

ROTHERHAM METROPOLITAN BOROUGH
COUNCIL

Housing Viability Study Of Small Sites

Affordable Housing Requirements

Prepared by Professor Stephen Walker

Draft: January 2011

Final: May 2012 [After Scrutiny]

EXECUTIVE SUMMARY

Study Context

1. Professor Stephen Walker was commissioned by Rotherham Metropolitan Borough Council in September 2010 to produce financial appraisals on twelve residential development sites in Rotherham.
2. Presently, Rotherham do not seek a contribution in provision or in lieu [via a financial payment] regarding affordable housing on sites below the PPS3 [CLG, 2006] threshold of 0.5 hectares or 15 dwelling units.
3. The purpose of the appraisals was to assess the efficacy and potential of these twelve sites to make a financial contribution towards the provision of affordable housing off-site, as well as other relevant planning requirements by way of planning obligations [typically called S106 obligations].
4. The findings from these viability studies are intended to specifically inform Rotherham council's future planning and affordable housing policies with regard to small sites and to ensure that such policies do not render forthcoming housing developments on small sites unviable as prescribed by current national Government guidance [i.e. PPS1, PPS3 and PPS12].
5. The approach in testing viability involves a standard valuation method - a Discounted Cash Flow method of Residual [Land] Valuation - which has been tailored to reflect local circumstances in terms of prices and costs. This approach is no different from the valuation method applied to the study of Large Sites prepared by Professor Stephen Walker dated October 2010.

Viability Testing

6. At the core of this study is development economics and in particular subjecting housing [and other sites] to the rigour of viability assessment prior to plan making. The imperative of viability is a market concept. However, plan making is now required to take development economics and viability into account. PPS3 Housing [DCLG, 2006], Circular 05/2005 on Planning Obligations [ODPM, 2005], Planning Obligations, Practice Guidance [ODPM, 2006], PPS12 Local Spatial Planning [CLG, 2009] and HCA [March 2010], all emphasise the need for and importance of robust viability assessments.
7. The Borough Council wanted the appraisals to be "ground clearing" in testing the impact of levying a new off-site financial contribution towards the provision of affordable housing from small sites taking into account a number of market development situations.
8. The sites for this study of small sites were carefully selected so as to reflect different market circumstances i.e. geographical locations - town centre, suburban, edge of town, rural; site capacity ranging from 1 unit to 14 units; green-field and brown-field where proposals involve complete redevelopment or a mix of conversion and new building. A map on page 4 of this Report shows their location across the borough.

Affordable Housing Quotas: Stress-Testing Options

9. The viability of the twelve study sites was stress-tested for **twelve iterations** relating to:

- Zero affordable housing i.e. all market housing as a baseline.
- Prospective affordable housing policy for small sites:
 - £5,000 per dwelling unit as a financial contribution
 - £7,500 per dwelling unit as a financial contribution
 - £10,000 per dwelling unit as a financial contribution
 - £15,000 per dwelling unit as a financial contribution
 - £20,000 per dwelling unit as a financial contribution
 - £25,000 per dwelling unit as a financial contribution
 - £30,000 per dwelling unit as a financial contribution
 - £50,000 per dwelling unit as a financial contribution
 - £75,000 per dwelling unit as a financial contribution
 - £100,000 per dwelling unit as a financial contribution
- Current affordable housing policy [i.e. 25% of all units are affordable units].

In liaison with the Borough Council, we assumed that no social housing grant was available.

Planning Obligations and other Costs

10. As part of our modelling approach we included a standard planning obligation charge to cover a mix of planning requirements that might be paid in the future by housing developers. For consistency we assumed a standardized charge of £7,000 per dwelling on all twelve sites.
11. Where appropriate, we have also included in the appraisals a sum for abnormal costs. Only one site [site 7] in Rawmarsh was provision made for potential remediation costs of £50,000.
12. Local market conditions showed that house prices across the Borough varied considerably and these were reflected in the new build prices applied in the modelling to reflect mix, location and development constraints.
13. Comparative land values showed the existence of wide differences according to land uses [e.g. agricultural, industrial, housing].
14. The modelling also required us to specify a number of other important development assumptions relating to professional fees, stamp duty land tax, interest rates and discount factor, as well as the pace and phasing of development. In respect of the latter, these were important in modelling the RLV using the cash flow approach.

Developers Profits

15. Critically, in all our appraisals we set the developers rate of profit at 20% on costs for the market units; where modeling involved the direct provision of affordable dwelling units then the target rate of profit for these units was 6% on costs.

Residual Land Value [RLV]

16. Financial appraisals were carried out for each of the twelve options relating to off-site financial contributions towards the provision of affordable housing on each of the twelve study sites using the discounted cash flow method of calculating the Residual Land Value.
17. The RLV is by definition a residual. It is the sum of money available to buy the land needed for the development to proceed. It is a derived sum based on the final development value, an accurate estimate of building costs and a sum of money to meet the developers target rate of profit. The RLV is the maximum budget to buy the land.
18. For a proposed development to pass the test of viability, it is necessary for the land value for housing to exceed the land value from any valid alternative use [i.e. requiring planning permission].
19. For virgin land or a green field site, where its current use is agricultural, its land value will be typically low [i.e. around £14,000 per hectare] but we have applied the higher value of £50,000 per hectare to reflect market practices. In contrast to the Viability Report on Large Sites [prepared in October 2010], ten of the small study sites are brown-field [Sites 1,2,3,4,5,6,7,8,9 and10] with uses including farm buildings, nursery, back gardens, community and industrial buildings] . Clearly where such sites have been cleared, or are known to be contaminated or where derelict structures are evident, these sites' current use values are likely to be low, possibly nominal and even negative.
20. Efficient market hypothesis contends that markets ought to reflect all the relevant costs and values, so that a developer's land bid offer price reflects in a clear and true way the full costs of providing affordable housing and other planning requirements.
21. In the context of any off-site financial contribution being sought towards the provision of affordable housing *a priori*, such requirements will lead to lower land values. As a general principle there is an inverse relationship between the size of the financial contribution and land values; as the requirements for the former increase the latter decrease. It is also important to record how the cost of mitigating a planning objection affects the RLV, and whether the RLV is abnormally low or appears to be negative.

Results of Financial Appraisals

22. Table A overleaf summarizes the results of the viability appraisals [this replicates Table 6.2 in this Report].
23. Table A below, which summarizes the results of the viability appraisals, reveals that with NO financial contribution towards the provision of affordable housing off-site, the twelve study sites deliver a residual land value [RLV] of over £1.37m per hectare on average. This figure is in line with the Valuation Office Agency data for small sites of around £1.3 to £1.4m per hectare [see The Property Market Report, January 2010]. This finding indicates that the appraisals accurately estimate the level of profitability in the valuations.

Table A: Summary of Appraisal Results: Residual Land Values [£/hectare]

Land Bid [£m/hectare] Equivalent	Average for ALL Study sites	% fall in RLV caused by Financial Contributions towards AH provision off-site
1. Baseline [100% Market Homes]	£1,371,466	0.00%
2. Plus £5,000 per Unit for AH	£1,173,703	-14.42%
3. Plus £7,500 per Unit for AH	£1,075,951	-21.55%
4. Plus £10,000 per Unit for AH	£976,687	-28.79%
5. Plus £15,000 per Unit for AH	£779,734	-43.15%
6. Plus £20,000 per Unit for AH	£579,903	-57.72%
7. Plus £25,000 per Unit for AH	£380,225	-72.28%
8. Plus £30,000 per Unit for AH	£172,759	-87.40%
9. Plus £50,000 per Unit for AH	-£734,834	-153.58%
10. Plus £75,000 per Unit for AH	-£1,902,211	-238.70%
11. Plus £100,000 per Unit for AH	£3,079,120	-324.51%
12. Extant AH Policy [25%]	£949,408	

24. Imposing a £10,000 per unit financial contribution towards the provision of affordable housing off-site, will reduce average RLVs by nearly 30% across all study sites.
25. On average, once the financial contribution reaches over £40,000 per unit, the RLV approaches zero.
26. Importantly, if a £10,000 per unit contribution was imposed on developers towards the provision of affordable housing off-site, this would be equivalent to requiring developers to provide 25% of a site's development as affordable housing units as required for large housing sites - see Table A, where we simply compare the levels of RLV in the yellow and green cells.
27. In practice, the threshold of viability is not fixed. Viability will depend on the value from existing uses or any valid alternative. Thus, as the above findings do not take into account sensitivity analysis, we need to be sure that likely changes to costs or prices in the future do not compromise viability whilst seeking to introduce a new policy relating to financial contributions on small sites.

Sensitivity Testing

28. To reiterate, a site is viable when a developer has enough money in their budget to buy the land, build out the scheme and meet their assumed target rate of profit. This means the developer's land bid budget must be large enough to compete away other land uses

that planning would permit at today's market prices and costs [i.e. at the time of the valuation (now)].

29. Sensitivity analysis has been conducted across twelve different levels of off-site financial contributions towards the provision of affordable housing [i.e. from £5,000 to £100,000 per unit] to see at what level such contributions compromise a site's viability.

30. *A priori*, viability is a relative and thus a dynamic concept. To accommodate changes in market conditions, we have conducted sensitivity analysis - a kind of stress testing of viability when price and costs of building change. We have been guided by the fact that there are four key variables that affect the RLV and hence ultimately viability. According to Ratcliffe et al [2009], price [rents and yields], cost, time and interest rates are the most important of all variables. In respect of housing viability, price and cost are the most important of the four variables.

