties can support cash flow and risk sharing in joint ventures. However, there is potential that starter homes provided in lieu of other forms of affordable housing may not deliver the same kind of benefits to speed of delivery, albeit they may support viability overall.

This principle – of a product targeting a different segment of demand helping boost rates of development – may similarly apply to the emergent sectors such as 'build-to-rent' or 'self build' in locations where there is a clear market for those products. Conversely, the potential for starter homes to be provided in lieu of other forms of affordable housing may overlap with demand for market housing on some sites, and will not deliver the kind of cash flow / risk sharing benefits that comes from disposal of properties to a Registered Provider.

Figure 9: Affordable housing provision and housing output



Source: NLP analysis

The Timeline of the Build-out Period

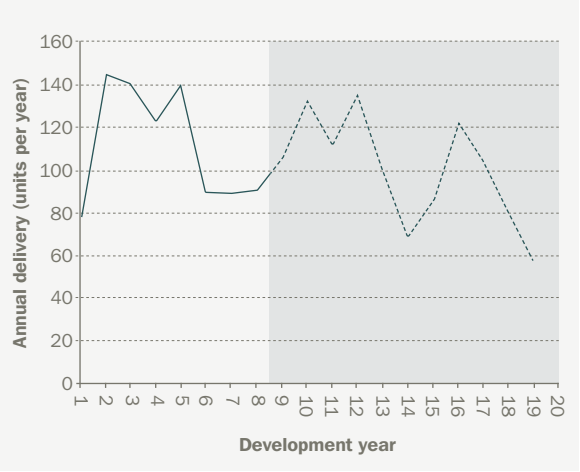
Many planners' housing trajectories show large sites gradually increasing their output and then remaining steady, before tailing off at the end. In fact, delivery rates are not steady. Looking at the first eight years of development – where the sample size of large sites is sufficiently high – NLP's research showed that annual completions tended to be higher early in the build-out period before dipping (Figure 10).

For sites with even longer build out periods, this pattern of peaks and troughs is potentially repeated again (subject to data confidence issues set out below). This surge in early completions could reflect the drive for

rapid returns on capital in the initial phase, and/or early delivery of affordable housing, with the average build rate year by year reducing thereafter to reflect the optimum price points for the prevailing market demand. Additionally, the longer the site is being developed, the higher the probability of coinciding with an economic downturn – obviously a key factor for sites coming forward over the past decade – which will lead to a reduction in output for a period.

Our sample of sites where the development lasted for more than eight years is too small to draw concrete findings, but it does flag a few other points. On extremely large sites that need to span more than a decade, the development will most likely happen in phases. The timing and rate of these phases will be determined by a range of factors including: the physical layout of the site, the ability to sell the homes; trigger points for payment for key social and transport infrastructure obligations; the economic cycle; and local market issues. Predicting how these factors combine over a plan period is self-evidently difficult, but plan makers should recognise the uncertainty and build in flexibility to their housing trajectories to ensure they can maintain housing supply wherever possible.

Figure 10: Average annual build-out rate per year of the build period



Source: NLP analysis

Summary

1. There is a positive correlation between the strength of the market (as measured by residential land values) and the average annual build rates achieved.
2. The annual average build-rate for the largest sites (of 2,000 or more units) is circa 161 dwellings per annum
3. The rate of delivery increases for larger schemes, reflecting the increased number of sales outlets possible on large sites. However, this is not a straight line relationship: on average, a site of 2,000 units will not, deliver four times as fast as a site of 500. This reflects the limits to number of sales outlets possible on a site, and overall market absorption rates.
4. There is significant variation from the average, which means some sites can be expected to deliver more (or less) than this average. However, the highest average build-out rate of all the assessed sites is 321 dwellings per annum in Cranbrook. But this relates to just three years of data, and the scheme benefitted from significant government funding to help secure progress and infrastructure. Such factors are not be present in all schemes, and indeed, the data suggests sites tend to build at a higher rate in initial years, before slowing down in later phases.
5. Build rates on sites fluctuate over their life. The highest build rate recorded in a single year is 620 units at Camborne, but for the duration of the development period the average annual build rate is 239 dwellings.
6. There is a positive correlation between the percentage of affordable homes built on site and the average annual delivery of homes with sites delivering 30% or more affordable housing having greater annual average build rates than sites with lower affordable housing provision. The introduction of different tenures taps into different market segments, so a build to rent product may similarly boost rates of delivery – where there is a market for it – but starter homes may have the opposite effect if they are provided in lieu of other forms of affordable homes, and displace demand for cheaper market homes.

