

**Rushcliffe Borough Council  
Nottingham Core Affordable Housing Viability  
Assessment  
Final Report**

**Three Dragons**



**December 2009**

# 1 INTRODUCTION

## Background to the Study

- 1.1 A consortium of the local authorities in the Nottingham Core Housing Market Area commissioned Three Dragons to undertake a study which examined, “..... *the potential impact on development viability of revised planning-led affordable housing targets, thresholds and tenure splits for each authority*” (extract from the Study Brief).
- 1.2 The local authorities in the Nottingham Core Housing Market Area are Ashfield District Council (Hucknall part only), Broxtowe Borough Council, Erewash Borough Council, Gedling Borough Council, Nottingham City Council and Rushcliffe Borough Council.
- 1.3 The Study Brief provides a further explanation of the relationship between this study and the development of policy at the local level, stating that:  
  
*“The Nottingham Core authorities are fully committed to increasing the delivery of affordable housing through a planning-led process, but they recognise Planning Policy Statement 3 (PPS3) requires a viability assessment to be undertaken before making major policy changes, and want to be confident that viability issues do not threaten implementation of these policies. Regional Housing Group funding has been obtained so that the authorities can carry out a comprehensive viability assessment, which will enable them to set specific and deliverable affordable housing targets. These targets may be fed through policy into each authority’s Local Development Framework (LDF), housing strategy and the East Midlands Regional Spatial and Housing Strategies.”*
- 1.4 This report relates to the specific circumstances of Rushcliffe Borough Council.

## Progress in Delivering Affordable Housing

Recent affordable housing completions in the Borough since 2006 are as follows:

2006/7	54 dwellings;
2007/8	30 dwellings
2008/9	73 dwellings

## Need for Affordable Housing

- 1.5 The Nottingham Core HMA was published by B. Line Housing Information and Three Dragons in May 2007. The report calculates housing need

estimates using the ‘Bramley model’ which has been considered as “potentially one of the most robust methods that could be used at regional, HMA and local levels.”

- 1.6 The following table indicates that there is an annual need for 334 affordable houses in Rushcliffe and this equates to about 45% of the planned new housing supply.

**Table 1.1: Final Housing Need Figures for Rushcliffe**

Net Annual Need	LA Planned Annual New Supply <sup>1</sup>	Need as a % of New Supply
334	750	44.5%

Source: Adapted from Nottingham Core Strategic Housing Market Assessment, B. Line Housing Information and Three Dragons, May 2007.

- 1.7 It is suggested that a target of 13% of the affordable housing in Rushcliffe should be Intermediate Housing marketed at 70% of the open market entry level price. Lower proportions of open market entry level price are illustrated, but not recommended because it is likely that this would create financial difficulties for Registered Social Landlords to develop.
- 1.8 Our report is not intended to deal with the issue of affordable housing need in any detail. However, we note that the Strategic Housing Market Assessment indicated that the need for affordable housing was estimated at around 45% of total supply<sup>2</sup>.

### **Policy context - national**

- 1.9 This study focuses on the percentage of affordable housing sought on mixed tenure sites and the size of site from above which affordable housing is sought (the site size threshold). National planning policy, set out in PPS3 makes clear that local authorities, in setting policies for site size thresholds and the percentage of affordable housing sought, must consider development economics and should not promote policies which would make development unviable.

PPS3: Housing (November 2006) states that:

*“In Local Development Documents, Local Planning Authorities should:*

*Set out the range of circumstances in which affordable housing will be required. The national indicative minimum site size threshold is 15 dwellings. However, Local Planning Authorities can set lower minimum thresholds, where viable and practicable, including in rural areas. This*

<sup>1</sup> Based on the East Midlands Regional Plan, 2009.

<sup>2</sup> Based on the East Midlands Regional Plan supply figures, 2009

*could include setting different proportions of affordable housing to be sought for a series of site-size thresholds over the plan area. Local Planning Authorities will need to undertake an informed assessment of the economic viability of any thresholds and proportions of affordable housing proposed, including their likely impact upon overall levels of housing delivery and creating mixed communities". (Para 29)*

- 1.10 The companion guide to PPS3<sup>3</sup> provides a further indication of the approach which Government believes local planning authorities should take in planning for affordable housing. Paragraph 10 of the document states:

*"Effective use of planning obligations to deliver affordable housing requires good negotiation skills, **ambitious but realistic affordable housing targets and thresholds** given site viability, funding 'cascade' agreements in case grant is not provided, and use of an agreement that secures standards."* (our emphasis)

### **Policy context – East Midlands Region**

- 1.11 The East Midlands Regional Plan was published in March 2009. It has identified that 15,000 dwellings should be provided in Rushcliffe for the period 2006 to 2026, giving an annual average figure of 750 dwellings per annum (dpa) for the period.
- 1.12 Policy SRS 3 for the Three Cities sub region (which includes Rushcliffe ) indicates that at least 530 dpa out of the 750 dpa should be, '*...within or adjoining Nottingham PUA, including sustainable urban extensions as necessary*'.
- 1.13 Policy 14 of the Regional Plan requires 17,100 (30%) affordable dwellings to be provided in the Nottingham Core HMA, within which Rushcliffe falls. If the same ratio is applied to Rushcliffe, this would equate to about 225 affordable dwellings per annum, between 2006 and 2026. 225 would be about two thirds (67.4%) of the need indicated by the SHMA.

### **Policy context – Rushcliffe Borough Council**

- 1.14 The Borough of Rushcliffe has a limited number of saved Local Plan (1996) policies,(which do not include any dealing with affordable housing), and a non-statutory replacement local plan (2006). The policies in the non statutory local plan have been subjected to full scrutiny through the Local Plan Inquiry process and have now been formally accepted by the Borough Council as a statement of Council policy. It is considered by the Council that the non statutory replacement local plan carries significant

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<sup>3</sup> CLG, Delivering Affordable Housing, November 2006

weight and is used as the basis for determining planning applications. The replacement plan includes two policies regarding affordable housing.

- 1.15 **Policy HOU7** seeks up to 30% affordable housing on allocated sites and unallocated sites of 0.5ha or 15 dwellings or more. On all other unallocated sites less than 0.5ha or 15 dwellings provision of affordable housing will be encouraged.
- 1.16 **HOU8** considers exceptional local needs housing. It states that in exceptional circumstances permission will be given for affordable housing in rural areas where development would otherwise be contrary to other policies if local need is satisfactorily demonstrated. The site must be in or adjoining an existing settlement and development must be of a type and size to meet local need and be guaranteed to remain affordable in perpetuity.
- 1.17 An Affordable Housing Supplementary Planning Guidance (SPG) was adopted in 2003 which states that the Council's Interim Position Statement for Affordable Housing is that on housing sites of 25 dwellings or one hectare or more 15% would be affordable housing. The SPG also allows for exceptional site release for areas of local need in rural areas.
- 1.18 However, The SPG is published with an addendum note that since its adoption the Local Plan Inspector recommended a change to the policy so that 30% of housing developments of 15 or more dwellings or 0.5ha or more will be affordable housing.
- 1.19 A Draft Supplementary Planning Document for Affordable Housing (2006) was prepared, but remains unadopted due to the withdrawal of the Replacement Local Plan. This document seeks up to 30% affordable housing on housing sites of 15 dwellings or 0.5ha or more. A need for two and three bedroom houses is identified, as is the predominant need for housing for rent.
- 1.20 As a result of the proposed changes to the Regional Spatial Strategy, in response to more recent government guidance and the newly adopted Regional Plan, Rushcliffe is working on a joint aligned Core Strategy with the five other local authorities that make up the Nottingham Core Housing Market Area (Ashfield District Council, Broxtowe Borough Council, Gedling Borough Council, Nottingham City Council and Erewash District Council) - as recommended by central government.

## **Research undertaken**

1.21 There were four main strands to the research undertaken to complete this study:

- Discussions with a project group of officers from the commissioning authorities which informed the structure of the research approach;
- Analysis of information held by the authority, including that which described the profile of land supply;
- Use of the Three Dragons Toolkit to analyse scheme viability (and described in detail in subsequent chapters of this report);
- A workshop held with developers, land owners, their agents and representatives from a selection of Housing Associations active in the district. A full note of the workshop is shown in Appendix 1.

## **Structure of the report**

1.22 The remainder of the report uses the following structure:

- Chapter 2 explains the methodology we have followed in, first, identifying sub markets and, second, undertaking the analysis of development economics. We explain that this is based on residual value principles;
- Chapter 3 provides analysis of residual values generated across a range of different development scenarios (including alternative percentages and mixes of affordable housing) for a notional 1 hectare site.
- Chapter 4 considers options for site size thresholds. It reviews national policy and the potential future land supply and the relative importance of small sites. The chapter considers practical issues about on-site provision of affordable housing on small sites and the circumstances in which collection of a financial contribution might be appropriate (and the principles by which such contributions should be assessed);
- Chapter 5 identifies a number of case study sites (generally small sites which are currently in use), that represent examples of site types found in the authority. For each site type, there is an analysis of the residual value of the sites and compares this with their existing use value.
- Chapter 6 summarises the evidence collected through the research and provides a set of policy options.

## **2 METHODOLOGY**

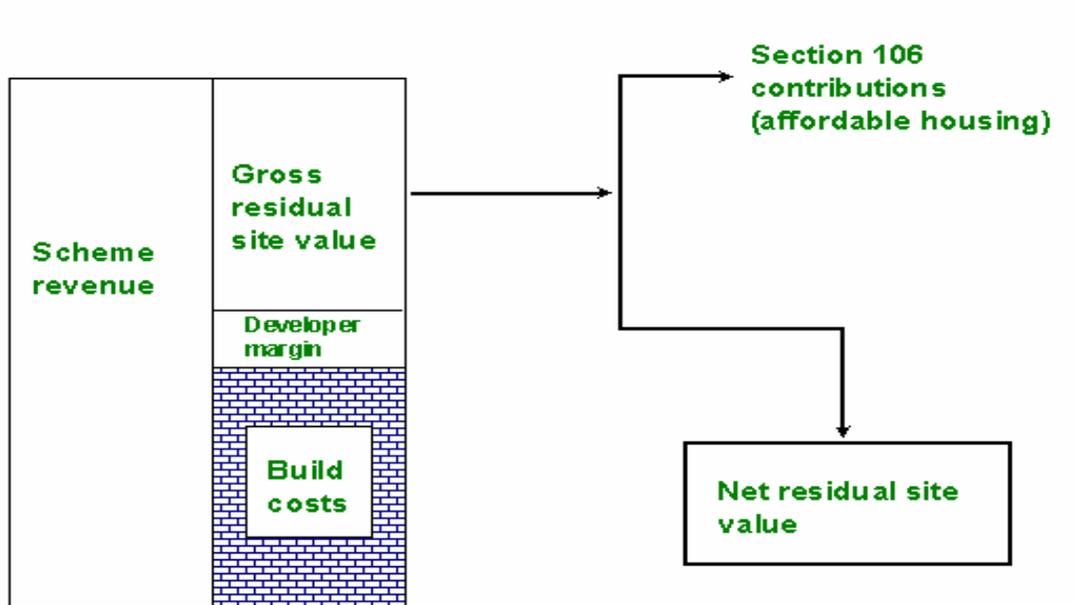
### **Introduction**

- 2.1 In this chapter we explain the methodology we have followed in, first, identifying sub markets (which are based on areas with strong similarities in terms of house prices) and, second, undertaking the analysis of development economics. The chapter explains the concept of a residual value approach and the relationship between residual values and existing/alternative use values.