31. We have also been guided by market changes and recent forecasts so that the testing is realistic as far as it can be, as follows:

- For price changes we have modelled the effects of 2.5% and 5% per annum rises and falls;
- For build cost changes we have modelled the effects of 2.5%, 5%, 7.5% and 10% per annum increases.

It is important to note, that if the build out time is longer than 12 months, then such changes will be compounded. Of the twelve small sites, seven sites [i.e. Sites 6 through to 12], are affected in this way.

32. We have also modelled the effects of stepped increases in build costs of £10,000, £20,000 and £30,000 per unit. With regard to this stress test, such one-off increases in build costs per unit emulate the consequence of trying to achieving higher rating as envisaged by the Code for Sustainable Homes[CLG, 2010b]. We also reveal the level of such a rise in build cost at the point when viability is compromised.

Results of Sensitivity Analysis

33. The results are set out in summary form in Tables 6.3, 6.4 and 6.5 in this Report.

34. A more detailed set of results of the sensitivity analysis for each site is presented in a separate Volume to this Report. The figures for each site are in the form of uplift multipliers. The uplift multiplier measures the size of the rise in land value due to developing the site for housing relative to a current use value. This means, irrespective of the comparator land use value and the particular sensitivity test [at the head of each column] that, so long a site's uplift multiplier is greater than 1, the site remains viable.

35. The key findings from the sensitivity analysis and the effects these have for viability are as follows:

Baseline Viability [see Column A, Table 6.3]:

- This ranges from £12,000 per unit to over £94,000 per unit; and the median is £36,000 per unit across all twelve study sites.

Viability in a Rising Market [see Column D, Table 6.3]:

- This ranges from £16,000 per unit to over £100,000 per unit; and the median has risen from the baseline to £41,500 per unit.

Viability in a Falling Market [see Column C, Table 6.3 with 5%pa house price reductions]

- This ranges from £7,500 per unit to over £70,000 per unit; and the median has fallen from the baseline to below £25,000 per unit.

Viability in a Falling Market [see Column B, Table 6.3 with 10%pa build cost increases]

- This ranges from £10,000 per unit to over £81,000 per unit; and the median has fallen from the baseline to £28,000 per unit.

36. We sought to demonstrate how viability is affected by predicted increases in building costs arising directly from meeting higher energy performance in accordance with the Code for Sustainable Homes. The results are displayed in Table 6.4, which show that build costs could rise by £9,000 per unit for ten of the twelve study sites without compromising their viability.
37. The viability of sites 7 and 8 are most vulnerable to stepped increases in build costs. See Table 6.4 for the results for all twelve study sites

Implications for Future Affordable Housing Policy Requirements for Small Sites

38. The results of the appraisals confirm that in developing the study sites, the resultant land values, which are free of planning and development costs and includes a target rate of developers profit of 20% on costs] typically approach about £1.37m per hectare. This is similar to the most up-to-date Valuation Office Agency data.
39. In our view, **the Borough Council is justified in formulating a new policy regarding small sites by setting a level of financial contributions towards the provision of affordable housing.**
40. We have stress tested the sites' viabilities, where increases in build costs or price falls have been modelled. We recommend that the Borough Council set a financial contribution that recognises that markets operate in a cyclical manner i.e. they rise and fall; and that they set a level for implementation which does not compromise viability in today's market. **This means that a financial contribution of between £10,000 and £20,000 per unit be considered** [see Figure 6.2].
41. In the future, market conditions may be return to be more growth orientated; under such circumstances, the Borough Council will be justified in repeating these tests of development viability and possibly raising the contribution level.

END

CONTENTS PAGE

Executive Summary.....	i
Study Context	i
Viability Testing.....	i
Affordable Housing Quotas: Stress-Testing Options	ii
Planning Obligations and other Costs.....	ii
Developers Profits	iii
Residual Land Value [RLV].....	iii
Results of Financial Appraisals	iii
Sensitivity Testing	iv
Results of Sensitivity Analysis.....	v
Implications for Future Affordable Housing Policy Requirements for Small Sites.....	vi
Contents Page	i
1 Rotherham's Housing Viability Study: S106 Requirements on Small Sites	1
Preamble	1
Brief for this study.....	1
Other Viability Studies	2
Structure of this report	2
2 Individual Sites for Housing Development	3
Preamble	3
Current Data and Information.....	3
Individual Sites for Housing Development.....	3
Development Assumptions	10
3 Affordable Housing and Other Planning Obligations and Developer Contributions	12
Preamble	12
Affordable housing assumptions.....	12
Affordable housing policy and quotas	12
Other Planning Obligations and Developer Contributions	13
4 Modelling housing Viability	14
Preamble	14
What is meant by Viability?.....	14
Viability: financial or economic?	14
Modelling Financial Viability.....	15
Viability Threshold: uplift multiplier	16
Profits of Developers.....	16
5 Assumptions for Viability Analysis.....	19
Preamble	19
The Housing Market Context.....	19
New Build Developments in Rotherham	22
Price assumptions for Financial Appraisals.....	25
Building Costs	26

Rotherham's Housing Viability Study: Affordable Housing Requirements on Small Sites

Other Costs	27
Finance Costs	27 Finance
Charge Weighting	27
Fees.....	28
Assumptions relating to phasing and pace of development	28
Benchmarking Land Values.....	29
Agricultural Land Values	29
Industrial Land Values	29
Residential Building Land Values	29
Summary on Land Value Benchmarks.....	30
6 Results of Viability Analysis.....	34
Preamble	34
The Residual Land Value [RLV].....	34
Financial Appraisal Results	34
Sensitivity Analysis.....	39
Results of Sensitivity Analysis: Individual Sites.....	40
Concluding Remark.....	45
7 Conclusions and Implications of Results.....	46
Bibliography.....	47

1 ROTHERHAM'S HOUSING VIABILITY STUDY: S106 REQUIREMENTS ON SMALL SITES

Preamble

- 1.1 Professor Stephen Walker was commissioned by Rotherham Metropolitan Borough Council [RMBC] in September 2010 to produce financial appraisals on twelve residential development sites in Rotherham.
- 1.2 Presently, Rotherham do not seek a contribution in the provision or in lieu [via a financial payment] regarding affordable housing on sites below the PPS3 threshold of 0.5 hectares or 15 dwelling units.
- 1.3 The purpose of the appraisals was to assess the efficacy and potential of these twelve sample sites to make a financial contribution towards the provision of affordable housing off-site, as well as other relevant planning requirements by way of planning obligations [typically called S106 obligations].
- 1.4 The findings from these viability studies are intended to specifically inform Rotherham Council's future planning and affordable housing policies with regard to small sites and to ensure that such policies do not render forthcoming housing developments on small sites unviable as prescribed by current national Government guidance [i.e. PPS1, PPS3 and PPS12].
- 1.5 The approach in testing viability involves a standard valuation method - a Discounted Cash Flow method of Residual [Land] Valuation - which has been tailored to reflect local circumstances in terms of prices and costs. This approach is no different from the valuation method applied to the study of Large Sites for RMBC prepared by Professor Stephen Walker [dated October 2010].

Brief for this study

- 1.6 At the core of this study is development economics and in particular subjecting housing [and other sites] to the rigour of market assessment prior to plan making. The imperative of viability is a market concept. However, plan making is now required to take development economics and viability into account. PPS3 Housing [DCLG, 2006], Circular 05/2005 on Planning Obligations [ODPM, 2005], Planning Obligations, Practice Guidance [ODPM, 2006], PPS12 Local Spatial Planning [CLG, 2009] and HCA [March 2010], all emphasise the need for or the importance of robust viability assessment.
- 1.7 As with the study of Large Sites [in October 2010], the Borough Council wants the appraisals to be "ground clearing" in testing the impact of seeking a financial contribution towards the provision of affordable housing [off-site] in a variety of market development situations.
- 1.8 The sites for this study of small sites were carefully selected so as to reflect different market circumstances i.e. geographical locations - town centre, suburban, edge of town, rural; site capacity ranging from 1 unit to 14 units; green-field and brown-field where proposals involve complete redevelopment or a mix of conversion and new building. A map on page 4 of this Report shows their location across the borough.
- 1.9 The approach also needed to be able to model additional sites and make comparisons as required. The approach in testing viability involves a standard valuation method - a Discounted Cash Flow method of Residual [Land] Valuation - which has been tailored to reflect local circumstances in terms of prices and costs. The modelling, with some training, can be conducted

by Borough Council personnel and is a skill that should be seen to complement the Borough's other work on planning and design assessments.

Other Viability Studies

- 1.10 In addition to the recently completed Housing Viability study of Large Sites for Rotherham [in October 2010], in the last two years, Professor Stephen Walker has conducted and led housing viability studies in North Devon, North Cornwall, Torridge and West Somerset and The Exmoor National Park Authority. In 2010, he completed a large study of twenty-six small sites [i.e. <0.5 hectares] jointly commissioned by North Devon and Torridge Councils. Additionally, in the last few years Professor Walker has been involved in planning obligations and property development economic studies for central Government and for local planning authorities. The focus of these studies has been to improve practice and to raise awareness of viability and how viability is affected by different planning and affordable housing requirements.