A Brownfield Land Solution?

The NPPF encourages the effective use of previously-developed land, and recent Government announcements suggest increased prioritisation of development for brownfield sites. Efforts to streamline the planning process for brownfield sites may also speed up their delivery. But, is there a difference in how quickly brownfield sites can come forward compared to greenfield sites?

Research produced by CPRE and Glenigan in March 2016[16] suggested that the time between planning permission being granted and construction work starting is generally the same for brownfield and greenfield sites, but suggested that work on brownfield sites is completed more than six months quicker. However, it was not clear if this finding was because the greenfield sites were larger than the equivalent brownfield sites surveyed in that study. We therefore looked at how lead in times and build rates compared for large-scale sites of 500+ dwellings on greenfield and brownfield sites.

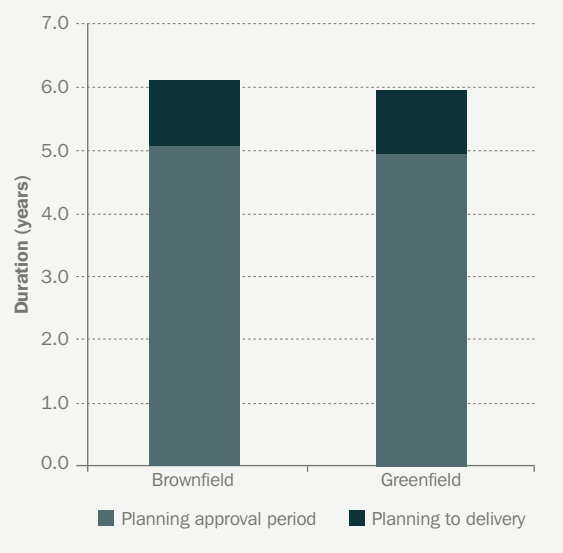
The Planning Approval Period

Whether land is brownfield or greenfield does not impact on the planning approval period. On average, for all sites, the planning approval period for the sites delivering 500 dwellings or more is almost identical at 5.1 years for brownfield and 5.0 years for greenfield – see Figure 11, although this is skewed by the very largest sites of 2,000+ units (see Table 2), with brownfield sites in the smaller-size bands being on average slightly quicker than their greenfield counterparts (albeit caution is required given the small sample size for some size bandings).

What the analysis tends to show is that it is the scale of development – rather than the type of land – which has the greatest impact on the length of planning process, and that despite government prioritisation on brownfield land in the NPPF, this is unlikely to result in significant further improvements in timescales for delivery.

The time period between gaining a planning approval and the first delivery of a dwelling is also similar overall.

Figure 11: Previous land use and duration of planning



Source: NLP analysis

Table 2: Previous land use and duration of planning approval period

	Site Size (dwellings)	Number of sites in this group	Average Planning Approval Period
Greenfield Sites	500-999	14	4.5
	1,000-1,499	9	5.3
	1,500-1,999	7	5.5
	2,000+	13	5.0
	Total/Average	**43**	**5.0**
Brownfield Sites	500-999	16	4.1
	1,000-1,499	3	3.3
	1,500-1,999	1	4.6
	2,000+	7	8.6
	Total/Average	**27**	**5.1**

Source: NLP analysis

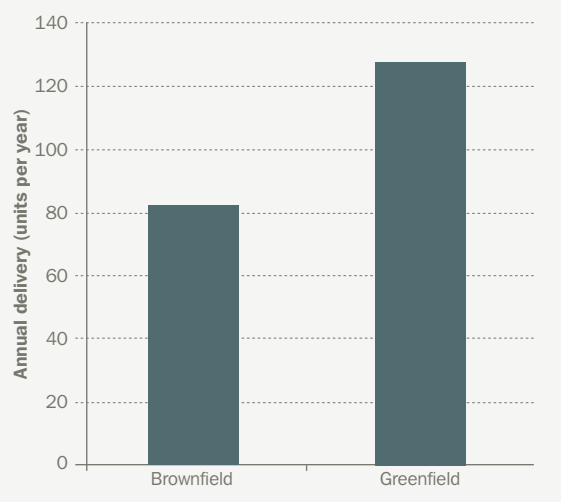
[16] Brownfield comes first: why brownfield development works CPRE, March 2016

Build-out Rates

There is a more discernible difference between brownfield and greenfield sites when it comes to the annual build out rates they achieve, with the analysis in Figure 12 suggesting that brownfield sites on average deliver at lower rates than their greenfield counterparts, both overall and across the different size bandings (see Table 3) albeit recognising the small sample size for some sizes of site. On average, the annual build-out rate of a greenfield site is 128 dwellings per annum, around 50% higher than the 83 per annum average for brownfield sites.