### **Viability – starting points**

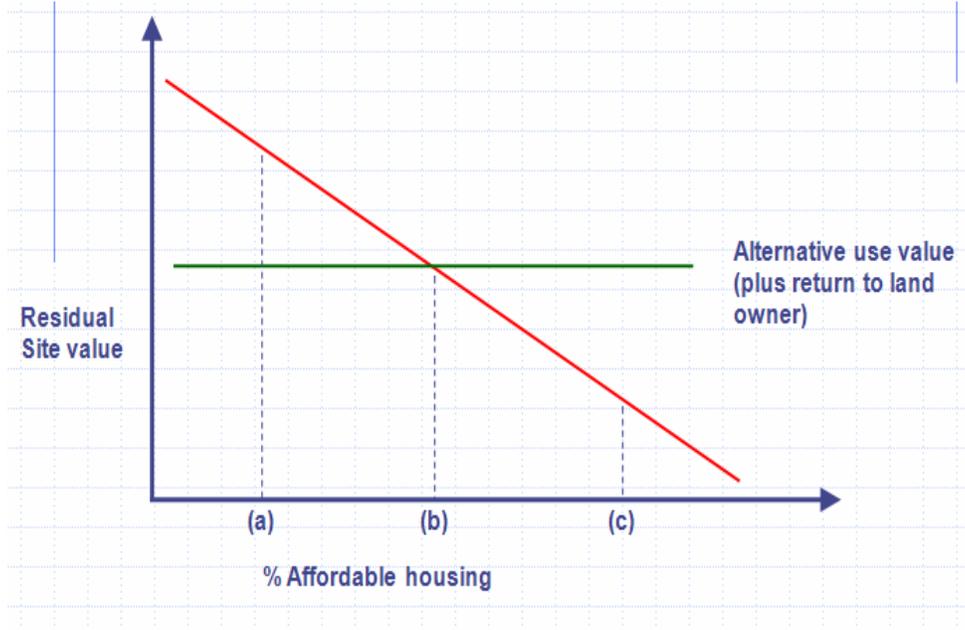
- 2.2 We use a residual development appraisal model to assess development viability. This mimics the approach of virtually all developers when purchasing land. This model assumes that the value of the site will be the difference between what the scheme generates and what it costs to develop. The model can take into account the impact on scheme residual value of affordable housing and other s106 contributions.
- 2.3 Figure 2.1 below shows diagrammatically the underlying principles of the approach. Scheme costs are deducted from scheme revenue to arrive at a gross residual value. Scheme costs assume a profit margin to the developer and the 'build costs' as shown in the diagram include such items as professional fees, finance costs, marketing fees and any overheads borne by the development company.
- 2.4 The gross residual value is the starting point for negotiations about the level and scope of s106 contribution. The contribution will normally be greatest in the form of affordable housing but other s106 items will also reduce the gross residual value of the site. Once the s106 contributions have been deducted, this leaves a net residual value.

**Figure 2.1 Theory of the Section 106 Process**



- 2.5 Calculating what is likely to be the value of a site given a specific planning permission, is only one factor in deciding what is viable.
- 2.6 A site is extremely unlikely to proceed where the costs of a proposed scheme exceed the revenue. But simply having a positive residual value will not guarantee that development happens. The existing use value of the site, or indeed a realistic alternative use value for a site (e.g. commercial) will also play a role in the mind of the land owner in bringing the site forward and thus is a factor in deciding whether a site is likely to be brought forward for housing.
- 2.7 Figure 2.2 shows how this operates in theory. Residual value falls as the proportion of affordable housing increases. At some point (here 'b'), alternative use value (or existing use value whichever is higher) will be equal to scheme value. If there is a reasonable return to the land owner at point 'b' (i.e 'b' reflects best possible current use value (alternative or existing) and there is a sufficient return, then the scheme will come forward. At point 'c', affordable housing will make the site unviable. At 'a' the scheme should be viable with affordable housing. The diagram does not assume grant. Grant should be used to 'lever out' sites from their existing or best alternative uses.

**Figure 2.2 Affordable housing and alternative use value**



2.8 The analysis we have undertaken uses a Three Dragons Viability model. The model is explained in more detail in Appendix 2, which includes a description of the key assumptions used.

### 3 HIGH LEVEL TESTING

#### Introduction

- 3.1 This chapter of the report considers viability for mixed tenure residential development for a number of different proportions and types of affordable housing. The analysis is based on a notional 1 hectare site and has been undertaken for a series of sub markets that have been identified. The residual value shown will be the same whether the site is greenfield or on previously used land. The chapter explains this and explores the relationship between the residual value for the scenarios tested and existing/alternative use values.

#### Market value areas

- 3.2 Variation in house prices will have a significant impact on development economics and the impact of affordable housing on scheme viability.
- 3.3 We undertook a broad analysis of house prices in Rushcliffe using HM Land Registry data to identify the sub markets. These sub markets have been developed from smaller geographical areas which were developed for the Strategic Housing Market Assessment. The house prices which relate to the sub markets provide the basis for a set of indicative new build values as at December 2008. Table 3.1 below sets out the sub markets in Rushcliffe developed for the study. The areas are illustrated in the map which follows.

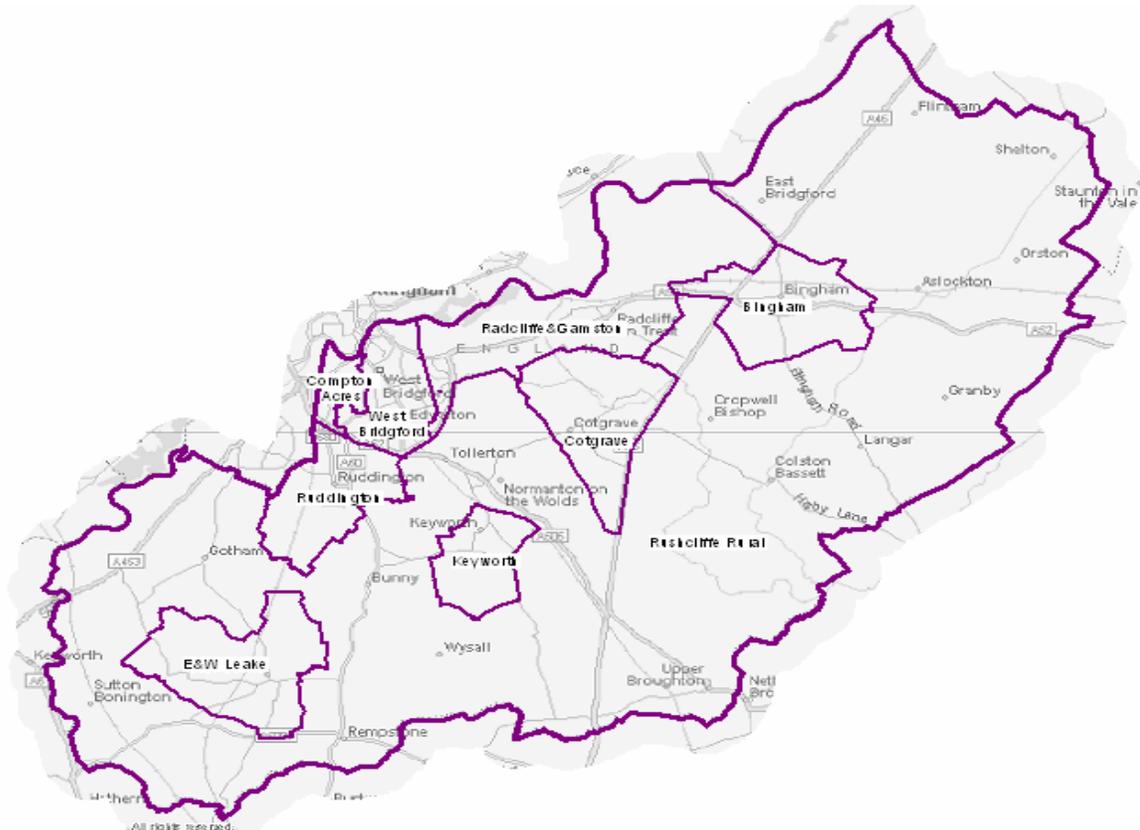
**Table 3.1 Viability sub markets in the Rushcliffe BC area**

<b>RUSHCLIFFE</b>
<b>NEW BUILD INDICATIVE</b>
<b>1) West Bridgford</b>
<b>2) Rushcliffe Rural East and West</b>
<b>3) Radcliffe</b>
<b>Gamston</b>
<b>4) Ruddington</b>
<b>Compton Acres</b>
<b>5) E&amp;W Leake</b>
<b>Keyworth</b>

6) Bingham
7) Cotgrave

Source: Market value areas as agreed between Three Dragons and Rushcliffe BC

**Map 3.1 Viability sub markets in the Rushcliffe BC area**



**Testing assumptions (notional one hectare site)**

- 3.4 For the viability testing, we defined a number of development mix scenarios, using a range of assumptions agreed with the Council. The scenarios were based on an analysis of typical development mixes and were discussed at the stakeholder workshop.
- 3.5 The development mixes were as follows:
  - 30 dph: including 10% 2 Bed flats; 10% 2 bed terraces; 15% 3 bed terraces; 20% 3 bed semis; 25% 3 bed detached; 15% 4 bed detached; 5% 5 bed detached

- 40 dph: including 5% 1 bed flats; 15% 2 bed flats; 15% 2 bed terraces; 15% 3 bed terraces; 20% 3 bed semis; 20% 3 bed detached; 10% 4 bed detached;
- 50 dph: including 10% 1 bed flats; 20% 2 bed flats; 20% 2 bed terraces; 15% 3 bed terraces; 15% 3 bed semis; 15% 3 bed detached; 5% 4 bed detached;
- 80 dph: including 20% 1 bed flats; 30% 2 bed flats; 30% 2 bed terraces and 20% 3 bed terraces.

3.6 We calculated residual scheme values for each of these (base mix) scenarios in line with a further set of tenure assumptions. These were 10%; 20%; 25%; 30%; 35%; 40% and 50% affordable housing. These were tested at 80% Social Rent and 20% New Build HomeBuy in each case. For the New Build HomeBuy, the share purchase was assumed to be 40%. All the assumptions were agreed with the authority. Unless stated, testing was carried out assuming nil grant.

#### **Other s106 contributions**

3.7 For the modelling we have undertaken (and unless shown otherwise) we have assumed that other planning obligations have a total cost of £7,000 per unit. This figure was agreed with the local authority as being a reasonable average figure for the Borough.

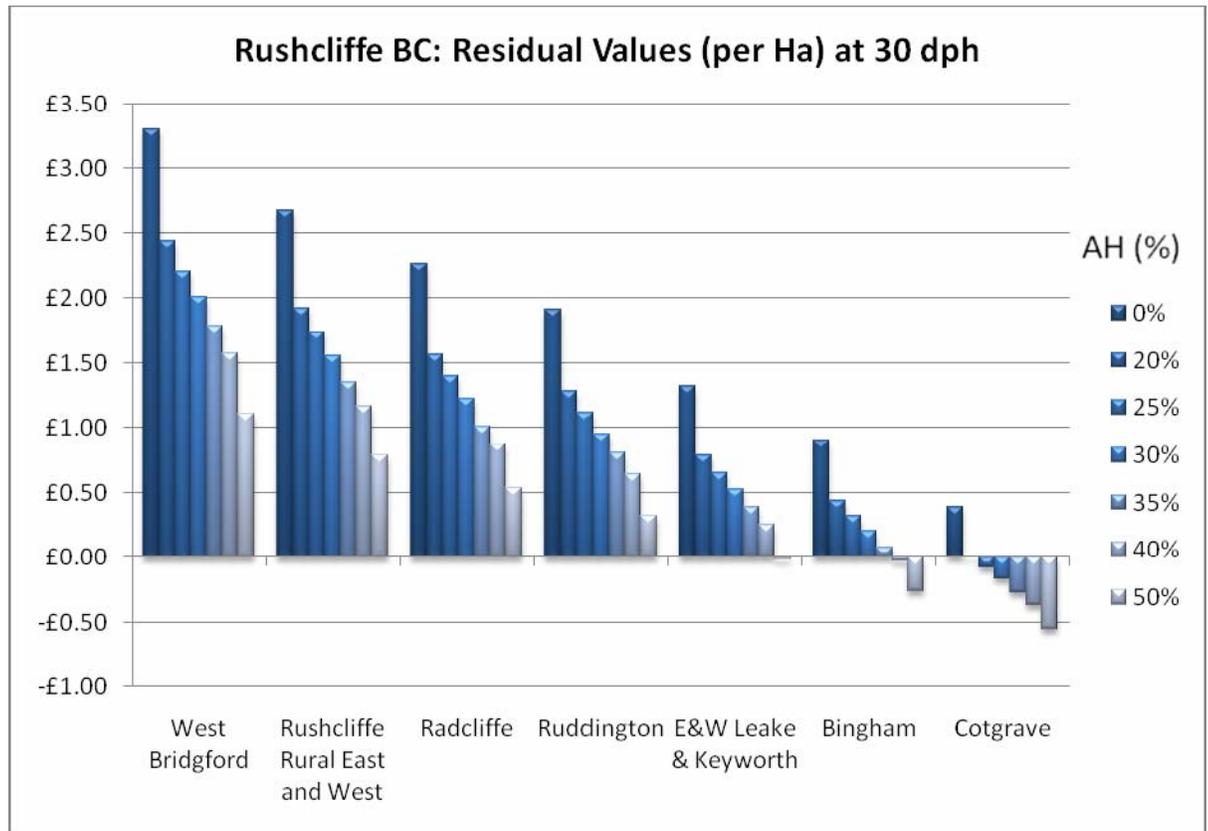
#### **Results: residual values for a notional one hectare site**

3.8 This section looks at a range of development mixes and densities. It shows the impacts of increasing the percentage of affordable housing on residual site values. The full set of results is shown in Appendix 3.

**Low density housing (30 dph)**

3.9 Figure 3.1 shows low density housing (30dph) and the residual values for each of the market value areas outlined in Section 3.