Structure of this report

- 1.11 The rest of the report covers the following:
- Section 2: Individual Sites for Housing Development. This Section simply describes the attributes of the sites and some of the key assumptions made.
 - Section 3: Affordable Housing and Other Planning Obligations and Developer Contributions. Since RMBC currently does not seek contributions from small sites, this Section explains the options relating to off-site financial contributions towards the provision of affordable housing that will comprise the viability testing and reveals the inclusion of other planning obligations as part of the viability assessment.
 - Section 4: Modelling Housing Viability: This Section sets out the methodology adopted in conducting viability and explains the importance of the Uplift Multiplier in the testing of the study sites' viability. We also describe in some detail our approach towards developers' profits.
 - Section 5: Assumptions for Viability Analysis. This Section explains those costs and values used in the viability analysis and the range of other variables and parameters applied in modelling viability, including finance, pace of development and information on comparative land values.
 - Section 6: Results of Viability Analysis. This Section presents the results of the viability where baseline land values are compared against land values affected by off-site financial contributions towards the provision of affordable housing, affordable housing and importantly reveals the findings from carrying out a range of sensitivity testing.
 - Section 7: Conclusions and Implications of Results.

2 INDIVIDUAL SITES FOR HOUSING DEVELOPMENT

Preamble

- 2.1 In liaison with Rotherham Metropolitan Borough Council [RMBC] a total of twelve sites were identified for study. This Section specifically considers the main characteristics of the individual sites for housing, and the principal assumptions made about proposed development for the purposes of generating financial appraisals and for testing for viability.
- 2.2 All the individual sites were subject to site visits and appraisals.

Current Data and Information

- 2.3 The planning status of the sites was known. With the exception of two sites [sites 11 and 12], planning permission had been granted, and two of these were under construction at the time of the study. For these two cases, as development is proceeding well, their viability is not in question. We will of course confirm whether these two sites could have made a financial contribution towards the provision of affordable housing off-site without compromising viability, since current policy exempts them from this requirement. Other information regarding costs and profits has been informed by housing developers and locally operating housing associations.
- 2.4 This information has been taken into account in formulating development assumptions for individual sites and for shaping the modelling approach.

Individual Sites for Housing Development

- 2.5 Basic data on the twelve sites identified by the Borough Council is set out in the Table 2.1 and are mapped in Figure 1 overleaf.
- 2.6 The sites provide a good mix of development situations: town and suburban; village and rural settings. As these sites are geographically spread across the Borough, they mirror, in a realistic and practical way, different planning and development pressures and opportunities. Sites 11 and 12 [two green-field sites] were identified through the Borough's Strategic Housing Land Availability Assessment as part of its attempt to identify an adequate future supply of developable land as part of the local development plan process.

Figure 1: Locations of Small Sites

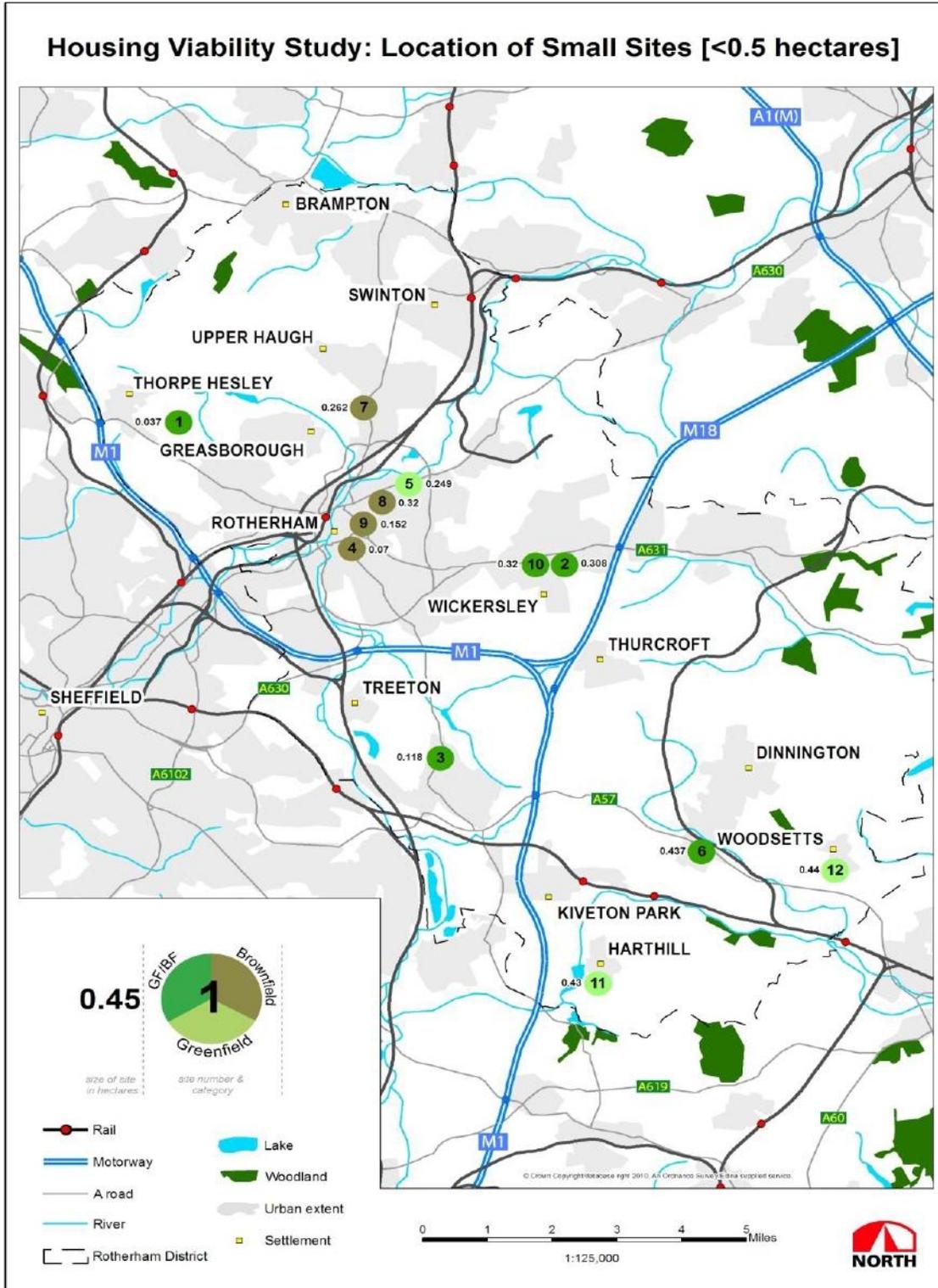


Table 2.1 Individual Site Details: Small Sites [<0.5hectares]

1	Land adjacent to 85 Scholes Lane, Scholes	Green-field/Brown-field	0.037	<p>This site is in the centre of the village, being a side garden to 85 Scholes Lane, laid to lawn and vegetable patch. Access to a building at the rear of 85/87 Scholes Lane that was formerly a Wesley Chapel, now partly converted, is over part of the site that is immediately adjacent to 85 Scholes Lane [i.e. on the northern boundary of the site]. To the west [and rear] of the site, the land is open fields. The site is flat and planning permission was granted in May 2008 [RB20008/0215] for 1, 2 storey dwelling house with garage. Village comprises ribbon development along Scholes Lane; the whole village being in a designated conservation area and subject to Green Belt constraints [i.e. it is washed-over]. The village is quiet, where the site has good east facing views across The Paddock to open countryside. There is slight noise from the M1, which can be accessed via the junction for Thorpe Hesley.</p>
2	Land to the rear of 38 Goose Lane, Wickersley	Green-field/Brown-field	0.308	<p>Planning was granted in March 2008 [RB2007/2112] for the erection of 2 No. detached 4 bed dormer bungalows. The site comprises the back gardens of 38 & 40 Goose Lane with a private drive to be created over the land of 38 Goose Lane. The site lies in a quiet neighbourhood, adjacent to the designated Conservation Area in Wickersley and is identified as a "development site" in the Adopted Unitary Development Plan [June 1999]; and educational and local retail and other amenities are easily accessible.</p>

Table 2.1 [C ontinued] I ndividual S i te D eta ils: S mall S i tes [<0 .5hecta res]

3	2 Main Street, Aughton	Brown-field	0.118	<p>Planning was granted in April 2008 [RB2008/0313] for the erection of 4, 3bed two storey dwelling houses [as a pair of semi-detached houses] (reserved under outline RB2005/1151) for Roundbrand Limited. The site has no structures, with the front half of the site is laid to concrete [base of former buildings] with the rest of the site scrub and grass areas. The site slopes upwards [to the east] from the Main Street]; opposite are houses and 2 food outlets; immediately adjacent to the site are single storey bungalows and sheltered housing. The site is on a main bus route.</p>
4	The Regis form 4 No. apartments including enlargement of roof, formation of rooms in roofspace Hotel, 1 Hall Road, Moorgate	Brown-field	0.07	<p>Planning was granted in November 2007 [RN2007/1746] for alterations and conversion to & installation of dormer windows and erection of two storey side extension with basement parking to form 4 No. apartments. The site is located in an established neighbourhood of housing [mix of Victorian Edwardian and 1960s housing] and community and health-related uses. The hotel has ceased trading. The land adjoining the 4 storey [including lower ground] is 2/3 metre lower than road level, with car access to back garden [overgrown] and garage and other low outbuildings. The site also lies close to a designated conservation area.</p>
5	Land at dwelling houses for JPW Developments [as 4 semi-detached homes]. This site is View Road, Eastwood	Brown-field	0.249	<p>Planning was granted in December 2008 [RB2008/1738] for the erection of 8, 3bed two storey in an established neighbourhood of Victorian/Edwardian terraced housing with frontdoor opening onto the pavement. The site is flat and is laid to hard core; it is not secured and contains piles of building materials. The adjoining site [to the west], which was previously a dairy, is under-construction for housing. There is an access road on the south east corner of the site that provides a vehicular access to 2 factory units located immediately to the north of the site; there is another factory/industrial unit on the corner of View Road and Foljambe Road.</p>