This may reflect that brownfield sites carry extra costs (e.g. for remediation) which reduces the scale of contribution they make to infrastructure and affordable housing provision (which as shown can boost rates of delivery).

Figure 12: Previous land use and housing delivery



Source: NLP analysis

Table 3: Previous land use by size and average annual build out rate

	Site Size (dwellings)	Number of sites in this group	Average Annual Build-out Rate
Greenfield Sites	500-999	14	86
	1,000-1,499	9	122
	1,500-1,999	7	142
	2,000+	13	171
	Total/Average	**43**	**128**
Brownfield Sites	500-999	16	52
	1,000-1,499	3	73
	1,500-1,999	1	84
	2,000+	7	148
	Total/Average	**27**	**83**

Source: NLP analysis

Summary

1. Brownfield and greenfield sites come forward at broadly similar rates, although at the smaller end of the scale, there does appear to be some 'bonus' in speed of decisions for previously-developed land. For the largest sites (of 2,000+ units) the sample of brownfield sites suggests an extended time period (3.6 years longer) compared to their equivalent greenfield sites;

2. Once started, large-scale greenfield sites do deliver homes at a more rapid rate than their brownfield equivalents, on average 50% quicker.

Conclusion

There is a growing recognition that large-scale housing development can and should play a large role in meeting housing need. Garden towns and villages – planned correctly – can deliver sustainable new communities and take development pressure off less sustainable locations or forms of development.

However, if planners are serious about wanting to see more homes built each year and achieve the government's target of one million by 2020 (or indeed, deliver the 300,0000 per annum that are needed), simply allocating a site or granting a permission is not enough. The Government recognises this: the Minister for Planning has been quoted as saying that *"you cannot live in a planning permission".*

Part of the debate has focused on perceptions of 'land banking' – the concept that developers are hoarding land or slowing down development. Equally, suggestions have been made that proposals for large-scale development should be 'protected' from competition from smaller sites or from challenge under five year land supply grounds. The evidence supporting these propositions appears limited.

In our view the real concern – outside London, at any rate – is ensuring planning decisions (including in plan-making) are driven by realistic and flexible housing trajectories in the first place, based on evidence and the specific characteristics of individual sites and local markets.

Based on the research in this document, we draw five conclusions on what is required:

1. If more homes are to be built, more land needs to be released and more planning permissions granted. Confidence in the planning system relies on this being achieved through local plans that must be sufficiently ambitious and robust to meet housing needs across their housing market areas. But where plans are not coming forward as they should, there needs to be a fall-back mechanism that can release land for development when it is required.

2. Planned housing trajectories should be realistic, accounting and responding to lapse rates, lead-in times and sensible build rates. This is likely to mean allocating more sites rather than less, with a good mix of types and sizes, and then being realistic about how fast they will deliver so that supply is maintained throughout the plan period. Because no one site is the same – and with significant variations from the average in terms of lead-in time and build rates – a sensible approach to evidence and justification is required.

3. Spatial strategies should reflect that building homes is a complex and risky business. Stronger local markets have higher annual delivery rates, and where there are variations within districts, this should be factored into spatial strategy choices. Further, although large sites can deliver more homes per year over a longer time period, they also have longer lead-in times. To secure short-term immediate boosts in supply – as is required in many areas – a good mix of smaller sites will be necessary.

4. Plans should reflect that – where viable – affordable housing supports higher rates of delivery. This principle is also likely to apply to other sectors that complement market housing for sale, such as build to rent and self-build (where there is demand for those products). Trajectories will thus need to differentiate expected rates of delivery to respond to affordable housing levels or inclusion of other market products. This might mean some areas will want to consider spatial strategies that favour sites with greater prospects of affordable or other types of housing delivery. This plays into the wider debate about support for direct housing delivery for rent by local government and housing associations and ensuring a sufficient product mix on sites.