**Figure 3.1 Low density housing (30 dph) – Residual value in £s million**

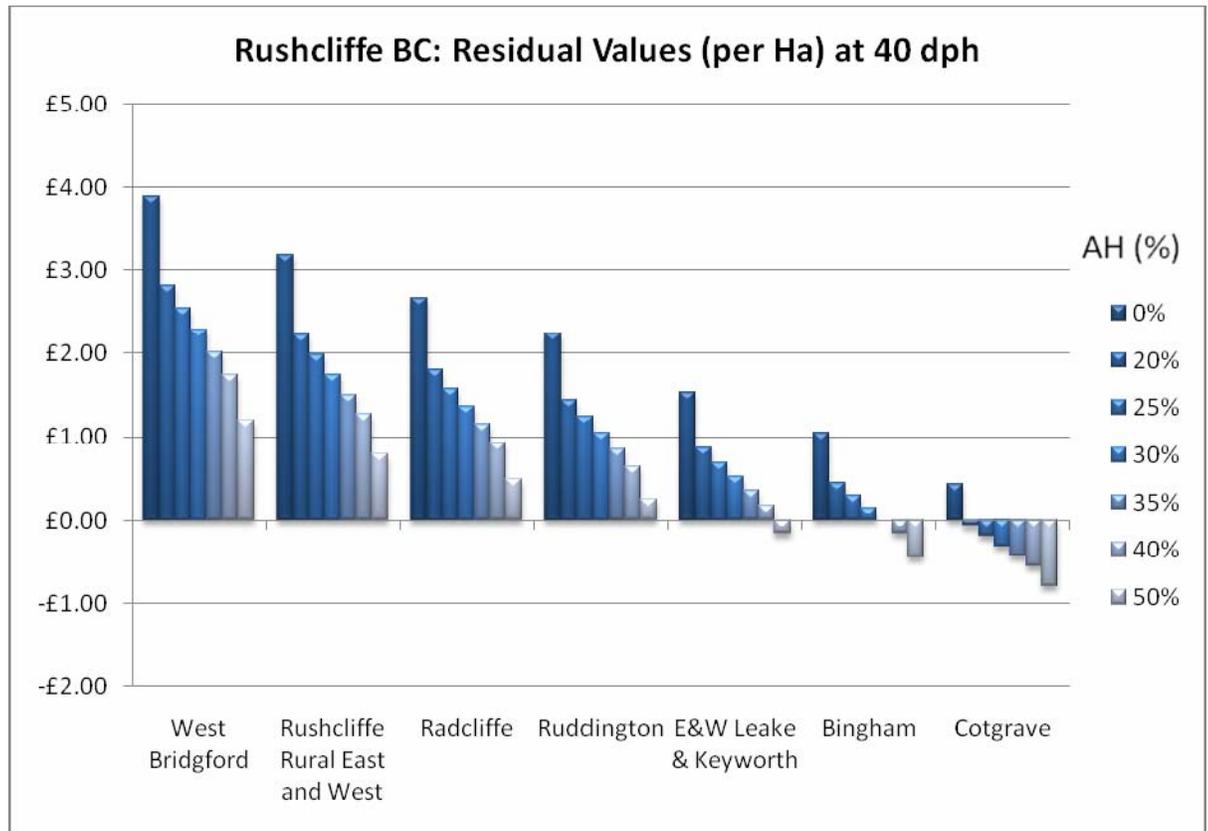


- Figure 3.1 shows a range of mainly positive residual values, depending on the sub market and amount of affordable housing. Residual values at 30% affordable housing range from £2.01 million per hectare in West Bridgford to minus £0.17million per hectare in Cotgrave.
- The chart shows a range of values across the settlements with West Bridgford and the Rural areas providing the highest residual values, Radcliffe and Ruddington then being the strongest of the larger settlements in terms of viability and with Bingham and Cotgrave being the weakest in terms of residual value and viability.
- The range in values has potentially important implications for policy making. With the scenarios tested (Figure 3.1), a significantly higher value (£1.21 m versus £0.43m) is generated in West Bridgford at 50% affordable housing than in Cotgrave at 100% market housing.

**Lower density housing (40 dph)**

3.10 Figure 3.2 shows lower density housing (40 dph) and the residual values for each of the market value areas.

**Figure 3.2 Lower density housing (40 dph) – Residual value in £s million**

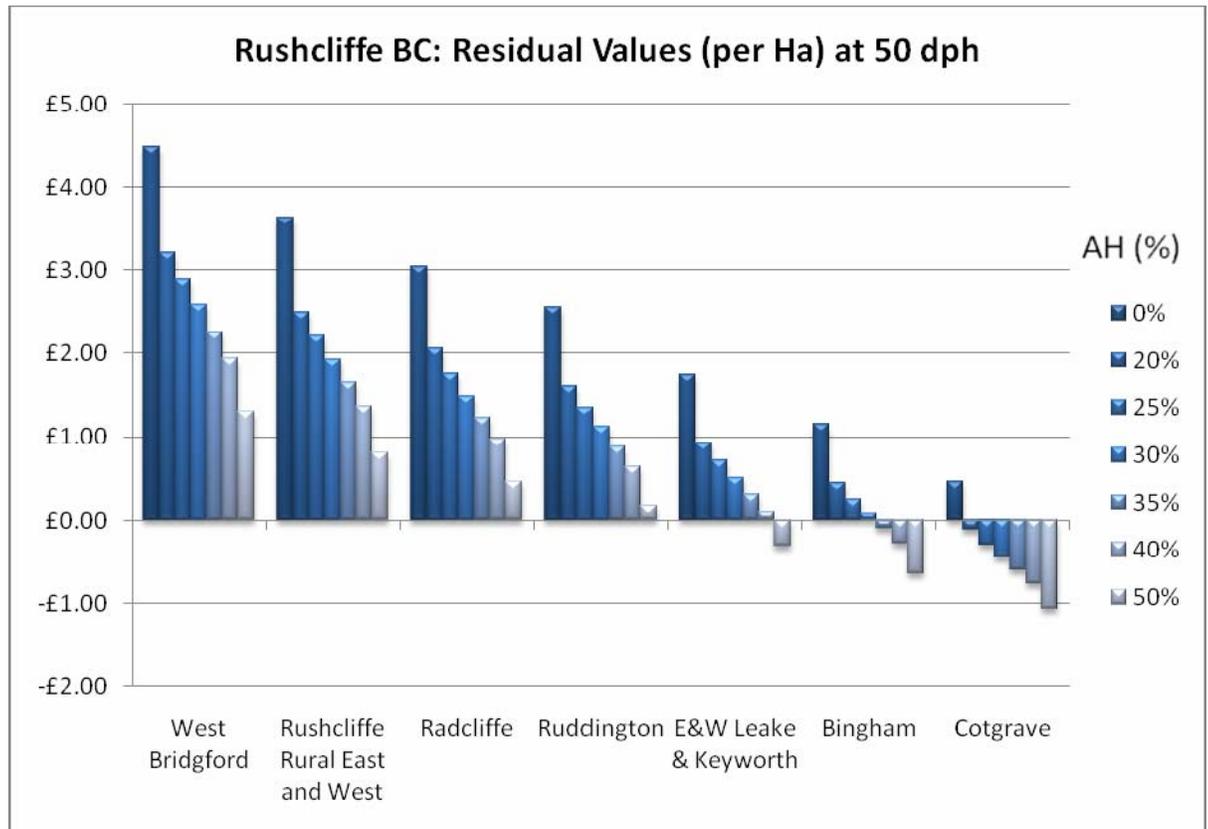


- Consistent with the 30 dph scenario, a range of both positive and negative land values is shown, although with significant negative scheme values now beginning to be seen in Bingham and Cotgrave.
- The impact of increased density varies between market areas and at different levels of affordable housing. Increases in residual value occur with increased density (30 dph to 40 dph) in West Bridgford and Rushcliffe Rural up to 40% affordable housing. However in Bingham, the 30 dph scenario produces a higher residual value at 25% affordable housing and higher. In Cotgrave, all affordable housing scenarios tested here produce a lower residual at 40 dph than 30 dph. This suggests that in the middle and weaker market areas, lower density development (with houses rather than flats) will tend to optimise the residual value.

### 50 dph scheme

3.11 Figure 3.3 shows residual values for a (50 dph) scheme and the residual values for each of the market value areas outlined earlier.

**Figure 3.3 Medium density housing (50 dph) – Residual value in £s million**

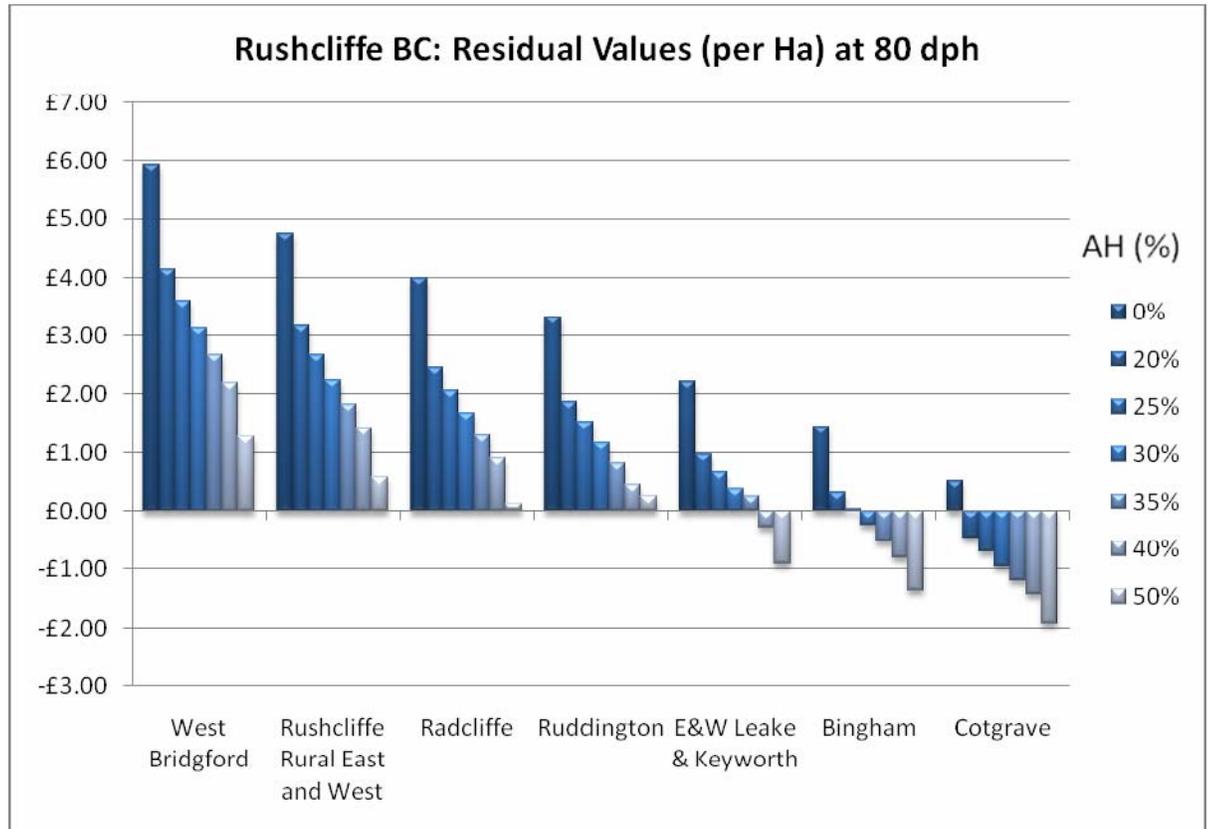


- The results for the 50 dph scenario underline the conclusion that increasing density does not necessarily increase residual value.
- However, this conclusion depends on location. 50 dph produces a higher residual in West Bridgford and Rushcliffe Rural at all percentages of affordable housing. In Radcliffe and Ruddington, the 50 dph scenario produces the highest residual (versus 30 dph and 40 dph) up to 40% affordable housing. However at Bingham and Cotgrave, a 30 dph scheme is likely to produce a higher residual at all affordable scenarios higher than 20%.
- Several scenarios show negative residual values at 50 dph. Cotgrave is particularly noticeable here.

**80 dph scheme**

3.12 Figure 3.5 shows residual values for a (80 dph) scheme and the residual values for each of the sub markets.

**Figure 3.5 Higher density housing (80 dph) – Residual value in £s million**



3.13 The 80 dph scenario includes a significantly higher proportion of apartments – 50% of the scheme is assumed to be flats.

3.14 The impacts of the development mix and density on residual is largely twofold. Versus other lower density scenarios the impact is generally to enhance residuals at lower proportions of affordable housing and in higher value locations, and, on the other hand, to make schemes in weaker sub markets even less viable at relatively modest proportions of affordable housing.