Table 2.1 [C ontinued] I ndividual S i te D eta ils: S mall S i tes [<0 .5hecta res]

6	Church Fam, Sheffield Road, South Anston	Brown-field	0.437	<p>Planning was granted in August 2008 [RB2008/0936] for the erection of 2 No. three storey dwelling houses, 7 No. two storey dwelling houses with rooms in roofspace & dormer windows, 1 No. two storey dwelling house and associated garages for Spareland Limited. The site lies within the boundary of the South Anston Conservation Area. The site was previously occupied by barns and other farm buildings, which were subsequently cleared. The site is currently under construction by Holme Hall Development [Inspirational Homes]. The homes are currently marketed as luxury development with starting prices of £199,950. The site is slopes northwards down to the A57 - a busy, noisy major route linking Sheffield and Workshop. The village was once a mining village, but is now residential in character. The village is in a good location for accessing the city region and its airports and ports.</p>
7	Land adjacent to St. Mary's Church, High Street, Rawmarsh	Brown-field	0.262	<p>Planning was granted in August 2008 [RB2008/0966] for outline application for the erection of 2 No. two storey apartment buildings (10, 2 bed apartments in total) for Hather Plant. Located close to the apex of the High Street, which is part of the busy A633. The site is currently used as a commercial van hire depot and car wash/valeting service. Most of the site is laid to brick paving and asphalt, and there are two single storey buildings and a large canopied area, with the rest open area for the storage of cars and vans. The site slopes southwards to Parkgate and westwards to a cemetery. Opposite the site are communal and other local amenities, being close to Rawmarsh Shopping centre on Bellows Road.</p>
8	Parkhurst, Doncaster Road, Eastwood	Brown-field	0.32	<p>Planning was granted in August 2007 [RB2006/2030] for alterations and rear extension to form 8 No. flats and erection of a single storey building with rooms in roofspace to form 4 no. flats. The site is located in Eastwood Conservation Area. This former Teaching Training Centre [owned by RMBC Education Department] is now derelict and the gardens overgrown; there are significant signs of vandalism. It is in an attractive location being situated across Doncaster Road from Clifton Park, accessing local bus services and schools in Eastward, Clifton and East Dene. The site is east of a development of two and 6 storey apartments at Beechwood. The existing building is in an elevated position, some 15/18 metres higher than the vehicular access in Doncaster Road.</p>

Table 2.1 [C ontinued] I ndividual S i te D eta ils: S mall S i tes [<0 .5hecta res]

9	Blenheim House, Ridge Road, Eastwood	Brown-field	0.152	<p>Planning was granted in December 2008 [RB2008/0701] for the conversion of existing building to form 6, 2bed apartments and erection of a three storey building linked to existing to form 8, 2bed apartments; application made on behalf of B & M Homes. The site is located in Eastwood Conservation Area and owned by RMBC Education Department. The building is derelict and there are significant signs of vandalism and the site is unsecured. The building was formerly in D1 use as a Training Centre. Access is available from both Ridge Road [north] and from Doncaster Road [south]. The existing building is in an elevated position [some 15/18 metres higher than Doncaster Road]. The gardens and grounds are overgrown. The site is in an attractive location being situated across Doncaster Road from Clifton Park [with skate park, paddling pool and other facilities], accessing local bus services and schools in Eastward, Clifton and East Dene.</p>
10	Land off the East of Morthen Road, 19 Morthen Road, Wickersley	Brown-field	0.32	<p>This comprises the redevelopment of a nursery and allotment gardens with 5, 4bed detached homes currently being built by Sweet Homes [North] Limited [01709 866303], planning permission was granted in August 2008 [RB2008/0719]. The site is located within Wickersley Conservation Area and is an infill development being build of stone. It fronts an area of open grass land that is identified in the 1999 Unitary Development Plan for future housing development site [see Site Numbers: 2 (small site) and 6 (large site)].</p>
11	Land off Whinney Hill, Firvale, Harthill	Green-field	0.43	<p>This site is on the edge of the village of Harthill, currently open grassland. It is accessed via a narrow gate between existing ribbon-type housing on Whinney Hill. It is a narrow strip of land, with access available onto Whinney Hill. This site is in effect an infill site, which could access local services and schools. The village location gives convenient access to Sheffield. <u>No outstanding planning application.</u></p>

Table 2.1 [Continued] Individual Site Details: Small Sites [<0.5hectares]

12	Part of land off Taylor Drive, Woodsetts	Green-field	0.44	This site is located in the conservation area of Woodsetts and is only accessible via Taylor Drive. The site is mainly flat being rough grass land, previously used for holding horses. The site identified is part of a larger field where larger trees on the higher ground provide cover to older houses and church. No outstanding planning application.
----	--	-------------	------	--

- 2.7 Though the Borough Council seeks to promote a high standard of space and urban design, market and location factors will also affect the character and design standard for particular sites. Both site size and buildability will influence building costs and specific planning designations impact on materials [conservation] and massing [green belt policies] that is permitted; again these may raise costs but also could justify a house price premium. Further comments on these matters will be covered later.
- 2.8 Only two of the twelve sites [Sites 11 and 12] involve development of green-field land; the rest are brown-field sites, replacing current uses, cleared sites or involving the intensification of development on gardens for instance.

Development Assumptions

- 2.9 To carry out financial modelling of the twelve sites a number of assumptions and parameters had to be agreed and set. Consideration was given to local [housing] market conditions and the current planning and development context and activity which were used to inform the modelling.
- 2.10 Crucially, our approach is different from that used in the study of Large Sites [prepared for the Borough in October 2010]; in that study the vast majority of the study sites had no planning history. For this study, since the vast majority of the small sites have been the subject of a successful planning application to develop the sites for housing, we have modelled these extant planning permissions. Only on two sites [sites 11 and 12] have we imposed a density similar to those used in the study of Large Sites i.e. 30 dwellings per hectare.
- 2.11 In turn, we have also applied building costs in accordance with the scale and nature of development that is planned for the sites. This means that in some cases because of the absence of economies of scale and the bespoke nature of the intended development, build costs are higher and a typology would be inappropriate.
- 2.12 A further implication of this approach is that benchmarking is more difficult to achieve, because of the lack of comparability across the chosen study sites; this is a feature of the study involving such small, bespoke sites.
- 2.13 Table 2.2 presents the housing capacity, density and the nature of the development activity on each of the study sites. The overall density across the twelve sites is 40 dwellings per unit, which is made higher by the provision of apartments on two of the sites.
- 2.14 The next section explains the context for seeking a financial contribution towards the provision of affordable housing off-site from small sites.

Table 2.2 Site area, capacity and density

Sit Number	Site Name	Site Area [hectares]	Housing Capacity	Density [dwellings per hectare]	Development activity
1	Land adjacent to 85 Scholes Lane, Scholes	0.037	1	27	Side garden development - intensification
2	Land to the rear of 38 Goose Lane, Wickersley	0.308	2	6	Back garden development - intensification
3	2 Main Street, Aughton	0.118	5	42	Brown-field - infill
4	The Regis Hotel, 1 Hall Road, Moorgate	0.07	8	114	Brown-field - intensification and conversion
5	Land at View Road, Eastwood	0.249	8	32	Brown-field - intensification
6	Church Farm, Sheffield Road, South Anston	0.437	10	23	Brown-field - new development infill
7	Land adjacent to St. Mary's Church, High Street, Rawmarsh	0.262	10	38	Brown-field - intensification
8	Parkhurst, Doncaster Road, Eastwood	0.32	12	38	Brown-field - intensification and conversion
9	Blenheim House, Ridge Road, Wastwood	0.152	14	92	Brown-field - intensification and conversion
10	Land off the East of Morthern Road, 19 Morthern Road Wickersley	0.32	5	16	Brown-field - new development infill
11	Land off Whinney Hill, Firvale, Harthill	0.43	12	28	Green-field - new development infill
12	Part of land off Taylor Drive, Woodsetts	0.44	13	30	Green-field - new development infill
	Average			40	

3 AFFORDABLE HOUSING AND OTHER PLANNING OBLIGATIONS AND DEVELOPER CONTRIBUTIONS

Preamble

- 3.1 This Section focuses on the assumptions agreed and parameters set to test the viability of small sites and the impact of seeking a financial contribution towards the provision off-site of affordable housing from the development of small housing sites, including assumptions regarding other relevant planning obligations and developer contributions.

Affordable housing assumptions

- 3.2 Appraisals have been prepared for a specific number of development scenarios/iterations which reflected varying sums in the form of a financial contribution towards the provision of off-site affordable housing from £5,000 per unit to £100,000 per unit.