5. Finally, in considering the pace of delivery, large-scale brownfield sites deliver at a slower rate than do equivalent greenfield sites. The very largest brownfield sites have also seen very long planning approval periods. Self-evidently, many brownfield sites also face barriers to implementation that mean they do not get promoted in the first place. In most locations outside our biggest cities, a good mix of types of site will be required.

A Checklist for Understanding Large-scale Site Delivery

In setting or assessing reasonable housing trajectories for local plans or five year housing land supply, the lead-in times and average rates of housing delivery identified in this research can represent helpful benchmarks or rules of thumb, particularly in situations where there is limited local evidence.

However, these rules of thumb are not definitive. It is clear from our analysis that some sites start and deliver more quickly than this average, whilst others have delivered much more slowly. Every site is different.

In considering the evidence justifying the estimated time and rate of delivery, the questions listed in Table 4 below represent a checklist of questions that are likely to be relevant:

Table 4: Questions to consider on the speed of housing delivery on large-scale sites

Lead-in times to getting started on site	Factors affecting the speed of build out rate
✓ Is the land in existing use?	✓ How large is the site?
✓ Has the land been fully assembled?	✓ Will the scale, configuration and delivery model for the site support more sales outlets?
✓ If in multiple ownership/control, are the interests of all parties aligned?	✓ How strong is the local market?
✓ To what extent is there any challenge to the principle of development?	✓ Does the site tap into local demand from one or more existing neighbourhoods?
✓ Is the site already allocated for development? Does it need to be in order for release?	✓ Is the density and mix of housing to be provided consistent with higher rates of delivery?
✓ Does an SPD, masterplan or development brief help resolve key planning issues?	✓ What proportion of affordable housing is being delivered?
✓ Is the masterplan/development brief consistent with what the developer will deliver?	✓ Are there other forms of housing – such as build to rent – included?
✓ Is there an extant planning application or permission?	✓ When will new infrastructure – such as schools – be provided to support the new community?
✓ Are there significant objections to the proposal from local residents?	✓ Are there trigger points or phasing issues that may affect the build rate achievable in different phases?
✓ Are there material objections to the proposal from statutory bodies?	
✓ Are there infrastructure requirements – such as access – that need to be in place before new homes can be built?	
✓ Are there infrastructure costs or other factors that may make the site unviable?	
✓ Does the proposal rely on access to public resources?	
✓ If planning permission is secured, is reserved matters approval required?	
✓ Does the scheme have pre-commencement conditions?	
✓ Is the scheme being promoted by a developer who will need time to dispose of the site to a house builder?	

Appendix 1: Large Sites Reviewed

~ = No Data

Site Name	Local Planning Authority	Site	Previous Use	Year of first housing completion	Build Rates																	
					Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16	Yr 17	Yr 18	Yr 19
Land at Siston Hill	South Gloucestershire	504	Greenfield	2006/07	77	211	96	63	57														
University Campus Chelmsford	Chelmsford	507	Brownfield	N/A																			
St. James Village	Gateshead	518	Brownfield	2000/01					406					~	14	13	18	15					
Thingwall Lane	Knowlsey	525	Brownfield	2013/14	79	~																	
Pamona Docks	Trafford	546	Brownfield	N/A																			
Velmead Farm	Hart	550	Greenfield	1989/90	1	104	193	89	101	52	101	113	130	74	102	48	4						
Land adjoining Manchester Ship Canal	Trafford	550	Greenfield	N/A																			
Ochre Yards	Gateshead	606	Brownfield	2001/02					424					~	~	46	4	52					
Former Pontins Holiday Camp	Lancaster	626	Brownfield	2006/07	16	22	4	5	~														
Land south of Wansbeck General Hospital	Northumberland	644	Greenfield	2005/06					209														
Staiths South Bank	Gateshead	667	Brownfield	2003/04	24	58	~	44	~	48	~												
Rowner Renewal Project	Gosport	700	Brownfield	2010/11	4	100	70	16	0														
South Bradwell (Phase 1)	Great Yarmouth	700	Greenfield	N/A																			
Land at West Blyth	Northumberland	705	Greenfield	2008/09				164															
Northside	Gateshead	718	Brownfield	1996/97							61							~	16	30	31	33	25
Hungate	York	720	Brownfield	2008/09			168																
The Parks	Bracknell Forest	730	Brownfield	2007/08	104	88	101	54	47	72	59	94											
West of Kempston	Bedford	730	Greenfield	2010/11	43	102	144	167	124														
Land at Popley Fields	Basingstoke & Deane	750	Greenfield	2006/07	105	172	118	186	126	44													
Dowds Farm	Eastleigh	765	Greenfield	2006/07	54	189	187	44	102	47	66	76	~										
Abbotswood	Test Valley	800	Greenfield	2011/12	30	190	157	102															
Kempshott Park	Basingstoke & Deane	800	Greenfield	2000/01	78	310	229	213	281	84	33	24											
Prospect Place	Cardiff	826	Brownfield	2007/08	135	48																	
Taylors Farm/ Sherfield Park	Basingstoke & Deane	850	Greenfield	2004/05	56	79	81	86	88	50	100	141	88	91	75								