3.15 It can be seen (Figure 3.5) that in the weakest two sub markets, Bingham and Cotgrave, affordable housing produces increasingly negative residuals above 10% affordable housing.

### **Bingham and Cotgrave – viability issues**

- 3.16 Given the findings on residual value for Cotgrave and Bingham assuming no grant, an additional test was run for these two locations assuming 10% affordable housing.
- 3.17 The result for Bingham was £0.83 million per hectare and for Cotgrave £0.20 million per hectare.

### **Impacts of potential grant funding**

- 3.18 The availability of public subsidy (in the form of grant) can have a significant impact on scheme viability. Grant given to the affordable housing providers enables them to pay more for affordable housing units, thus increasing overall scheme revenue and therefore the residual value of a mixed tenure scheme. There are two main sources of grant which may be available: from the Homes and Communities Agency and/or the local authority (for example using money collected from development in the form of a commuted sum, through a s106 agreement).
- 3.19 We have assumed grant of £45,000 per Social Rented unit and £15,000 per New Build HomeBuy unit. These figures were agreed with the Nottingham Core group as a reasonable figure for the purposes of analysing the policy implications.
- 3.20 For our testing, we have tested the impact of grant on residual values for a 1 Ha site at 40 dph for a selection of locations. The results are shown in Table 3.2.

**Table 3.2 Comparison of impact of grant versus on residual values (at 40 dph): Residual Value (£s million per hectare); 80% Social Rent: 20% Shared Ownership**

40 Dph	West Bridgford		Radcliffe		E & W Leake		Bingham		Cotgrave	
	No grant	Grant	No grant	Grant	No grant	Grant	No grant	Grant	No grant	Grant
0% AH	£3.89	N/A	£2.67	N/A	£1.54	N/A	£1.04	N/A	£0.43	N/A
20% AH	£2.82	£3.13	£1.80	£2.11	£0.86	£1.17	£0.44	£0.75	-£0.06	£0.25
25% AH	£2.55	£2.94	£1.58	£1.97	£0.69	£1.08	£0.30	£0.69	- £0.19	£0.22
30% AH	£2.29	£2.76	£1.37	£1.84	£0.52	£0.99	£0.14	£0.61	- £0.32	£0.15
35% AH	£2.02	£2.58	£1.15	£1.71	£0.35	£0.91	£0.00	£0.56	- £0.43	£0.13

<b>40% AH</b>	£1.75	£2.37	£0.94	£1.56	£0.18	£0.80	-£0.15	£0.47	- £0.56	£0.06
<b>50% AH</b>	£1.21	£1.99	£0.50	£1.28	-£0.15	£0.63	-£0.45	£1.08	- £0.80	-£0.02

3.21 Table 3.2 shows that grant will enhance site viability. In Rushcliffe, grant should not necessarily be a starting point, particularly outside Bingham and Cotgrave, as values are relatively robust without subsidy. In the weaker market locations (and indeed for 'colder' spots within the higher value sub markets), the Council should, we think, look to support the delivery of affordable housing through grant.

3.22 As a general rule, the introduction of grant has a greater proportionate impact in the weaker sub markets. For example, in Bingham, there is a 75% increase in residual value at 20% affordable housing (from £0.44m per hectare to £0.75m). The equivalent uplift in the West Bridgford sub market is 11%

3.23 Whilst the biggest impact of grant is in the weaker value areas, grant is not an insignificant factor in middle and higher markets and the Council should consider how best to enhance affordable housing supply via this option.

**Impacts of increasing the proportion of Intermediate housing within the affordable element**

3.24 In the previous section we considered the impact of grant on scheme viability. Where grant is not available to support schemes (or is not sufficient on its own), scheme viability can be (further) enhanced by increasing the percentage of intermediate affordable housing. We have tested all scenarios thus far assuming the relevant affordable element is split 80% Social Rent and 20% New Build HomeBuy . Here we test a 50%:50% split in the affordable element.

**Table 3.3 Site values (£ million per hectare) for a 40 dph scheme comparing 50% Social Rent and 50% New Build HomeBuy without grant versus grant option (80% Social Rent and 20% New Build HomeBuy)**

40 Dph	West Bridgford		Radcliffe		E & W Leake		Bingham		Cotgrave	
	No grant 50%:50%	Grant								
<b>0% AH</b>	£1.66	N/A	£1.49	N/A	£0.81	N/A	£0.58	N/A	£0.32	N/A
<b>20% AH</b>	£3.15	£3.13	£2.04	£2.11	£1.05	£1.17	£0.61	£0.75	£0.07	£0.25

<b>25% AH</b>	£2.96	£2.94	£1.89	£1.97	£0.94	£1.08	£0.50	£0.69	-£0.02	£0.22
<b>30% AH</b>	£2.77	£2.76	£1.74	£1.84	£0.82	£0.99	£0.40	£0.61	-£0.11	£0.15
<b>35% AH</b>	£2.57	£2.58	£1.58	£1.71	£0.68	£0.91	£0.29	£0.56	-£0.20	£0.13
<b>40% AH</b>	£2.39	£2.37	£1.43	£1.56	£0.57	£0.80	£0.18	£0.47	-£0.29	£0.06
<b>50% AH</b>	£2.00	£1.99	£0.66	£1.28	£0.32	£0.63	-£0.04	£1.08	-£0.47	£0.02

- 3.25 Table 3.3 shows the residual values with a 50%:50% split in the affordable element. In all locations, with the exception of West Bridgford, this does not however show a higher residual value compared to the 'with grant' scenario. In East and West Leake (also Keyworth), for example, a 'with grant' scenario produces a significantly higher residual value than the 50%:50% affordable option, across all the percentages of affordable housing tested. This is also the case in Bingham and Cotgrave.
- 3.26 In Radcliffe, the options are more marginal. At 25% affordable housing, for example, the residual value with grant is £2.11 million per hectare, whereas a 50%;50% scheme produces a marginally lower residual of £2.04 million per hectare.
- 3.27 The main reason for these differences lies in the role played by New Build HomeBuy in the appraisals. In high value areas, switching tenure (an 80%:20% split to a 50%;50% split in the affordable tenure) will have much more dramatic impact than in a low value area, since revenue to the developer is based on a higher affordable housing payment, based in turn on higher house prices.

### **Market sensitivity testing**

- 3.28 Given the volatility of the current housing market, we have looked at a situation where house prices are 10% higher and 10% lower than the levels assumed in our main testing based at December 2008.
- 3.29 Table 3.4 shows residual values for a 40 dph scheme with house prices increased and decreased by 10%. This is not a reflection of any particular forecast of how the market will perform, but aims to show the sensitivity of residual values to changes in house prices.

### **Table 3.4 Residual values (£ million per hectare) for a 40 dph scheme with prices 10% higher and lower than the**

**baseline. No grant; 80% Social Rent: 20% New Build HomeBuy**

<b>Prices up10%</b>	<b>0%</b>	<b>20%</b>	<b>30%</b>	<b>40%</b>	<b>50%</b>
<b>West Bridgford</b>	£4.72	£3.50	£2.90	£2.30	£1.68
<b>Rushcliffe Rural</b>	£3.89	£2.82	£2.28	£1.74	£1.21
<b>E and W Leake</b>	£2.10	£1.32	£0.94	£0.55	£0.16
<b>Bingham</b>	£1.54	£0.86	£0.52	£0.17	-£0.16
<b>Cotgrave</b>	£0.83	£0.30	£0.02	-£0.27	-£0.55
<b>Baseline position</b>	<b>0%</b>	<b>20%</b>	<b>30%</b>	<b>40%</b>	<b>50%</b>
<b>West Bridgford</b>	£3.89	£2.82	£2.29	£1.75	£1.21
<b>Rushcliffe Rural</b>	£3.18	£2.22	£1.75	£1.27	£0.79
<b>E and W Leake</b>	£1.54	£0.86	£0.52	£0.18	-£0.15
<b>Bingham</b>	£1.04	£0.44	£0.14	-£0.15	-£0.45
<b>Cotgrave</b>	£0.43	-£0.06	-£0.32	-£0.56	-£0.80
<b>Prices down10%</b>	<b>0%</b>	<b>20%</b>	<b>30%</b>	<b>40%</b>	<b>50%</b>
<b>West Bridgford</b>	£3.13	£2.19	£1.71	£1.24	£0.77
<b>Rushcliffe Rural</b>	£2.46	£1.63	£1.21	£0.80	£0.38
<b>E and W Leake</b>	£0.99	£0.41	£0.11	-£0.18	-£0.48
<b>Bingham</b>	£0.55	£0.03	-£0.23	-£0.48	-£0.77
<b>Cotgrave</b>	-£0.01	-£0.16	-£0.64	-£0.86	-£1.06

- 3.30 Table 3.4 shows significant variation in residual values depending on the assumption about future price changes. For example in the West Bridgford sub market, a 10% increase in house prices will increase residual land value by 30% at a 40% affordable housing target. At the weaker end of the market, a small increase in prices will have an even more dramatic impact. For example, at Bingham, a 10% rise in house prices at 305 affordable housing will almost quadruple residual value.
- 3.31 Falling house prices will have a significant impact on land values as can be seen from the table above.

**Viability on very large sites**

- 3.32 The analysis carried out relates to a notional one hectare site, where it is anticipated that market selling prices will broadly 'pick up' the values from surrounding or very local settlements.
- 3.33 In practice, where very large sites are released (several hundred houses), these sites will have the potential to create their own market, which in

many instances will exceed the prices being charged for new housing being on smaller sites.

- 3.34 The testing of such strategic sites is beyond the scope of this study, as market values and specific infrastructure and abnormal costs need to be established in each instance. We would suggest that these sites are tested by the Council going forward, where affordable housing targets can be set independently of the findings of this study. This will apply for example in the case of any large extensions located on the edge of West Bridgford or Clifton.

### Benchmarking results

- 3.35 There is no specific guidance on the assessment of viability which is published by national government. In Section 2, we set out that we think viability should be judged against return to developer and return to land owner.
- 3.36 One approach is to take “current” land values for different development uses as a kind of ‘going rate’ and consider residual values achieved for the various scenarios tested against these. Table 3.5 shows residential land values for selected locations within the East Midlands.

**Table 3.5 Residential land values regionally**

EAST MIDLAND			
REGION	Small Sites (sites for less than five houses)	Bulk Land (sites in excess of two hectares)	Sites for flats or maisonettes
	£s per hectare	£s per hectare	£s per hectare
Lincoln	1,200,000	1,100,000	1,100,000
Mansfield	840,000	700,000	700,000
Nottingham (suburbs)	1,470,000	1,470,000	1,470,000
Derby	1,700,000	1,550,000	1,550,000
Leicester	1,600,000	1,500,000	1,500,000
Northampton	1,480,000	1,350,000	1,350,000
Loughborough	1,600,000	1,500,000	1,500,000

Source: Valuation Office; Property Market Report, January 2009

- 3.37 The table indicates residential land values ranged from £0.75 million (Mansfield) to £1.47 million (Nottingham suburbs).

- 3.38 Another benchmark which can be referred to is that of industrial land. Table 3.6 shows values ranging from £250,000 per hectare to £500,000 per hectare in the latter part of 2008 for Typical sites (Table 3.6)

**Table 3.6 East Midlands industrial land values**

<b>EAST MIDLANDS</b>			
	<b>From £s per ha</b>	<b>To £s per ha</b>	<b>Typical £s per ha</b>
Lincoln	250,000	300,000	275,000
Mansfield	200,000	300,000	250,000
Nottingham	425,000	575,000	500,000
Derby	325,000	450,000	400,000
Leicester	350,000	500,000	425,000
Northampton	350,000	500,000	450,000

Source: Valuation Office; Property Market Report, January 2009

- 3.39 The 'benchmark' of industrial land value can be important where land, currently in use as industrial land, is being brought forward for residential development or where sites may be developed either for residential or employment use.

## 4 LAND SUPPLY, SMALL SITES AND USE OF COMMUTED SUMS

### Introduction

- 4.1 This chapter reviews the policy context and options for identifying the size of sites above which affordable housing contributions would be sought, in the national policy context. Policy HOU7 seeks 30% affordable housing on allocated sites and unallocated sites of 0.5ha or 15 dwellings or more. On all other unallocated sites less than 0.5ha or 15 dwellings provision of affordable housing will be encouraged. The chapter provides an assessment of the profile of recent planning consents and the likely relative importance of small sites. It then considers practical issues about on-site provision of affordable housing on small sites and the circumstances in which collection of a financial contribution might be appropriate (and the principles by which such contributions should be assessed).