Affordable housing policy and quotas

- 3.3 Since 2007, the Borough Council's affordable housing policy has been 25% which is sought on all sites above the PPS3 [DCLG, 2006] threshold [i.e. sites larger than 0.5 hectares or 15 dwelling units]. The tenure mix for the 25% affordable housing is split 14% for social rented units and 11% for part ownership [e.g. HomeBuy].
- 3.4 Where justified, on the basis of evidence from viability assessment, PPS3 permits planning authorities to seek financial contributions in lieu of direct provision from sites below central Government's site size and capacity threshold so long as such contributions do not render development unviable.
- 3.5 On this basis, we have tested the twelve study sites' viability in terms of **twelve iterations** relating to:
- Zero affordable housing i.e. all market housing as a baseline.
 - Prospective affordable housing policy:
 - £5,000 per dwelling unit as a financial contribution
 - £7,500 per dwelling unit as a financial contribution
 - £10,000 per dwelling unit as a financial contribution
 - £15,000 per dwelling unit as a financial contribution
 - £20,000 per dwelling unit as a financial contribution
 - £25,000 per dwelling unit as a financial contribution
 - £30,000 per dwelling unit as a financial contribution
 - £50,000 per dwelling unit as a financial contribution
 - £75,000 per dwelling unit as a financial contribution
 - £100,000 per dwelling unit as a financial contribution
 - Current affordable housing quota i.e. 25% of all units are affordable units.

- 3.6 This last iteration provides a benchmark and hence a comparator with the Borough's current affordable housing policy for large sites; in this regard, small sites are being treated on an equivalent basis.
- 3.7 In addition to the summary table of results in Section 6, the results of the modelling for each site are presented in a separate Volume to this Report.

Other Planning Obligations and Developer Contributions

- 3.8 Most authorities seek or require that housing [and other] developments mitigate impacts on the local area and community. With the exception of affordable housing, the basis of these planning requirements are triggered by the needs arising from proposed development and whether there is adequate provision and capacity in the local area regarding social and community services. The sort of requirements can include:
- Transport covering for example parking, cycle-ways and footpaths, bus services
 - School places in nursery, primary and secondary schools
 - Libraries and leisure provision
 - Open space and children's play areas and equipment
 - Health and social personal services [e.g. doctors' surgeries, health centres]
 - community and village halls
 - Public Art provision.
- 3.9 It was not feasible to estimate the contributions arising from the development on each of the study sites. However, as part of our modelling approach we have included a standard charge of £7,000 per dwelling unit to cover a mix of requirements that might be paid by housing developers.
- 3.10 One might argue that regarding other planning obligations to be funded by private housing developers, we are being over-optimistic or indeed opportunistic. However, our view is that we are being risk averse as these additional costs will result in lower outturn land bid budgets; the costs for the planning obligations do not affect the target rate of profit sought by the private housing developer as their profit is a fixed input determined by the developer.
- 3.11 And, clearly, in recognizing that there may be a need to make such contributions we are ensuring that a "truer" or "fuller" cost of development is being covered; such costs are amortised in local land values in the same way that abnormal costs and costs tied to remediation reduce land values.
- 3.12 The standard planning obligation charge, in terms of its design and impact, will be similar to imposing a Community Infrastructure Levy [CIL] [see CLG, 2010a]. Thus, if the Borough decides to seek to adopt the CIL in the future, then this viability study of small sites could be used to inform its design.

4 MODELLING HOUSING VIABILITY

Preamble

- 4.1 The principal purpose of this study is to conduct viability analysis in order to test the impact of requiring small housing sites to make a financial contribution towards the provision of affordable housing.
- 4.2 The basis of our calculations proceed from the recognition that developers are profit-led and our studies assume a market rate of return that is similar to that cited in respected sources, including Ratcliffe et al [2009], in Barker [HM Treasury, 2003 and 2004], in good practice advice [HCA,2009] and used in common valuation packages [RICS, 2009].
- 4.3 We recognise that, for too long, viability has not been sufficiently taken into account regarding affordable housing and planning requirements and that this might have frustrated the implementation of development projects in the past. However, with the emergence of central Government guidance [i.e. PPS3 Housing [DCLG, 2006 and 2010]; Circular 05/2005 on Planning Obligations [TSO,2006]; Planning Obligations - Practice Guidance, [DCLG, 2007] and HCA advice [HCA, 2009] there is an impetus and a new imperative for a wide range of stakeholders, as well as those directly associated with the planning and development decision making [i.e. Council officers, elected Members, other third parties] to become more aware and understand better the consequences of imposing or seeking planning and affordable housing requirements on viability.
- 4.4 Consequently, employing some kind of development appraisal where a site's development potential can be assessed prior to plan making will serve to inform a procedure which has been largely the domain of private housing developers.
- 4.5 In pursuit of transparency, our approach does not only provide the requisite financial information and other evidence on which to base decisions regarding viability, but in the proceeding Sections we will explain the underlying principles [i.e. methodology] and assumptions made in carrying the viability testing. This is important because it will allow the Borough Council to draw on the study's findings to inform emerging policy as well as subsequent monitoring and review.

What is meant by Viability?

- 4.6 Our understanding of viability can be seen from two perspectives.
- 4.7 Firstly, for the developer, a proposed development project is viable if, in principle, the developer has enough money to buy the site now, build out the site and achieve their target rate of profit.
- 4.8 And secondly, for the landowner, their test of viability is based on whether the land bid price in some future use [which is permitted by planning] is higher than the land's current use value now.

Viability: financial or economic?

- 4.9 Additionally, viability is sometimes prefaced with the term "financial" or "economic". This can lead to some confusion.

- 4.10 In using the term financial or finance it is generally seen [at least by economists] to relate to a narrow set of factors or variables under consideration that directly affect the demand side [in revenue terms] and/or supply side [in cost terms]; the operative word being "direct".
- 4.11 The term economic is a wider concept that normally includes both those costs and revenues that directly and indirectly arises from a project or activity. As such their scope is often prescribed by the nature of the project [e.g. the building of a road] or a programme [e.g. decommissioning of power stations] or a scheme [e.g. the training of unemployed workers] that is under scrutiny.
- 4.12 For the purposes of this study the term viability refers to economic viability, since we seek to include all relevant and reasonable costs incurred in mitigating all the directly-related needs arising from a proposed development [whether on-site or off-site].

Modelling Financial Viability

- 4.13 In essence, development appraisal models are relatively simple¹. The basic framework for development appraisal involves conducting a residual [land] valuation. This can be expressed in the form of a formula:

$$\mathbf{GDV - (BC + P) = RLV}$$

Where:

GDV = Gross Development Value

BC = Building Costs, including all fees and finance charges

P = Developers Normal Profits

RLV = Residual Land Value

- 4.14 For our purposes, this basic equation can be re-arranged in three ways, as follows:

[1] **GDV - (BC + P) = RLV** Here the Land Value is a residual. This is the maximum amount that can be paid for the land by the developer.

[2] **GDV - (BC + RLV) = P** Here, with a known Land Value, the Profit is a residual in this equation.

[3] **(BC + P + RLV) = GDV** Here the GDV is made up of the three main "cost" elements which explicitly include the developer's profit.

- 4.15 From these different equations we can identify critical values:
- Equation 1: for those who are seeking to sell or buy land;
 - Equation 2: the amount of profit that might be achieved by the developer having bought the land; and
 - Equation 3: this reveals the three basic "costs" that comprise the value of the completed development.

¹ The procedure for the conduct of and the purpose of a valuation of this kind is set out in a manual

ion.

kno
wn
as
"The
Red
Book
"
whic
h is
prep
ared
and
publi
shed
by
the
RIC
S,
the
prof
essi
onal
body
o
th
cha
rter
ed
sur
vey
ors.
See
RIC
S
(20
09)
*RIC
S
App
rais
al
and
Val
uati
on
Sta
nda
rds*
[Th
e
Re
d
Boo
k],
6
E
d
i
t

f

- 4.16 The basic framework for conducting the modelling uses Microsoft Excel spreadsheets; these have been designed and created by Professor Stephen Walker specifically to conduct Residual Land Valuation of a site's development potential, applying a discounted cash flow approach.

Viability Threshold: uplift multiplier

- 4.17 Viability testing is achieved by comparing the residual land values [the land budget available to buy the land] in its future use for housing against a site's current and/or alternative land use values. The ratio of these two values is termed the **uplift multiplier**. So long as this quotient is **greater than 1** for any level of financial contribution towards the provision of affordable housing and sensitivity testing, then the **development as housing is viable**. The results of the modelling are located in Section 6 of this Report.
- 4.18 For each site, detailed outputs from the financial modelling are presented in a separate volume to this main Report. These models embrace standard RICS valuation procedures as set out in its "Red Book" as well as cash flow based appraisals including sensitivity analysis output, which reflects HCA advice².