~ = No Data

Site Name	Local Planning Authority	Site	Previous Use	Year of first housing completion	Build Rates																	
					Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16	Yr 17	Yr 18	Yr 19
Queen Elizabeth II Barracks	Hart	872	Brownfield	2012/13	56	165	~																
West Park	Darlington	893	Brownfield	2004/05	60	104	98	66	69	19	35	10	16	51	35								
Orchard Park	South Cambridgeshire	900	Greenfield	2006/07	100	290	148	103	95	56	34	16	75										
Nar Ouse Millenium Commuity	Kings Lynn and West Norfolk	900	Brownfield	2007/08	32	77	0	0	0	0	30	24											
Ingress Park	Dartford	950	Brownfield	2002/03	184	~	275	100	74	0	119	0	0										
North of Popley	Basingstoke & Deane	950	Greenfield	2007/08	65	57	16	28	0	0	15	118											
Monksmoor Farm	Daventry	1,000	Greenfield	2013/14	14	~																	
Boulton moor	South Derbyshire	1,058	Greenfield	N/A																			
Picket Twenty	Test Valley	1,200	Greenfield	2011/12	147	178	180	176															
Staynor Hall	Selby	1,200	Brownfield	2005/06	12	141	115	10	43	62	46	59	79	162									
Highfields Farm	South Derbyshire	1,200	Greenfield	N/A																			
Melton Road	Rushcliffe	1,200	Greenfield	N/A																			
Broughton (Broughton & Atterbury)	Milton Keynes	1,200	Green field	2003/04	114	105	170	409	204	180	18												
Holborough Quarry	Tonbridge and Malling	1,211	Brownfield	2006/07	85	137	91	47	18	100	59	12	43										
Park Prewett Hospital	Basingstoke & Deane	1,250	Brownfield	1998/99	58	82	37	102	0	0	0	0	0	307	214	219	146	33	34	56	~		
Oxley Park (East & West)	Milton Keynes	1,300	Greenfield	2004/05	52	166	295	202	115	91	75	163											
Love's Farm	Huntingdonshire	1,352	Greenfield	2007/08	34	186	336	302	216	60	108	59											
Great Denham	Bedford	1,450	Greenfield	2003/04	116						92	150	138	71	122	146							
Jennet's Park	Bracknell Forest	1,500	Greenfield	2007/08	153	154	145	168	136	179	235	93											
Parc Derwen	Bridgend	1,500	Greenfield	2010/11	8	103	134	201	199														
Northumberland Park	North Tyneside	1,513	Greenfield	2003/04	54	194	171	93	179	100	69	117	96	53	82	64							
Centenary Quay	Southampton	1,620	Brownfield	2011/12	58	102	103	72															
Red Lodge	Forest Heath	1,667	Greenfield	2004/05	65	93	722				235		~	~	77								
Dickens Heath	Solihull	1,672	Greenfield	1997/98	2	179	196	191	207	88	124	64	249	174	16	96	110	4					
Hunts Grove	Stroud	1,750	Greenfield	2011/12	333																		