### Purpose of the Analysis

- 4.2 PPS3 Housing sets out national policy on thresholds and affordable housing and states:

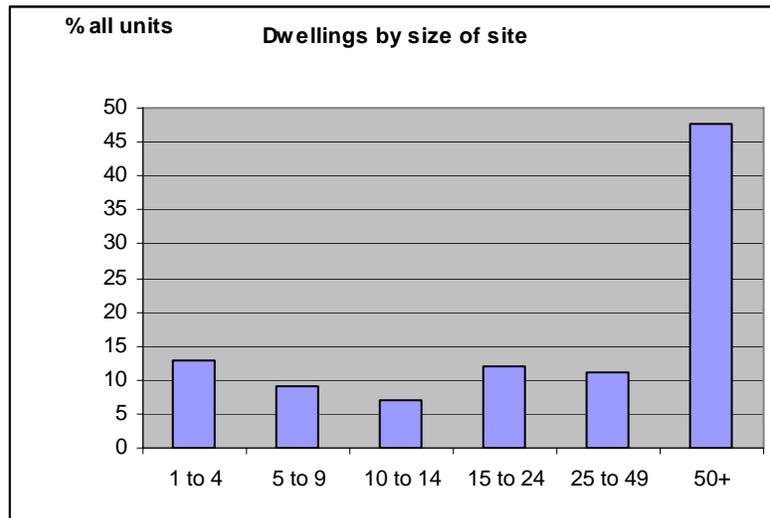
*"The national indicative minimum site size threshold is 15 dwellings. However, Local Planning Authorities can set lower minimum thresholds, where viable and practicable, including in rural areas. This could include setting different proportions of affordable housing to be sought for a series of site-size thresholds over the plan area." (Para 29)*

- 4.3 By reducing site size thresholds and 'capturing' more sites from which affordable housing can be sought, an authority can potentially increase the amount of affordable housing delivered through the planning system.
- 4.4 In this section we examine the impact that varying site size thresholds would have on affordable housing supply. In order to do this we need to examine the likely future site supply profile.

### Small sites analysis

We have analysed data on past permissions to consider how important sites of different sizes are likely to be to the future land supply. The chart below shows the results of this exercise. The analysis has considered permissions granted over the three years 2005 to 2008.

**Table 4.1: Proportion of dwellings in different sizes of sites, granted permission between 2005 and 2008**



- 4.6 The information on past permissions shows a fairly broad range of site sizes which are contributing to the land supply in Rushcliffe and demonstrates both the significant contribution ( 48%) from very large sites (over 50 units) and the even spread of dwellings provided on smaller sizes of site. The data indicates that around 29% of dwellings granted planning permission are on sites of less than 15 dwellings (the national indicative minimum site size threshold).
- 4.7 Below 15 dwellings, schemes of 1 to 4 dwellings make up 13% of total housing supply, compared with 16% for sites of 5-14 dwellings.
- 4.8 The analysis shows that sites below 15 units make a significant contribution to overall housing supply and serious consideration could be given to reducing the threshold at which affordable housing contributions are sought. In the context of other Notts Core authorities, we believe that Rushcliffe is however less reliant on small sites and this may be a further consideration in forming policy.
- 4.9 We believe that in order to make an informed decision the Council should seek to establish whether the proportion of small sites varies between the urban and the rural parts of the district. It may be appropriate to consider the use of differential threshold targets between urban and rural areas if it can be demonstrated that smaller sites are more important in either urban or rural parts of the borough.

### **Small sites and management of affordable housing**

- 5.12 We discussed the suitability of small sites for affordable housing at the workshop with the development industry and which included representatives from locally active housing associations.

- 5.13 The housing associations said that there is no problem, in principle, of providing affordable housing on-site (even if this means there will be as few as one or two affordable homes in the scheme). Whilst some housing associations normally prefer to secure affordable housing in larger 'blocks', other associations will take on very small numbers (even single units) of affordable housing.
- 5.14 Although the number of affordable housing units is not a reason, in itself, to forego an on-site contribution, there may be scheme-specific housing management reasons why it is better to take an off-site contribution (either as units or a commuted sum). Such reasons could include, for instance, high service charges in a flatted block.
- 5.15 Another reason raised at the workshops for not taking on-site provision on small sites was that of the lack of familiarity amongst developers of small sites about affordable housing. It was agreed that whilst this factor should not exempt developers of small sites from making an affordable housing contribution, the form of the contribution could more realistically be as a commuted sum and not on-site provision. Contributions as a commuted sum were believed to reduce the degree of complexity in scheme negotiations with the local authority and housing and a potential range of other parties and make for a simpler s106 agreement.

#### **Use of commuted sums**

- 5.16 As a general principle, we recognise that seeking on-site provision of affordable housing will be the first priority and that provision of affordable housing on an alternative site or by way of a financial payment in lieu (or commuted sum) should only be used in exceptional circumstances. This position is consistent with national guidance in Paragraph 29 of PPS3 which states:
- "In seeking developer contributions, the presumption is that affordable housing will be provided on the application site so that it contributes towards creating a mix of housing. However, where it can be robustly justified, off-site provision or a financial contribution in lieu of on-site provision (of broadly equivalent value) may be accepted as long as the agreed approach contributes to the creation of mixed communities in the local authority area" Para 29.*
- 5.17 Where commuted sums are sought as an alternative to direct on or off-site provision, PPS3 sets out the appropriate principle for assessing financial contributions - that they should be of "broadly equivalent value" (see para set out 29 above). Our approach is that the commuted sum should be equivalent to the 'developer/landowner contribution' if the affordable housing was provided on site. One way of calculating this is to take the difference between the residual value of 100% market housing and the

residual value of the scheme with the relevant percentage and mix of affordable housing.

- 5.18 If the 'equivalence' principle is adopted, then the decision of the local authority to take a commuted sum will be based on the acceptability or otherwise of on-site provision as a housing and spatial planning solution.
- 5.19 Any concerns about scheme viability (whatever size of site) should be reflected by providing grant or altering tenure mix, or by a 'reduced' affordable housing contribution whether provided on-site, off-site or as a financial contribution. Other planning obligations may also need to be reduced under some circumstances.
- 5.20 However, if affordable housing is sought from very small sites, in certain circumstances it becomes impractical to achieve on site provision e.g. seeking less than 25% on a scheme of 4 dwellings. There will also be occasions where on-site provision can only deliver a partial contribution towards the proportion of affordable housing sought e.g. 25% affordable housing in a scheme of 5 dwellings would deliver one affordable unit on site (representing 20% of provision). In the latter case, it is possible to devise a formula which mixes on-site provision with a commuted sum to 'make up the balance'.
- 5.21 The 'equivalence principle' for off-site provision and taking commuted sums was discussed and supported by the development industry workshop. Comment was also made at the workshop that where commuted sums are collected, it is important that the local authority has an effective programme in place to spend the money.

## 5 CASE STUDY VIABILITY ANALYSIS

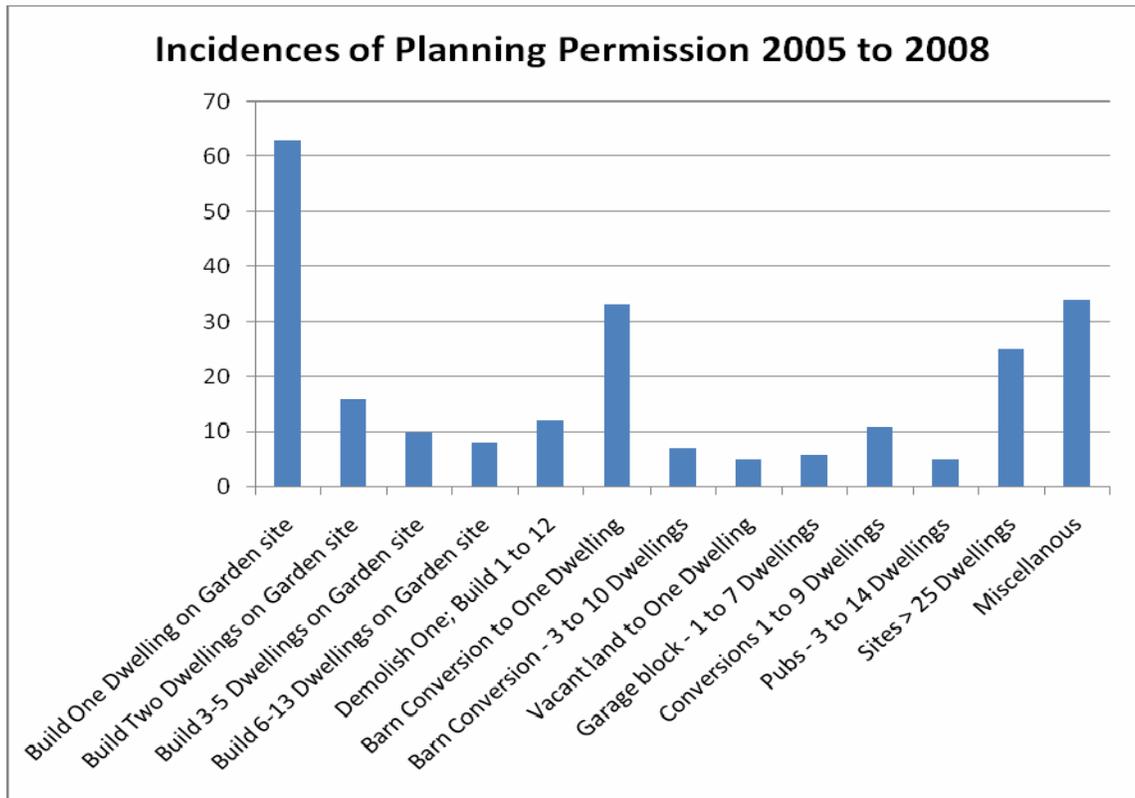
### Introduction

- 5.1 The analysis in Chapter 3 provides a good indication of the likely viability of sites in the borough. The residual values can be compared with existing use values to establish whether land owners are likely to make a return over and above existing use value, taking into account a developer margin.
- 5.2 The analysis in Chapter 3 will apply for large as well as small sites (on a pro rata basis). We do not have any evidence to suggest that the economics change significantly between large and small sites. This assumption was accepted at the development industry workshops as has been the case elsewhere where we have run similar workshops.
- 5.3 It will be noted (Table 3.5) that small sites can achieve higher land values than larger ones, suggesting that the economics of developing smaller sites could actually be more favourable than developing larger ones.
- 5.4 In theory therefore there is no real need to review in detail viability issues for small sites. However, for the sake of further illustration, and recognising that there may be special circumstances which impact on the viability of some types of smaller sites, it was felt helpful to review the development economics of some illustrative case studies.

### Case study sites

- 5.5 In this section we review a number of case study developments which are examples of small sites for residential development. Figure 5.1 shows the types of schemes granted planning permission during the period 2005 to 2008, with the nature of the existing land use. Here we are measuring the number of schemes of different sizes.

**Figure 5.1 Incidence of planning permissions (no of schemes) 2005-2008**



- 5.6 Figure 5.1 shows a high incidence of permissions for schemes involving the development of one dwelling, mainly from land which is categorised as garden land (27% of all incidences of planning permission). Other significant types of schemes involve the development of three to thirteen dwellings on garden land (15% of all incidences of planning permission). According to the data, 5% of all incidences of planning permission involve the demolition of one dwelling and the construction of one to twelve new units. Barn conversions make up a significant number of incidences of planning permission.
- 5.7 There are a number of other types of planning permission for smaller sites. These include various conversions, vacant land, pub and garage sites.
- 5.8 There are a number of schemes which do not fit neatly into any of these categories. These are included as miscellaneous. Permissions for more than 15 dwellings has been categorised separately.

- 5.9 On the basis of the data, we have selected four case studies for further investigation. These are shown in Table 5.1

**Table 5.1 Case study sites**

<b>Case Study</b>	<b>Number of dwellings</b>	<b>Type of new development</b>	<b>Site Size (Ha)</b>	<b>Resulting density</b>
<b>A</b>	<b>1</b>	1 x 5 bed detached house	0.05	20
<b>B</b>	<b>2</b>	1 x 4 bed detached house; 1 x 5 bed detached house	0.075	27
<b>C</b>	<b>4</b>	2 x 3 bed terraces; 2 x 4 bed detached	0.1	40
<b>D</b>	<b>10</b>	4 x 2 bed flats; 2 x 2 bed terraces 4 x 3 bed terraces	0.125	80

- 5.10 For each case study we have undertaken an analysis of residual values for a selection of three sub markets (high, medium and lower value) and at levels of affordable housing from 0%; 20%; 30%; 40% and 50%. All the other assumptions used are the same as for the main analysis described in Chapter 3.

- 5.11 We have then benchmarked the residual values derived against various potential alternative/existing use values. One comparator is the value of a second hand dwelling which is a relevant comparison where the development includes the demolition of an existing dwelling. We have used the market value of a second hand 4 bed detached dwelling as the comparator for these cases. Our estimate of the 'average' market value of one 4 bed detached property for each of the three market value areas we have analysed is as follows:

West Bridgford - £355,000

Ruddington - £280,000;

Bingham - £225,000.