Profits of Developers

- 4.19 Profit is a factor input determined by the developer. It reflects the developers' opportunity costs of capital. Developers rarely like to reveal this quotient. We know that the CBI³ has stated that business must make between 12% and 18% profits to standstill. Economists would interpret this to be a business's normal profit rate. One would expect that the "hurdle" rate for developers would be higher, given that development attracts a risk premium over and above general business risk and involves the production of such "lumpy goods". Compared to commercial development, risks are higher for the speculative private housing developer.
- 4.20 Given their sensitivity we think it vital that we declare our position and the way we came to set an appropriate developers rate of profit used in viability testing. From an academic perspective actual profits are often described as "confidential" and therefore not for discussion. The academic literature, therefore, resorts to assumptions and one well-tried assumption in the property sector is the 33%:33%:33% of value [i.e. gross development value] rule where profit is assumed to be one third alongside land costs and build costs.
- 4.21 Profits also are a function of the property cycle, where profits can be squeezed in a falling market and rise at an increasing rate in a rising market. Empirical evidence attests to this cyclical behaviour in that the Barker Report [2003] cites the average rate of profit [%] based on a ratio of trading profits to turnover for the main house builders in the UK in Table 4.1 below. We have updated this set of statistics to cover reported profits derived from the accounts of house-builders [see FAME, 2010].

²See HCA, 2009, *Investment and planning obligations*

³*Responding to the downturn, Good Practice*

N
o
t
e
.

H
C
A

©
2000
Cm
Wash
to
n
D
C
U
S
D
E
P
O
F
I
N
T
E
R
I
O
R
A
F
F
A
I
R
S
P
O
R
T
S
M
A
N
A
G
E
M
E
N
T

Table 4.1: Developers Profits

Year	Profits as a % of Turnover or Value [Before Tax]	Profit as a % of Costs [Equivalence; Before Tax]	Position in the property cycle
1989/90	23%	30%	Peak
1992/93	10%	11%	Falling market; point of inflection
1994/95	13%	15%	Slow recovering market
2000/01	15%	18%	A rising market
2002/03	16%	19%	A continuing rising market
2007 March [Bovis Homes]	23%	30%	Top of the market; mergers and acquisition activity attests to a much tighter market.
2010 June [Bovis Homes]	85%	93%	Until now a falling market; possibly start of a recovery [i.e. a point of inflexion].

Source: Adapted from Barker Review, Interim Report - Analysis, 2003, p.65; with additions from Company Accounts via FAME [accessed July and November 2010].

- 4.22 Another observation that builds on the academic literature is the concept of normal profit; where each sector is presented as having an acceptable rate of return that needs to be achieved to keep them interested in staying in that sector or country. Consequently, if house builders are squeezed and find their returns falling much below, say, 20% they might resort to other development or related activities. Economists would explain the transfer of resources to alternative uses [and countries] as an opportunity cost, and in some ways our discussions with locally active property developers suggests that companies are essentially cautious but that they need to be more able to respond to market opportunities as they arise [i.e. as expressed in terms of cash flow and the ratio of risk to profit returns].
- 4.23 A further area of debate relates to the base on which profits are set. In this respect, it is argued that as costs are almost always known or easier to estimate, validate and crucially to control, they are therefore a better base on which to set the developers target rate of profit. Additionally, value is only known when actual [economic] demand is known [or a pre-sale or let has been agreed] which is at the point of sale. Therefore, value is a hypothetical; a guess-estimate based on assessments now of a market which might be some years away in the future. Thus, basing the developers target rate of profit on value is open to substantially higher risks of change and uncertainties.
- 4.24 An appropriate rate of profit might lie between 15% and 25% on costs. Ultimately, this will depend on a number of factors, including: competition and hence demand; position on the property cycle; national as well as local economic sentiments.
- 4.25 Recent discussions with commercial and housing developers have revealed an acceptable profit margin of about 20% on costs. Higher margins might be warranted given the range of contingencies and higher risks associated with some sites [especially brown-field sites] in Rotherham.
- 4.26 Given the academic reasoning and empirical evidence presented above, we feel justified in setting a target rate of profit of 20% on costs that is equivalent to 16.67% of value, which comfortably reflects current market sentiment. For the iteration where affordable housing units are delivered on-site, then for these units only the profit rate has been set as if the developer is a contractor i.e. at 6% on costs or 5.66% of value; this is the approach adopted in the study of Large Sites for Rotherham [prepared in October 2010].

5 ASSUMPTIONS FOR VIABILITY ANALYSIS

Preamble

- 5.1 This Section considers the key price and cost variables and other assumptions required to generate financial appraisals for the individual sites in Rotherham. These include the following matters:
- Price assumptions for financial appraisals
 - Cost assumptions for financial appraisals
 - Assumptions relating to phasing and pace of development

The Housing Market Context

- 5.2 As with other housing markets, Rotherham and its neighbouring Councils have recorded substantial house price reductions largely fuelled by a dramatic fall in the volume of transactions caused by scarcity in mortgage finance. According to The Land Registry, since June 2007, average house prices in the councils comprising South Yorkshire have fallen by over 12% points to March 2010. Crucially, the volume of home transactions peaked at 2,635 [quarterly figures ending in June 2007]; since then these have shown a steady if not consistent fall since that quarter. For example, transaction volumes were close to 50% points below the peak in the quarter ending March 2008, and by the quarter ending in January 2009 transaction volumes were close to 80% points below the peak [at just 552]. Though the transaction volumes have picked up in the recent quarters, these have hovered between 55% points and 70% points below the quarterly peak in June 2007. The general prospects for the future remain pessimistic and at best unclear.
- 5.3 Transactions data sourced from The Land Registry by postcode sectors, shows that in the 4th Quarter of 2006 the average house price of homes sold was just over £134,000. However, there are sharp differences across Rotherham's housing market as demonstrated by the data in Table 5.1 below; the cheapest homes are more than 40% lower than the average, whilst the most expensive are over 43% higher than the average.
- 5.4 The majority of the transactions involved either semi-detached [44%] or terraced homes [33%] where they achieved average sales prices of £114,000 and £86,700 respectively.
- 5.5 Table 5.2 shows where the highest and lowest prices and volume of sales that have been achieved in Rotherham, using postcode sector data, which was sourced from The Land Registry, August 2010.

Table 5.1: Average House Prices Sold by House Type in Rotherham MBC, at June, for 2006 through to 2010

Month	Detached (£)	Semi-Detached (£)	Terraced (£)	Maisonette /Flat (£)	All (£)	Monthly Sales Volume
June 2006	201,196	107,670	65,767	85,886	116,883	443
June 2007	212,522	113,731	69,470	90,721	123,463	449
June 2008	218,346	116,848	71,374	93,207	126,846	157
June 2009	176,765	94,596	57,781	75,457	102,690	227
June 2010	187,235	100,199	61,204	79,927	108,773	Not available

Source: The Land Registry, 2010 [accessed August 2010]

Table 5.2: Average Prices of New and Old Homes Sold in Rotherham MBC, 2nd Quarter 2010 by Postcode Districts and Sales Volume

Postcode Districts	Average NEW House Prices [Sales in Brackets]	% difference from the Average NEW	Average OLD House Prices [Sales in Brackets]	% difference from the Average OLD	Place names
S64	£102,466 [3]	-30.07%	£114,340 [46]	-5.12%	Wath Upon Dearne/Swinton
S61	£130,022 [4]	-11.27%	£111,232 [52]	-7.70%	West RMBC/Kimberworth/Greasborough
S25	£135,835 [7]	-7.30%	£132,932 [46]	10.30%	Thurcroft/Hooton Levitt
S63	£143,834 [17]	-1.84%	£102,764 [81]	-14.73%	West Melton/Brampton/Swinton/Upper Haugh
S62	£148,616 [3]	1.42%	£110,785 [28]	-8.07%	Thorpe Helsey/Wentworth
S73	£162,753	11.07%	£98,085 [54]	-18.61%	Brampton -only a small part
S26	£171,310 [7]	16.91%	£141,289 [59]	17.24%	Dinnington/Aston/Aughton/Todwick/Wales/Harthill/Kiveton Park
S66	£177,460 [17]	21.10%	£142,889 [111]	18.56%	Bramley/Maltby
S13	£0 [0]	na	£111,513 [54]	-7.47%	Catcliffe/Orgreave/Treeton
S60	£0 [0]	na	£122,062 [65]	1.28%	Herringthorpe/Moorgate/Canklow/Whiston [SW of Town Centre]
S65	£0 [0]	na	£118,611 [43]	-1.58%	Thrybergh/Hooton Roberts/Dalton/
S81	£0 [0]	na	£139,689 [97]	15.91%	Dinnington/Aston/Aughton/Todwick/Wales/Harthill/Kiveton Park
Average [Total]	£146,537 [63]		£120,516 [736]		

Source: The Land Registry, 2010, Crown Copyright Reserved [Accessed August 2010]

- 5.6 Relative to the total volume of sales, the sale of new homes is discernibly low compromising fewer than 8% of the total in Rotherham for the 2nd quarter of 2010.
- 5.7 Much of the cheaper housing [largely terraced and semi-detached homes] were sold in places north and west of the River Don [e.g. in Rawmarsh, Swinton and Kimberworth] and in places immediately situated in an arc to the south west of the town centre; the former being part of the South Yorkshire Housing Renewal Pathfinder area.
- 5.8 Notwithstanding national economic pressures, Rotherham's housing market in the future will also be influenced by a number of more local factors, of which the more important ones are listed below:
- Continuing imbalance in the local housing markets in terms of prices, mix and quality within the Borough.
 - Given that the current Local Plan has no "white" land in relation to its current green belt policies, which were set and designed originally to complement urban renewal and economic development with the Borough's extant urban boundaries. There is a realization that in the forthcoming plan period, some future housing development is likely to be accommodated on sites released from their green belt designation.
 - Major former mining sites have undergone extensive land reclamation and this long term action is beginning to deliver benefits in relation to economic and community benefit. In this regards, plans for a new community at Waverley are progressing well.
 - The legacy of redundant and derelict factory buildings and sites continues to blight prominent areas of the Borough; market action alone is unlikely to be viable even in the long term.
 - Complementary economic development and urban renaissance strategies supporting the employment and housing markets, particularly in relation to town centre renewal and investment.
 - Good access to motorway network, regional airports and ports.
- 5.9 Finally, a recent market forecast [February 2010] made by cost consultants Cyril Sweett for the Yorkshire and Humber region expressed the following sentiment:
- "[the region] is expanding modestly. Market confidence is recovering with schemes being reviewed for re-commencement. Activity is firm in education, health and infrastructure, with *residential and retail also fairing well* [my emphasis]. Industrial, offices and the leisure sector remain depressed."