~ = No Data

Site Name	Local Planning Authority	Site	Previous Use	Year of first housing completion	Build Rates																	
					Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16	Yr 17	Yr 18	Yr 19
Elvetham Heath	Hart	1,869	Greenfield	2000/01	192	300	297	307	287	238	103	139	6									
Charlton Hayes	South Gloucestershire	2,200	Brownfield	2010/11	83	87	163	331	281													
Chapelford Urban Village	Warrington	2,200	Brownfield	2004/05	211	214	166	262	224	141	180	183	247	60	160							
Western Riverside	Bath and North East Somerset	2,281	Brownfield	2011/12	59	147	93	~														
Clay Farm/ Showground Site	Cambridge	2,300	Greenfield	2012/13	16	272	~															
Broadlands	Bridgend	2,309	Greenfield	1999/00	288	331	307	193	204	156	64	104	91	28	81	50	147	11				
Land East Icknield Way	Test Valley	2,500	Greenfield	2009/10	184	257	103	181	135	~												
Kings Hill	Tonbridge and Malling	2,800	Brownfield	1996/97			698			126	219	104	237	166	281	300	224	93	55	90	84	108	91
Cranbrook	East Devon	2,900	Greenfield	2012/13	187	419	356															
West of Waterloo	Havant and Winchester	3,000	Greenfield	2009/10	38	71	30	82	112	193												
North West Cambridge	Cambridge and South Cambridgeshire	3,000	Greenfield	N/A																		
Beaulieu Park	Chelmsford	3,600	Greenfield	N/A																		
Eastern Expansion Area (Broughton Gate & Brooklands)	Milton Keynes	4,000	Greenfield	2008/09	154	359	371	114	473	138	~											
Cambourne	South Cambridgeshire	4,343	Greenfield	1999/00	42	361	213	337	620	151	377	267	219	190	162	206	154	151	129	240		
Wichelstowe	Swindon	4,500	Greenfield	2008/09	158	93	195	64	100	61	44											
The Wixams	Bedford	4,500	Brownfield	2008/09	8	190	160	138	113	109	109											
Monkton Heathfield	Tauton Deane	4,500	Greenfield	2013/14	120	265																
Priors Hall	Corby	5,200	Greenfield	2013/14	59	46																
East of Kettering	Kettering	5,500	Greenfield	N/A																		
The Hamptons	Peterborough	6,320	Brownfield	1997/98					1684					548	265	442	997				102	
Ebbsfleet	Gravesham/ Dartford	15,000	Brownfield	2009/10	127	79	55	50	87													

Appendix 2: Small Sites Reviewed

Site Name	Local Planning Authority	Site Size
Holme Farm, Carleton Road, Pontefract	Wakefield	50
Part Sr3 Site, Off Elizabeth Close, Scotter	West Lindsey	50
Former Downend Lower School, North View, Staple Hill	South Gloucestershire	52
Fenton Grange, Wooler	Northumberland	54
Land at the Beacon, Tilford Road, Hindhead	Waverley	59
Land To Rear Of 28 - 34 Bedale Road, Aiskew	Hambleton	59
Hanwell Fields Development, Banbury	Cherwell	59
Land at Prudhoe Hospital, Prudhoe	Northumberland	60
Oxfordshire County Council Highways Depot	Cherwell	60
Clewborough House School, St Catherines Road	Cherwell	60
Land south of Pinchington Lane	West Berkshire	64
Land Off Cirencester Rd	Stroud	66
Springfield Road Caunt Road	South Kesteven	67
Land off Crown Lane	Wychavon	68
Former Wensleydale School, Dent Street, Blyth	Northumberland	68
Land at Lintham Drive, Kingswood	South Gloucestershire	68
Hawthorn Croft (Off Hawthorn Avenue Old Slaughterhouse Site), Gainsborough	West Lindsey	69
Land to the North of Walk Mill Drive	Wychavon	71
Watermead, Land At Kennel Lane, Brockworth	Tewkesbury	72
North East Area Professional Centre, Furnace Drive, Furnace Green	Crawley	76
Land at Willoughbys Bank, Clayport Bank, Alnwick	Northumberland	76
The Kylins, Loansdean, Morpeth	Northumberland	88
MR10 Site, Caistor Road, Market Rasen	West Lindsey	89
OS Field 9972 York Road Easingwold	Hambleton	93
Land At Green Road - Reading College	Reading	93
North East Sandylands	South Lakeland	94
Auction Mart	South Lakeland	94
Parcel 4, Gloucester Business Park, Brockworth	Tewkesbury	94
Former York Trailers Yafforth Road Northallerton Scheme 1/2	Hambleton	96
Poppy Meadow	Stratford-on-Avon	106
Weeton Road/Fleetwood Road	Fylde	106
Land South of Station Road	East Hertfordshire	111
Former Bewbush Leisure Centre Site, Breezehurst Drive, Bewbush	Crawley	112
Land West Of Birchwood Road, Latimer Close	Bristol, City of	119
Land Between Godsey Lane And Towngate East	South Kesteven	120
Bibby Scientific Ltd	Stafford	120
Kennet Island Phase 1B - E, F, O & Q, Manor Farm Road	Reading	125
Primrose Mill Site	Ribble Valley	126
Land Rear Of Mount Pleasant	Cheshire West and Chester	127
Land to the east of Efflinch Lane	East Staffordshire	130
North of Douglas Road, Kingswood	South Gloucestershire	131
Land at Farnham Hospital, Hale Road, Farnham	Waverley	134
Bracken Park, Land At Corringham Road, Gainsborough	West Lindsey	141
Doxey Road	Stafford	145
Former York Trailers Yafforth Road Northallerton Scheme 2/2	Hambleton	145