### Case study A – Develop one detached house on a 0.05 ha site

- 5.12 The first scenario assumes the development of one five bed detached house. The results, with the affordable housing impacts are shown in Table 5.2:

**Table 5.2 Develop one detached house**

Case A	0%	20%	30%	40%	50%
<b>West Bridgford</b>	<b>£189,000</b>	<b>£146,000</b>	<b>£124,000</b>	<b>£101,000</b>	<b>£80,000</b>
	<b>£3.78</b>	<b>£2.92</b>	<b>£2.48</b>	<b>£2.02</b>	<b>£1.60</b>
<b>Ruddington</b>	<b>£113,000</b>	<b>£82,000</b>	<b>£67,000</b>	<b>£50,000</b>	<b>£35,000</b>
	<b>£2.26</b>	<b>£1.64</b>	<b>£1.34</b>	<b>£1.00</b>	<b>£0.70</b>
<b>Bingham</b>	<b>£55,000</b>	<b>£33,000</b>	<b>£23,000</b>	<b>£12,000</b>	<b>£2,000</b>
	<b>£1.10</b>	<b>£0.66</b>	<b>£0.46</b>	<b>£0.24</b>	<b>£0.04</b>

Table shows residual values in a selection of market value areas: the upper figure is the residual value for the scheme and the lower figure is the equivalent residual value per hectare (in £s million)

- 5.13 Table 5.2 shows residual values at the different proportions of affordable housing. All results are positive, although absolute returns in the Bingham sub market are low. The residual values on this type of small site are generally strong.
- 5.14 Where one dwelling of this type is built on, for instance, garden or backland sites, we would expect there to be a substantial uplift in site value, particularly in the stronger sub markets. For sites taken from garden land, this will also be the case although a devaluation to the existing dwelling may also occur.
- 5.15 As indicated in Figure 5.1, a number of cases involve the replacement of an existing property with a new one. These are not significant (5% of incidences of planning permission). Given the average values we set out in 5.11 above, demolishing an existing dwelling and building a single new five bed detached dwelling and which makes a contribution to affordable housing, looks unlikely to be viable.
- 5.16 However, in the example used above, it can be seen that the residual value generated without any affordable housing is well below the existing use value. This will partly explain the small number of examples of this development type found in the Borough. It also implies that the circumstances in which a dwelling is brought forward for redevelopment will not be the 'average' situation for the market value area. The analysis

implies that properties brought forward for redevelopment will be below average values and the new dwellings will be of a higher value than 'average' for new properties.

**Case study B – Develop two detached houses (one 4 bed and one five) on a 0.075 ha site.**

- 5.17 The viability of developing two detached houses rather than one will depend on the site size and existing use value. There will be some instances where the relationship between existing use value and residual development value is favourable and some where this may not be the case. Table 5.3 shows residual values for the development of two detached houses.

**Table 5.3 Develop two detached houses**

Case A	0%	20%	30%	40%	50%
<b>West Bridgford</b>	<b>£344,000</b>	<b>£263,000</b>	<b>£223,000</b>	<b>£183,000</b>	<b>£143,000</b>
	<b>£4.58</b>	<b>£3.51</b>	<b>£2.97</b>	<b>£2.44</b>	<b>£1.91</b>
<b>Ruddington</b>	<b>£198,000</b>	<b>£142,000</b>	<b>£113,000</b>	<b>£85,000</b>	<b>£58,000</b>
	<b>£2.64</b>	<b>£1.89</b>	<b>£1.51</b>	<b>£1.13</b>	<b>£0.77</b>
<b>Bingham</b>	<b>£91,000</b>	<b>£53,000</b>	<b>£33,000</b>	<b>£15,000</b>	<b>-£5,000</b>
	<b>£1.21</b>	<b>£0.71</b>	<b>£0.44</b>	<b>£0.20</b>	<b>£0.07</b>

Table shows residual values in a selection of market value areas: the upper figure is the residual value for the scheme and the lower figure is the equivalent residual value per hectare (in £s million)

- 5.18 Similar arguments apply to Case Studies 1 and 2. For infill, backland and garden plots, there will some uplift, although modest at lower affordable housing percentages. However, as previously discussed, schemes involving the demolition of an existing residential dwelling are in most situations unlikely to provide any Section 106 contributions.
- 5.19 As with residual values for one dwelling, values for a two dwelling scheme of detached housing is likely to generate robust values on the middle to higher value sub markets (here tested West Bridgford and Ruddington). In the weaker markets (here Bingham, but also Cotgrave), residual values are low on both a per hectare and an absolute financial basis, and more modest affordable housing contributions will be reasonable. It should be noted however, that difficulty in delivering this type of site will be explained not by site size but by location.

5.20 The analysis of recent permissions (Figure 5.1) indicates that the development of a site for 2 dwellings including the demolition of an existing dwelling is relatively low. We believe that even replacing one dwelling with two new ones will normally present viability problems, although (see Para 5.16) above, there will be instances where 'normal' or usual situations do not apply and a relatively low value dwelling can be developed for two new dwellings, providing an affordable housing contribution. These circumstances will need to be looked at by the Council on a site by site basis.

**Case study C – Develop four dwellings on a 0.1 ha site**

5.21 A number of schemes in the borough involve the development of four dwellings. We have modelled a mix of terraces and detached houses.

**Table 5.4 Develop two (3 bed) terraces and two (4 bed) detached houses**

Case A	0%	20%	30%	40%	50%
<b>West Bridgford</b>	<b>£536,000</b>	<b>£399,000</b>	<b>£331,000</b>	<b>£262,000</b>	<b>£194,000</b>
	<b>£5.36</b>	<b>£3.99</b>	<b>£3.31</b>	<b>£2.62</b>	<b>£1.94</b>
<b>Ruddington</b>	<b>£308,000</b>	<b>£210,000</b>	<b>£160,000</b>	<b>£111,000</b>	<b>£61,000</b>
	<b>£3.08</b>	<b>£2.10</b>	<b>£1.60</b>	<b>£1.11</b>	<b>£0.61</b>
<b>Bingham</b>	<b>£147,000</b>	<b>£75,000</b>	<b>£40,000</b>	<b>£3,000</b>	<b>-£32,000</b>
	<b>£1.47</b>	<b>£0.75</b>	<b>£0.40</b>	<b>£0.00</b>	<b>-£0.03</b>

Table shows residual values in a selection of market value areas: the upper figure is the residual value for the scheme and the lower figure is the equivalent residual value per hectare (in £s million)

5.22 This type of scheme, developed on garden, backland or residential infill should generate an uplift from existing use value in most instances (higher affordable housing percentages in Bingham and Cotgrave excepted). Four dwellings at a relatively high density (40 dph here) should generate a reasonable absolute value in the higher and middle market locations. As previously stated in the High Level testing, grant will need to be focused in the weaker sub markets for these smaller sites, as well as for the larger ones.

5.23 As before, where this type of development involves the demolition of an existing dwelling, residual values will normally fall short of existing use values – even at 100% market housing, although the economics of 'knock

one down, develop four' are significantly more favourable than with a lesser number of new build homes. As previously, the Council may wish to retain the right to negotiate these sites as they come forward.

**Case study D – Development of 10 dwellings on a 0.125 ha site**

- 5.24 We look here at an example of a 10 dwelling development which illustrates the kind of development economics which can be found with larger 'small' schemes.
- 5.25 We take as an example here the development of four (2 bed) flats, two (2 bed) terraces and four (3 bed) terraces.

**Table 5.5 Develop four (2 bed) flats, two (2 bed) terraces and four (3 bed) flats**

Case A	0%	20%	30%	40%	50%
<b>West Bridgford</b>	<b>£937,000</b>	<b>£647,000</b>	<b>£503,000</b>	<b>£358,000</b>	<b>£214,000</b>
	<b>£7.49</b>	<b>£5.18</b>	<b>£4.03</b>	<b>£2.86</b>	<b>£1.71</b>
<b>Ruddington</b>	<b>£540,000</b>	<b>£317,000</b>	<b>£206,000</b>	<b>£94,000</b>	<b>-£17,000</b>
	<b>£4.32</b>	<b>£2.54</b>	<b>£1.65</b>	<b>£0.75</b>	<b>-£0.14</b>
<b>Bingham</b>	<b>£256,000</b>	<b>£80,000</b>	<b>-£6,000</b>	<b>-£95,000</b>	<b>-£182,000</b>
	<b>£2.05</b>	<b>£0.64</b>	<b>-£0.05</b>	<b>-£0.76</b>	<b>-£1.45</b>

Table shows residual values in a selection of market value areas: the upper figure is the residual value for the scheme and the lower figure is the equivalent residual value per hectare (in £s million)

- 5.26 This type of development, at higher density, is likely to demonstrate, at smaller scale, the findings of the High Level testing which is that as density increases, higher value areas, at lower percentages of affordable housing, tend to achieve disproportionately high values, whilst, low value areas at high percentages of affordable housing tend to achieve disproportionately low values.
- 5.27 But again – where the alternative use value is that of an existing 4 bed detached house (demolished to create the new development), scheme viability becomes more difficult if affordable housing is included in the scenario.

**Commentary on the results**

- 5.28 This section on case studies is primarily illustrative, looking at the economics with particular reference to smaller sites and including

consideration of achieved residual values for different sites and how they compare with existing use values.

- 5.29 The results for the small sites reflect the previous analysis which considered the notional 1 hectare site. Market values across the district are not strong enough to support high levels of affordable housing without grant. In the weaker sub markets, the introduction of relatively low levels of affordable housing deliver either very low or negative residual values and this is the same for the small sites. Sites with a low number of dwellings (smaller sites) are no less or more viable than sites with a larger number of dwellings.
- 5.30 Schemes which involve the redevelopment of one dwelling with either one or two new dwellings will be more difficult to deliver with an affordable housing contribution because of the high existing use value. Such sites will, as a general rule, be unlikely to be able to deliver affordable housing and remain viable but may be able to do so in certain circumstances. We would suggest that the Council generally take a flexible approach to these types of schemes.

## 6 MAIN FINDINGS AND CONCLUSIONS

### Overview

- 6.1 In undertaking this viability study we have provided a broad based and comprehensive testing approach. This has involved two main types of analysis – a generic development type using a notional 1 hectare sites along with analysis of a range of case study sites reflecting the particular development types found in Rushcliffe. Our testing approach has then considered a range of sub markets within the district and different density and development mix types, along with testing at different levels of affordable housing. The residual values generated have been benchmarked against historic residential land values and realistic alternative use values. We believe that this range and depth of analysis provides a very robust basis for the council to establish policies for both affordable housing targets and thresholds in its future plans.

### Key findings

- 6.2 The market value areas in Rushcliffe which we identified were West Bridgford, Rushcliffe Rural ('Rural'), Radcliffe, Ruddington, East and West Leake ('Leake'), Bingham and Cotgrave.
- 6.3 There is significant variation in market values between the market value areas and this is reflected in the wide range of residual values identified (for the different scenarios tested). We found that residual value is dependent not only on location but also on the density adopted.
- 6.4 Residual values in the strongest market value area (West Bridgford) were as much as around £2.5m per hectare higher than in the weakest market value area of Cotgrave (using the 40 dph scenario and with 25/35% affordable housing). At 50% affordable housing and with the 40 dph scenario, the residual value in West Bridgford exceeds that for Cotgrave and Bingham at 100% market housing.
- 6.5 The Cotgrave market value area produces marginal or negative residual values with more than 10% affordable housing and even at this low level (and taking the 40 dph scenario) produces a residual value of only £0.20 per hectare. The Bingham market value area is stronger but at 20% has a residual value of around £0.4m for the scenarios tested and at 30% affordable housing, residual values generated are either marginally positive or negative (depending on the density scenario tested).
- 6.6 The other market value areas deliver residual values in between those of (on the one hand), West Bridgford and (on the other) Cotgrave and Bingham.
- 6.7 Radcliffe and Ruddington are broadly similar in terms of the residual values generated. At 30% affordable housing and with the 40dph