New Build Developments in Rotherham

- 5.10 At the time of this study [i.e. September-December 2010], some house builders have been returning to sites that they had mothballed during the worst times of the recent recession [which hit South Yorkshire at the end of 2007]. This includes:
- Persimmon at Laughton Common, near Dinnington;
 - Bloor Homes at Thorpe Helsey; and
 - Ackroyd & Abbott at Fenton Road, Rotherham

- 5.11 Some builders have started on new sites [e.g. Jones Homes at Treeton]; while a smaller, niche developer has been on site for several months [e.g. Sweet Homes at Wickersley].
- 5.12 Such new housing must compete with the extant housing stock not only in terms of the price/rent quality ratio but also in terms of accessibility to community and educational provision, affordability and householders' choices.
- 5.13 Some examples of current housing developments are displayed in Table 5.3 showing locally active house builders and the housing mix and prices that are viable in today's housing markets in Rotherham.
- 5.14 There seems to be three broad categories as follows:
- Small sites with potential for higher specification schemes in Rotherham's premium urban edge or rural fringe sites are still achieving £2,400/m² [e.g. Sweet Homes at Wickersley];
 - Sites in other towns and suburban sites achieving £1,890/m² [Treeton] to £2,820/m² [Thorpe Helsey]. However, the latter scheme is quite exceptional since the unit sizes are smaller by some 15-25m². **[£1,850/m²]**
 - Sites in less attractive suburban areas with modest aspect achieving between £1230/m² and £1670/m² [e.g. Topaz, Kimberworth; Potter's Court, Kilnhurst; Laughton Common, Dinnington]. **[£1,450/m²]**
- 5.15 On the basis of these and other schemes in Rotherham, leads to a range of new build house prices that vary between £1230/m² and £1,850/m² with a typical price of £1,650/m². This is close to an average fall of 18.8% in prices compared with £2031/m² that had been applied in Rotherham's 2007 Viability Assessment Study.

Table 5.3 Current New Build Developments in Rotherham

House Builders	Scheme Name	Housing Mix	Price per unit/m ²
Ben Bailey Homes	Wharf View, Kilnhurst [site currently mothballed, with several homes completed awaiting buyers]	4 bed [Epsom-100m ²], 4Bed Townhouse [Minster-100m ²], 4bed Townhouse [Lincoln-100m ²], 4bed Detached [Norton-110m ²]	£160k or £1,605/m ² , £185k or £1,850/m ² , £180k or £1,800/m ² , £230k or £2,090/m ²
Ben Bailey Homes	Ashcroft, Parkgate	3bed Mews [Chatsworth-66m ²], 3bed Terrace [Devon Open Plan -80m ²]; 4bed Detached [Elsmere-95m ²]	£140k to £160k; average @ £1,813/m ²
Ben Bailey Homes	Wentworth Grange, Brampton	Epsom, 4bed TH [100m ²]	£165k or £1,655/m ²
Persimmon Homes	Laughton Common, Dinnington	4bed [Brierley-122m ²], 4bed [Rowley-129m ²], 3bed Semi [Chelsea-101m ²], 3bed, 3storey [Kensington-124m ²]	£181k or £1,481/m ² ; £188k or £1,458/m ² ; £151k or £1,490/m ² ; £152.5k or £1,231/m ² ; Average @ £1,412/m ²
Jones Homes	Arundel Park, land off Rother Crescent, Treeton [currently on site]	2 and 3 bed linked homes; 4bed detached homes	From c. £147k to £220k; average @ £1,893/m ²
Bloor Homes	Thorpe Field Farm, Thorpe Helsey	Bradfield [63m ²]; Dalton [64m ²]	£180k or £2,842/m ² or £178.5k or £2,796/m ²
Ackroyd and Abbott	Topaz, Fenton Road, Kimberworth [site mothballed, but has started onsite again in May 2010]	2, 3 and 4 bed homes [coach houses, semi-detached, linked and detached]	£125k or £2,000/m ² £175k or £2,330/m ² <u>£215k or £2,500/m²</u>
Britannia Developments	Potter's Court, Kilnhurst [1 st phase completed; 2 nd phase on hold]	3bed Semi-detached [Derby-86.5m ²] 3bed Townhouse [Kentmere-126m ²] <u>4bed TH [Rishworth-136m²]</u>	£145k or £1,676/m ² £166k or £1,315/m ² <u>£179k or £1,316/m²</u>

- 5.16 In seeking appropriate new build prices for the twelve sites that are spread across Rotherham and which provide guidance for any future sites, we need to take account of this diversity as far as possible. The costs and price levels that are adopted are qualified by factors relating to complementary and competing uses, proximity and accessibility to community amenities and transport connections, as well as environmental quality dictated by some of the sites sensitive locations.

Price assumptions for financial appraisals

- 5.17 The Gross Development Value [GDV] is based on the notion that if a proposed development is built now, the value of the completed development can be estimated based on comparables of similar developments locally, with some adjustments made to ensure as close a comparison can be made on an equivalent basis. Thus the valuation is a product of current market prices, the content and mix of development, and any other relevant adjustments.
- 5.18 On the basis of the above we apportioned £/m² prices, as set out in Table 5.4 below.

Table 5.4 Housing Prices [unit/m²]

Price band	Site description	Sites applied to	Price/m ²
A1	Urban	1, 2, 3, 4, 5, 6part, 7	£1,650
A2	Village; <u>Conversion/Intensification</u>	6part, 8, 9, 11	£1,850
A3	Village; Conservation <u>Area</u>	6part, 10 and 12	£2,180 to £2,375

- 5.19 There are a number of basic development cost elements that are covered in the modelling:
- Building costs
 - Other costs [e.g. abnormal costs, planning obligations]
 - Finance costs and weighting
 - Fees
- 5.20 And additionally, of course, a key "cost" that has already been discussed [see paragraphs 4.19 to 4.26] is the developers' profits.

Building Costs

- 5.21 These can be derived by a Quantity Surveyor or estimated by drawing on industry standard costs and indices. The latter are readily available from Spon's Architects' and Builders' Price Book or Building Cost Information Services [BCIS], the latter is a service provided by the RICS⁴. Costs per unit, costs per m², and several kinds of cost, project and tender prices can also be accessed. These nationally derived costs are based on tender or actual completed contracts of development; adjustments can be made for building cost inflation and for local costs. Inclusive of these costs are preliminaries [15%], which cover site infrastructure and other normal preparation costs.
- 5.22 We have prepared the viability analysis using a set of building costs [£/m²] specific to the kinds of dwellings proposed in gaining planning permission [see Table 5.5 below]. Normal costs of £880/m² have been used for all the sites except those located in rural village settings and edge of town, particularly in conservation areas. The higher costs relate to higher specification and design standards to reflect market dynamics on one of the town centre sites and the one rural site that needs to take account of its sensitive location being adjacent to a conservation area.
- 5.23 The model has also adjusted these "national" building costs by applying a local cost adjustment factor⁵, equivalent to 0.89 to reflect Rotherham's local circumstances.

⁴ Davis, Langdon and Everest (editors) (2010) SPON'S ARCHITECTS' AND BUILDERS' PRICE BOOK, London: E and FN Spon; Building Cost Information Service (BCIS) (2010) SURVEY OF TENDER PRICES; PROJECT PRICES, bi or tri-annual, RICS

⁵See BCIS, 2010 [accessed November 2010].

Table 5.5 Building Costs [£/m²] - All Housing

Site Numbers	Build Types	Costs (£/m ²)
3, 11 and 12	Standard new build dwellings	880
4, 5, 8 and 9	New Apartments	
	1 storey	823
	2 storey	901
	Converted Apartments	746
2, 1, 6 and 10	Bespoke, higher quality, conservation area	1032, 1160, 1052, 1154

Source: BCIS, 2010 [Accessed November]

Other Costs

- 5.24 The modelling of viability can also take into account other costs above the normal. For example, these typically cover remediation costs to cover contamination; special survey costs; and planning obligations/contributions. As far as possible, our viability analysis has taken into account specific site requirements.
- 5.25 For one site [site 7] we have taken into account abnormal costs associated with development this site adjacent to St. Mary's Church in Rawmarsh, by including £50,000 relating to possible underground structure and remediation costs relating to possible contamination relating to its previous use as garage and petrol station. None of the other study sites are affected by such additional costs.