Site Name	Local Planning Authority	Site Size
London Road/ Adj. St Francis Close	East Hertfordshire	149
MR4 Site, Land off Gallamore Lane, Market Rasen	West Lindsey	149
Queen Mary School	Fylde	169
Sellars Farm, Sellars Road	Stroud	176
Land South of Inervet Campus Off Brickhill Street, Walton	Milton Keynes	176
Notcutts Nursery, 150 - 152 London Road	Cherwell	182
Hoval Ltd North Gate	Newark and Sherwood	196
Hewlett Packard (Land Adjacent To Romney House), Romney Avenue	Bristol, City of	242
128-134 Bridge Road And Nos 1 - 4 Oldfield Road	Windsor and Maidenhead	242
GCHQ Oakley - Phase 1	Cheltenham	262
Land off Henthorn Road	Ribble Valley	270
Land Between A419 And A417, Kingshill North, Cirencester	Cotswold	270
Hortham Hospital, Hortham Lane, Almondsbury	South Gloucestershire	270
Land At Canons Marsh, Anchor Road	Bristol, City of	272
M & G Sports Ground, Golden Yolk and Middle Farm, Badgeworth	Tewkesbury	273
Long Marston Storage Depot Phase 1	Stratford-on-Avon	284
Land at Brookwood Farm, Bagshot Road	Woking	297
Land at, Badsey Road	Wychavon	298
Land At Fire Service College, London Road, Moreton in Marsh	Cotswold	299
Land At Dorian Road	Bristol, City of	300
Kennet Island Phase 1 - H, M, T, U1, U2 Manor Farm Road	Reading	303
Chatham Street Car Park Complex	Reading	307
Former NCB Workshops, Ellington Rd, Ashington (aka Portland Park)	Northumberland	357
Former Masons Cerement Works and Adjoining Ministry of Defence Land, Gipping Road, Great Blakenham	Mid Suffolk	365
Woolley Edge Park Site	Wakefield	375
Luneside West	Lancaster	403
Radyr Sidings	Cardiff	421
New World House, Thelwall Lane	Warrington	426
Land at former Battle Hospital, 344 Oxford Road	Reading Borough Council	434
New Central (Land at Guildford Road and Bradfield Close including Network House, Merrion House, Bradford House and Coronation House	Woking Borough Council	445
Kingsmead South	Milton Keynes Council	450
Bleach Green, Winlaton	Gateshead	456
Farington Park, East of Wheelton Lane	South Ribble	468
Bickershaw Colliery, Plank Lane, Leigh	Wigan	471
Farnborough Business Park	Rushmoor	476
Horfield Estate, Filton Avenue, Horfield	Bristol City Council	485
Stenson Fields	South Derbyshire	487
Cookridge Hospital	Leeds	495

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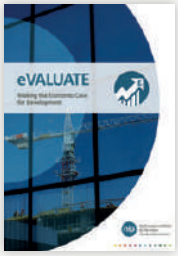

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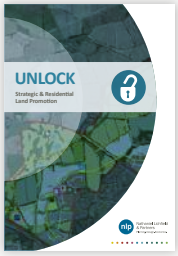

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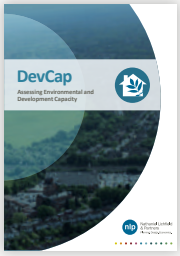

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