- scenario, the residual values per hectare are £1.37m and £1.05m respectively. At 40% they fall to £0.94m and £0.65m.
- 6.8 The Rural market value area is between that of West Bridgford and Radcliffe/Ruddington e.g. at 40 dph, the residual value per hectare is £1.27m (at 40% affordable housing). The other market value area of East and West Leake falls between that of Radcliffe/Ruddington and Bingham/Cotgrave.
- 6.9 This spread of residual values across the market value areas and limited grouping of market value areas is reflected in the policy options we set out in the next section. It has led us to an important conclusion that a single affordable target for the borough would not be appropriate. Our analysis of scheme viability has also highlighted, especially for the weaker market value areas, that the type of development and mix of dwellings in a scheme (reflected in the density scenarios we tested) can have an important bearing on viability.
- 6.10 The introduction of grant at the levels tested makes a significant difference to residual values and this effect is of far greater significance in the weaker market value areas. For example, in Bingham, there is a 75% increase in residual value at 20% affordable housing (from £0.44m per hectare to £0.75m). The equivalent uplift in the West Bridgford sub market is 11%. In the stronger market value areas, grant normally would seem unnecessary to deliver affordable housing. If there are viability concerns about specific schemes, modifying the tenure balance within the affordable component (i.e. increasing the amount of intermediate affordable housing) is an effective option to explore, although this solution will be less effective than using grant (at the assumed levels) to enhance residual value.
- 6.11 The analysis shows that residual values are very sensitive to house prices. Changes in house prices could have a significant impact on viability. This applies not only in the short term, in 'credit crunch' conditions, but also over the long term, where historically the trend in prices has been to increase (albeit with various peaks and troughs along the way).
- 6.12 The analysis of site supply showed that sites below 15 dwellings make a significant contribution to overall housing supply and that 29% of dwellings granted planning permission are on sites of less than 15 dwellings (the national indicative minimum site size threshold). We do not have the information to assess whether small sites (and of what size) make more or less of a contribution to the supply of land in the urban or rural part of the borough.
- 6.13 Scheme viability is sensitive to the relationship between existing (or, where relevant, alternative) use value. A small proportion of smaller sites being brought forward, involve the redevelopment of existing residential

- properties – either as a one for one replacement or at a higher density of development. Whilst such schemes can deliver affordable housing in some circumstances in the higher value markets, it must be acknowledged that residual values, with even relatively low levels of affordable housing, will not be sufficiently above current use values to encourage land owners to bring the land forward. The use of grant could help in achieving higher levels of affordable housing on such sites.
- 6.14 Again, it is important to highlight that it is not the size of the site per se that causes difficulties with viability, but the nature of the existing or alternative use.
- 6.15 From a housing management perspective, we did not find any in- principle objections from housing associations to the on-site provision of affordable housing on small sites. There may be particular schemes where on-site provision is not the preferred option, but as a general rule, on-site provision of (very) small numbers of affordable homes is acceptable to housing associations.
- 6.16 Where a financial payment in lieu of on-site provision of affordable housing (or commuted sum) is to be sought, it should be of “broadly equivalent value”. This approach is, on the evidence we have considered, a reasonable one to take in policy terms.
- 6.17 If this ‘equivalence’ principle is adopted, then the decision of the local authority to take a commuted sum will be based on the acceptability or otherwise of on-site provision as a housing and spatial planning solution, not in response to viability issues.

### **Conclusions and policy options**

- 6.18 There is no detailed government guidance setting out how targets should be assessed, based on an assessment of viability. In coming to our conclusions, we have reviewed the residual values generated for the different sub markets in the borough at the alternative levels of affordable housing tested and considered how these values compare with historic land values generally in the area.

#### *Affordable housing target*

- 6.19 The current policy operated in Rushcliffe is contained in the non-statutory Local Plan of 2006 and seeks 30% affordable housing on qualifying sites. The Council uses the PPS3 national indicative threshold of 15 dwellings.
- 6.20 Comparing Q3 of 2006<sup>4</sup> with Q3 of 2008, we find that mean average house prices in Rushcliffe have decreased by about 2%<sup>5</sup>. These figures are for

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<sup>4</sup> The year the Local Plan was adopted

all house prices and not specifically for new homes. We consider this to be an insignificant fall in prices suggesting relatively stable housing market conditions since the Plan was introduced.

6.21 Our review has also taken into account that the Strategic Housing Market Assessment indicated that the need for affordable housing was estimated at around 45% of the total housing requirement in the East Midlands Plan<sup>6</sup>.

6.22 On the basis of the available evidence and reflecting the wide range of market values in the borough, we believe that a single percentage target across the borough is not the most appropriate policy option. We do not completely discount the option as it would give clarity across the borough as to affordable housing requirements on mixed tenure schemes but we believe there are better options available. We put forward two alternative options, both based on different percentage targets for specific market value areas (as we have identified them). In identifying these targets, we have taken into account existing use values, the impact on small sites, local knowledge and drawn on our experience from other studies including those carried out for the Nottingham Core authorities.

- A target of 45% for West Bridgford and 'Rural' with a target of 30% elsewhere, except for Cotgrave and Bingham where a 10% target is used (and accepting that public subsidy may be required to meet these percentages, especially in Cotgrave and Bingham);
- A more refined set of targets which provide individual percentage for each market value area:
  - West Bridgford 40%
  - 'Rural' 40%
  - Radcliffe 35%
  - Ruddington 30%
  - 'Leake' 25%
  - Bingham 20%
  - Cotgrave 10%

Again – for some schemes, subsidy will be required to achieve the above targets in the lower value market areas.

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<sup>5</sup> CLG Live Table Mean House Prices by District. Q3 2006 = £229,974 Q3 2008 = £225,230 (Q3 2008).

<sup>6</sup> Based on the East Midlands Regional Plan supply figures, 2009

- 6.23 For either option to operate successfully, it will be important that the areas to which different targets apply are clearly identified and 'make sense' to the development industry.
- 6.24 We understand that the Council is anticipating the allocation of a significant housing expansion area. This opportunity can create its own market conditions and, although would reflect underlying values in the area, could achieve a quality of development which means that the targets outlined for the district as a whole, could be exceeded. In framing any future policy, we therefore recommend that the Council does not set out an affordable housing target for the scheme in advance of detailed viability assessment of it and taking into account best estimates of future market values likely to be achieved there.
- 6.25 Similarly, the Council may wish to retain flexibility so it can consider the affordable housing requirement for other sites it allocates in the light of specific circumstances.

#### *Viability on individual sites*

- 6.26 Our analysis has indicated that there will be site-specific circumstances where achievement of the affordable housing proportions set out above may not be possible. This should not detract from the robustness of the overall targets but the council will need to take into account specific site viability concerns when these are justified.
- 6.27 If there is any doubt about viability on a particular site, it will be the responsibility of the developer to make a case that applying the council's affordable housing requirement for their scheme makes the scheme **not viable**. Where the council is satisfied this is the case, the council has a number of options open to it (including changing the mix of the affordable housing and supporting a bid for grant funding from the Homes and Communities Agency and/or using their own funds) before needing to consider whether a lower level of affordable housing is appropriate. In individual scheme negotiations, the council will also need to consider the balance between seeking affordable housing and its other planning obligation requirements.

#### *Thresholds*

- 6.28 There is a significant need for affordable housing in Rushcliffe and it is appropriate for the Council to give consideration to a lower threshold than the indicative national minimum (15 dwellings) set out in PPS3 and which is current council policy.
- 6.29 We believe that consideration should be given to reducing the threshold at which affordable housing contributions are sought. The relatively small number of units provided on sites of 10-14 units indicates that there is little point in reducing the threshold to 10 units. The possible options, if a

decision was taken to reduce the threshold, would be a threshold of 5 units (catching 87% of supply) or a threshold of 0 units (catching 100% of supply).

- 6.30 We believe that in order to make an informed decision the Council should seek to establish whether the proportion of small sites varies between the urban and the rural parts of the borough. It may be appropriate to consider the use of differential targets between urban and rural areas if it can be demonstrated that smaller sites are more important to one rather than the other.
- 6.31 Below a certain level of dwellings (depending on the target percentage adopted), on-site provision is not mathematically practical and an equivalent commuted sum will need to be sought.

#### *Commuted sums*

- 6.32 Where commuted sums are collected a possible approach to calculating the appropriate sum sought is to base this on the equivalent amount which would be contributed by the developer/landowner were the affordable housing provided on site. This is expressed as follows:

RV 100% M = Residual value with 100% market housing  
RV AH = Residual value with X% affordable housing (say 40%)  
Equivalent commuted sum = RV 100% MV minus RV AH

- 6.34 Where commuted sums are collected, the council will need to have in place a strategy to ensure the money is spent effectively and in a timely manner. Options for spending will be a matter for the council to consider but could include supporting schemes which would otherwise not be viable, increasing the amount of social rented housing in a scheme, increasing the proportion of family units in a scheme, seeking higher quality affordable housing (e.g. a higher level of the Code for Sustainable Homes).

#### **The current housing market**

- 6.35 At the time of preparing this report, the housing market has suffered a down-turn as a result of the 'credit crunch'.
- 6.36 We think it likely however that developers will increasingly run an argument during 2009 and 2010 that the affordable housing and wider s106 policy is holding back sites. We believe that whilst the council should be flexible in its negotiations on specific sites, we do not think it should shift its position from the policy conclusions of this report since these will be more appropriate to the longer term trend in house prices which have been shown to be upwards. In other words, the policy position should be one which reflects the longer run and not simply the impacts of the credit

crunch, although on a scheme by scheme basis, the Council will need to take into account market circumstances at the time when development takes place.

## **Appendix 1**

### **Nottingham Core Affordable Housing Viability Study**

#### **Workshops Notes**

Three workshops were held:

Tuesday 22<sup>nd</sup> July 2008 at Rushcliffe BC;  
Wednesday 23<sup>rd</sup> July 2008 at Gedling BC and  
Tuesday 29<sup>th</sup> July 2008 at Erewash BC.

Three Dragons and the Nottingham Core steering group would like to thank all those in attendance for their inputs to the study. Those attending are listed below.

#### **Introduction**

At each workshop Three Dragons gave a presentation summarising the methodology and outlining the process of higher level and detailed testing which would be carried out to examine viability targets. It was explained that the study covers the authorities of Ashfield DC, Broxtowe BC, Erewash BC, Gedling BC, Nottingham City Council and Rushcliffe BC.

It was agreed that the Powerpoint presentation (attached) would be made available to all workshop participants in conjunction with these feedback notes.

#### **Key issues**

##### **1 Basis for interpreting viability**

There was no objection in principle to the method for assessing viability proposed by Three Dragons. This measures viability by reference to residual scheme value (i.e. total scheme revenue less scheme costs) and then compares the residual value with the existing or alternative use value of a site.

Feedback from the workshops emphasised the importance of existing use values

On agricultural land, auction prices per hectare for agricultural land in the East Midlands range from £3,000 per hectare to £11,000 per hectare (Source Property Market Report Jan 2008). However, even in the present market, it was stated that farmers are looking for around £1million per acre and for paddock land, around £500,000 per acre where there is prospect of the land achieving planning permission for residential development.

Options for such land are normally for over 10 yrs with requirement to secure specified minimum sum. These may not come forward in the present housing market.

Housing associations find it difficult to compete in the land market, even in current market conditions, as landowners are 'holding onto' their sites in anticipation of a future up-turn in the market. However, it was noted that, at least for the short term, developers are approaching housing associations to 'buy' units which were developed initially as market units. Similarly it was reported that there is evidence of developers seeking ways of building out affordable housing units in advance of market housing, on mixed tenure schemes.

There is also an important viability question which relates to the timing of site acquisition: has the land been owned by developer for a considerable time or has been recently acquired (and if so, under which particular market conditions?)

## **2 Overall methodology**

Three Dragons explained that the approach to the study will be two stage with the first stage focusing on testing a notional one hectare site, assuming different development mixes and different percentages of affordable housing, with the second stage looking at a range of generic site types, ranging from large green field through to smaller brown field, windfall type sites, and in different current uses (e.g. residential use, employment use).

Participants at the workshops generally supported the approach set out (see also PowerPoint which explains the approach diagrammatically). It was noted that one form of 'brownfield development' which should be considered is where housing is developed within the 'grounds' of an existing property.

Data sources (e.g. HMLR for house prices and BCIS for build costs) were explained to participants. The need for best primary data sources based on a large sample was understood and agreed.

## **3 Sub markets**

A key part of the study will involve the analysis of viability at a sub market level. Sub markets will be defined primarily by house prices. The Powerpoint presentation shows a map of draft areas although these are subject to further refinement.

Participants generally welcomed the focus on sub markets and were receptive to the argument that differential affordable housing targets, responsive to house price differentials, might be a proper policy response. This could mean both

different targets between authorities and/or different targets for different areas within an authority.

It was stated that the affordable housing contribution that RSLs pay, will vary according to rents achieved in different locations. Three Dragons responded to this point by saying that it would be difficult to reflect this factor at a sub market level, but that it will be possible to reflect rent differentials at a local authority area level. It was noted that RSL payments for intermediate housing (e.g. HomeBuy could reflect market values).

#### **4 Density and development mix**

A template of development mixes was run past each of the workshops, showing proposed mixes at different densities. There were no significant objections to the proposed matrix, although it was stated that at the current time, even in high density schemes, around 70% to 80% of units will be 2 bed, because of the marketability problem in the current market relating to 1 beds. Although flatted developments generally were said to be more difficult to progress in the current market, it was agreed that apartments would return as part of the 'normal development mix' when the market has picked up.

No bungalows except on retirement schemes and exceptions sites.

One delegate suggested that the testing process should include three bed flats in Nottingham City centre apartment type schemes.

#### **5 Thresholds and the viability of smaller sites**

A range of views were expressed in relation to thresholds and the viability of small sites.

It was generally concluded that there is no reason why small sites should not contribute to affordable housing provision. Generally, small sites are no less viable than large ones although it was stated that the value of market housing could be adversely affected in small mixed tenure schemes.

The logic of a 15 dwelling threshold was questioned – why is it 15?; the economics do not change at this point.

One point raised related to developers who typically deal with small sites. One delegate suggested that '*small builders do not have a clue about affordable housing*'. It was agreed that whilst this factor should not exempt smaller developers from making an affordable housing contribution, the form of the contribution could more realistically be as a commuted sum and not on-site provision. Contributions as a commuted sum were believed to reduce the degree

of complexity in scheme negotiations with the local authority, and Housing Association and a potential range of other parties and make for a simpler s106 agreement. An initial view expressed at one workshop was that the 'cut off' point for on site provision should be around, say, 5 dwellings, (below that, a commuted sum should be sought).

It was stated that councillors are generally keen to support small builders as local employers and as a way of supporting the local economy. Imposing on-site affordable housing contributions may work against this objective. Low cost home ownership may be easier to integrate within a small owner-occupied scheme than social rented housing.

## **6 On-site provision and commuted sums**

The principle was debated and agreed that any commuted sum should be the difference between the residual value of a scheme with 100% market housing and one with the relevant mix of market and affordable housing.

With small sites, there is no problem, in principle, of providing affordable housing on site (even if this means there will be as few as one or two affordable homes in the scheme). Whilst some housing associations normally prefer to secure affordable housing in larger 'blocks', other associations will take on very small numbers (even single units) of affordable dwellings.

Whilst the number of affordable housing units is not a reason, in itself, to forego an on-site contribution, there may be scheme-specific reasons why it is better to take an off-site contribution (either as units or a commuted sum). Such reasons could include, for instance, high service charges in a flatted block. Local authorities should seek the views of housing associations about acceptability of on-site provision.

Where commuted sums are collected, it is important that the local authority has a programme for how the money is to be spent.

## **7 Development costs**

Three Dragons presented the proposed development costs that will be used for the testing framework. This is included in the Powerpoint presentation as a screenshot from the Toolkit. It was explained that the base build costs per square metre will be calculated from the BCIS data source (NB: costs in the Powerpoint presentation are not necessarily those relating to the Nottingham Core authorities). The other development costs (professional fees, internal overheads, profit margins, etc) are however those which Three Dragons intend to use.

The view at one workshop was that a 10-15% developer return would be an acceptable margin. However, it was questioned in one workshop whether the developer's return should be higher in the current market, to reflect increased risk.

It was suggested that interest rates plus 2% above LIBOR, not 2% above base rate should be used as the basis of the testing.

What will be the impact on costs of meeting Code for Sustainable Homes standards? This is not yet done extensively in the Nottingham Core area, although Code 3 is what seems to be coming through. Upton at Northampton is providing homes to high Code Standards (KD to investigate with EP at meeting on 11<sup>th</sup> August). It was commented that higher Codes may be easier to achieve with timber frame construction than with traditional masonry structure. A starting point for analysis of between Code Level 3 and Level 4 was discussed and accepted at the third workshop.

A more general point was raised about the rising costs of materials. The extent to which costs are rising is however difficult to gauge, particularly as the price of labour falls in response to a more competitive environment for contracts.

## **8 Other Section 106 contributions**

The level of planning gain package was discussed at all workshops. The range was queried – more widely (than the Notts Core area) it can range from £5,000 per dwelling to Milton Keynes tariff levels of £18,000 plus free land) or even higher.

## **9 Protocols for negotiations on Section 106**

Three Dragons explained that the project will provide the six local authorities with an Affordable Housing Toolkit to assist the process of negotiations on viability and Section 106 contributions. The availability of the Toolkit to developers and their agents was questioned by some delegates at the workshops – how would the process be managed, etc.

The general view from the workshops was that it was important for the authorities to have a clear policy which was consistently applied but that this should be seen as a starting point – it was important that the authorities were then flexible in their negotiations and be prepared to take into account scheme specific considerations.

## 10 Other issues

The study needs to take account of schemes which are developed out for 100% affordable housing (generally as a mix of social rent and intermediate affordable housing).

Availability of grant from the Housing Corporation remains uncertain, especially in the light of the Regular Market Engagement approach currently being taken.

Housing Corporation target rents are not necessarily the same as those used by local RSLs which are based on 1999 house prices.

### Attendees:

#### Rushcliffe BC:

Graham Day	Mosaic Estates
Angela Doherty	Rushcliffe BC
Mick Dunstall	The Moore Group
Donna Dwyer	Rushcliffe BC
Mark Elliott	Lace Market Properties
Lucy Kay	Escritt Barrell Golding Land Agents
Stephen Pugh	Spirita
Martin Rich	Broxtowe Borough Council
Chris Reed	Nottingham City Council
Marie Wilson	Eastern Shires Housing Group

Kathleen Dunmore	Three Dragons
Andrew Golland	Three Dragons

#### Gedling BC:

Lisa Bell	Gedling DC
David Bowden	Bowden Land
Martin Field	EMDA
Roger Foxall	Langridge Homes
Jo Gray	Gedling BC
Deborah Higgins	MHP
Nick Hutchings	Henry Mein Partnership
Judith Lewis	Broxtowe BC
Adam Murray	Haworth Estates
Anabel Rooksby	Peveril Homes
Anne Tomanek	Gedling BC

Kathleen Dunmore	Three Dragons
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Andrew Golland      Three Dragons  
Adam Watkins        Three Dragons

**Erewash BC:**

Alwa Daykin         East Midlands HA  
John Deakin         Bellway Homes  
Peter Harley         Derwent Living  
Miles King          Midlands Rural Housing  
Phillip Marshall     Rushcliffe BC  
Peter Morris         Carter Jonas  
Adam Reddish       Erewash BC  
Jas Singh            Freeth Cartright  
Peter Tyers          P.T Associates  
Sue Wytcherley     Tuntum HA

Lin Cousins         Three Dragons  
Andrew Golland     Three Dragons

## **Appendix 2 Three Dragons model: Method statement**

The Toolkit provides the user with an assessment of the economics of residential development. It allows the user to test the economic implications of different types and amounts of planning obligation and, in particular, the amount and mix of affordable housing. It uses a residual development appraisal approach which is the industry accepted approach in valuation practice.

The Toolkit compares the potential revenue from a site with the potential costs of development before a payment for land is made. In estimating the potential revenue, the income from selling dwellings in the market and the income from producing specific forms of affordable housing are considered. The estimates involve (1) assumptions about how the development process and the subsidy system operate and (2) assumptions about the values for specific inputs such as house prices and building costs. These assumptions are made explicit in the guidance notes. If the user has reason to believe that reality in specific cases differs from the assumptions used, the user may either take account of this in interpreting the results or may use different assumptions.

The main output of the Toolkit is the residual value. In practice, as shown in the diagram below, there is a 'gross' residual value and a 'net' residual value. The gross residual value is that value that a scheme generates before Section 106 is required. Once Section 106 contributions have been taken into account, the scheme then has a net residual value, which is effectively the land owner's interest.

## **Key data assumptions**

### **Market areas and prices:**

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The development mixes were as follows:

- 30 dph: including 10% 2 Bed flats; 10% 2 bed terraces; 15% 3 bed terraces; 20% 3 bed semis; 25% 3 bed detached; 15% 4 bed detached; 5% 5 bed detached
- 40 dph: including 5% 1 bed flats; 15% 2 bed flats; 15% 2 bed terraces; 15% 3 bed terraces; 20% 3 bed semis; 20% 3 bed detached; 10% 4 bed detached;
- 50 dph: including 10% 1 bed flats; 20% 2 bed flats; 20% 2 bed terraces; 15% 3 bed terraces; 15% 3 bed semis; 15% 3 bed detached; 5% 4 bed detached;
- 80 dph: including 20% 1 bed flats; 30% 2 bed flats; 30% 2 bed terraces and 20% 3 bed terraces.

### **Affordable housing targets:**

10%  
20%;  
25%;  
30%;  
35%;  
40%;

Affordable housing split: 80% to 20% Social Rent to Shared Ownership

### **Typical unit sizes adopted (m<sup>2</sup>):**

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*Rushcliffe Borough Council Final Report – December 2009*

	Market	Affordable
<b>1 Bed Flat</b>	45	46
<b>2 Bed Flat</b>	60	67
<b>2 Bed Terrace</b>	65	76
<b>3 Bed Terrace</b>	80	84
<b>3 Bed Semi</b>	90	86
<b>3 Bed Detached</b>	120	90
<b>4 Bed Detached</b>	150	110

### Other Affordable Housing Factors:

#### Social rents

	Weekly Rent
<b>1 Bed Flat</b>	£58
<b>2 Bed Flat</b>	£65
<b>2 Bed Terrace</b>	£66
<b>3 Bed Terrace</b>	£76
<b>3 Bed Semi</b>	£76
<b>3 Bed Detached</b>	£79
<b>4 Bed Detached</b>	£89

#### Gross to net factors (Affordable housing revenue)

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### Appendix 3 Results – Residual values – no grant scenarios

At 30 dph							
	0%	20%	25%	30%	35%	40%	50%
W. Bridgford	£3.30	£2.44	£2.21	£2.01	£1.78	£1.58	£1.11
Rushcliffe Rural	£2.68	£1.93	£1.74	£1.55	£1.35	£1.16	£0.78
Radcliffe	£2.26	£1.57	£1.40	£1.22	£1.01	£0.87	£0.53
Ruddington	£1.91	£1.28	£1.12	£0.95	£0.80	£0.64	£0.32
E&W Leake & Kw'h	£1.32	£0.78	£0.65	£0.52	£0.39	£0.25	-£0.02
Bingham	£0.90	£0.43	£0.32	£0.21	£0.08	-£0.03	-£0.26
Cotgrave	£0.39	£0.01	-£0.08	-£0.17	-£0.27	-£0.37	-£0.56
At 40 dph							
	0%	20%	25%	30%	35%	40%	50%
W. Bridgford	£3.89	£2.82	£2.55	£2.29	£2.02	£1.75	£1.21
Rushcliffe Rural	£3.18	£2.22	£1.98	£1.75	£1.50	£1.27	£0.79
Radcliffe	£2.67	£1.80	£1.58	£1.37	£1.15	£0.94	£0.50
Ruddington	£2.25	£1.45	£1.25	£1.05	£0.86	£0.65	£0.25

E&W Leake & Kw'h	£1.54	£0.86	£0.69	£0.52	£0.35	£0.18	-£0.15
Bingham	£1.04	£0.44	£0.30	£0.14	£0.00	-£0.15	-£0.45
Cotgrave	£0.43	-£0.06	-£0.19	-£0.32	-£0.43	-£0.56	-£0.80
<b>At 50 dph</b>							
	0%	20%	25%	30%	35%	40%	50%
W. Bridgford	£4.48	£3.21	£2.90	£2.58	£2.26	£1.94	£1.31
Rushcliffe Rural	£3.63	£2.49	£2.21	£1.93	£1.65	£1.37	£0.80
Radcliffe	£3.04	£2.06	£1.76	£1.49	£1.23	£0.98	£0.46
Ruddington	£2.56	£1.60	£1.36	£1.13	£0.88	£0.65	£0.17
E&W Leake & Kw'h	£1.75	£0.93	£0.71	£0.51	£0.31	£0.10	-£0.31
Bingham	£1.16	£0.44	£0.25	£0.08	-£0.10	-£0.28	-£0.65
Cotgrave	£0.46	-£0.12	-£0.30	-£0.45	-£0.60	-£0.76	-£1.06
<b>At 80 dph</b>							
	0%	20%	25%	30%	35%	40%	50%
W. Bridgford	£5.92	£4.15	£3.59	£3.13	£2.66	£2.21	£1.27
Rushcliffe Rural	£4.75	£3.16	£2.66	£2.25	£1.83	£1.41	£0.58
Radcliffe	£4.00	£2.45	£2.06	£1.68	£1.30	£0.90	£0.14
Ruddington	£3.32	£1.88	£1.53	£1.17	£0.81	£0.46	£0.26
E&W Leake & Kw'h	£2.22	£0.97	£0.66	£0.38	£0.25	-£0.28	-£0.90
Bingham	£1.45	£0.32	£0.05	-£0.23	-£0.51	-£0.80	-£1.36
Cotgrave	£0.51	-£0.46	-£0.70	-£0.95	-£1.19	-£1.43	-£1.92