Finance Costs

- 5.26 For modelling viability we have assumed a 6% per annum interest rate for both costs and revenues. Though this rate is materially higher than base rates on inter-bank rates, current bond markets were issuing paper at around this rate at the time of the modelling [i.e. November 2010].
- 5.27 Finance costs are triggered whether the developer funds the development from profits or from borrowed capital or a mix. This is because the finance cost is an opportunity cost: the profits could have been held in an escrow account and have accumulated interest or the finance could have funded alternative development options.

Finance Charge Weighting

- 5.28 Since, the modelling involved a discounted cash flow appraisal of residual land value this method explicitly obviates the need to employ finance charge weights. Such weighting is only necessary if a static approach to conducting residual land value is adopted; the 2007 Housing Viability study for Rotherham used the static method.

Fees

- 5.29 There are a variety of fees that we have included in our modelling. Such fees arise as a result of arranging finance; planning and survey fees; site finding and purchase, building design and procurement, and on the sale or letting of the completed development. The rates used are set out in Table 5.6 below.

Table 5.6 Fee Rates

<u>Fee Items</u>	<u>Rates</u>
<input type="checkbox"/> Professional Fees [% of building costs]	8%
<input type="checkbox"/> Sales Agent Fee [% of total sale value]	1%
<input type="checkbox"/> Sales Legal Fees [% of total sale value]	1%
<input type="checkbox"/> Land Acquisition Fees [%]	1%
<input type="checkbox"/> Marketing [£/unit]	£350
<input type="checkbox"/> Planning/Survey Fees	Current rate
<input type="checkbox"/> Stamp Duty Land Tax [%]	Current rate as appropriate
<input type="checkbox"/> VAT [%]	ignored

Assumptions relating to phasing and pace of development

- 5.30 As part of our modelling, we made a number of assumptions regarding phasing and the pace of development that take into account the size of sites, site attributes and building types; these are displayed in Table 5.7. Normally, house builders will give greater priority to householders' demand and would model options according to cash flows [including discounting]. Of course, for some sites planning conditions may impose particular restrictions to which developers must comply [e.g. conversion, materials].
- 5.31 The appraisals have also been prepared assuming that building costs and sales values at a base date of November 2010. There is a three months' pre-construction period for all the study sites to allow for resolution of minor planning issues and site preparation.

Table 5.7 Pace of Development Assumptions [by site number]

<u>Project Duration</u>	12 months	15 months	21 months	24 months
<u>Site Number</u>	<u>1, 2, 3, 4, 5</u>	<u>7</u>	<u>8, 9, 10, 11, 12</u>	<u>6</u>

- 5.32 The above assumptions mean that developments are completed at a reasonable consistent pace, which is dependent on the capacity of each site. If phasing is involved,

the build out of each site is assumed to proceed in regular phases over the duration of each site's project life.

Benchmarking Land Values

- 5.33 In advance of conducting the financial appraisals, data on land values sourced from The Valuation Office Agency [VOA] provide a good basis on which to develop an understanding of relative land values between the regions and across different land uses: principally agricultural, industrial and residential land uses.
- 5.34 Figure 5.2 summarises the position in Rotherham's land markets based on a range of data tracking regional and sub-regional transactions. The principal data source is The Property Market Report [VOA, 2009 & 2010] which reports on a biannual basis. Since that edition, the Valuation Office Agency has materially altered its publishing format and scope - largely to reflect the dearth of transactions. Nevertheless we can report on updated information from this latest report which was published in July 2010 for the preceding quarters [see below].

Agricultural Land Values

- 5.35 In contrast with a decline in residential building land values, agricultural land values have risen in the Yorkshire and Humber region. At July 2009, values had risen by more than 50% to around £14,000 per hectare compared with £10,000 per hectare in January 2007. This pattern of change is not exclusive to Yorkshire and Humber region. Though we are unable to draw a direct comparison with the data published in the latest Property Market Report [i.e. July 2010], values for Yorkshire and North East are marginally higher. For the green-field sites, these values serve as the "base" land values in the locality and given planning permission, any person offering a higher bid price is likely to trigger exchange to secure landownership. For this study of small sites, the "hope" base land value we have applied is £50,000 per hectare, which is some 3.5 times that cited at £14,000 per hectare to reflect the land's truer "market" worth where housing development is not normally permitted.

Industrial Land Values

- 5.36 Industrial land values have also substantially fallen over the same period. By July 2009, their values had fallen to around £435,000 per hectare for the Yorkshire and Humber region, which is 48% lower. Figures for Doncaster have also declined from £575,000 to £400,000 per hectare, which is over 30% lower, whilst for Sheffield land values fell to around £450,000, which is around 22% lower. The latest Property Market [January 2010], claim that values have not changed over the last six months. We have used the £400,000 per hectare for comparison purposes.

Residential Building Land Values

- 5.37 Nationally, there are some sharp differences in regional values of residential bulk land [sites over 2 hectares]: the highest is found in Inner London [£8.4m per hectare] and the lowest is recorded in the Merseyside region [£1.2m per hectare]. Of the English regions, Yorkshire and Humber region records the fourth lowest with values of £2.4m per hectare.
- 5.38 Residential building land values remained below £650,000 per hectare until the Autumn of 1999; which then was a ten-year peak that began back in 1989 [see Figure 5.1].

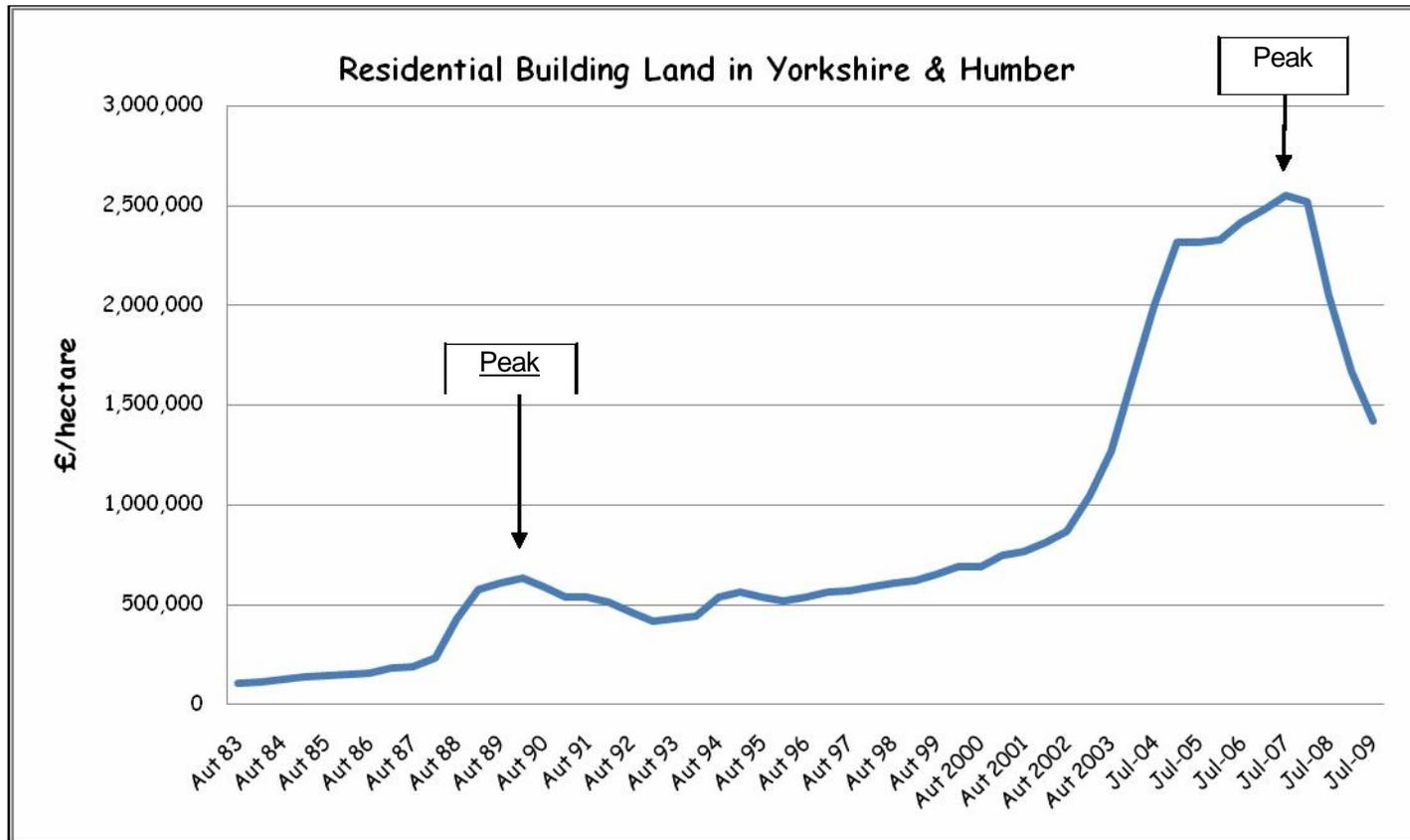
Values broke through the £1m per hectare threshold in the Spring of 2003. Values peaked at £2.6m per hectare in July 2007. By July 2009, values have fallen to around £1.4m per hectare, which is over 46% lower. The latest figures from The Property Market Report show that had remained at about the same levels. We will apply the rate of £1.4m per hectare as our comparable in this Report.

- 5.39 As Table 5.8 shows, there are wide variations within the Yorkshire and Humberside Region, Though Rotherham is not specifically identified, discussions with the VOA and local agents confirm that its bulk residential land values are judged to be between those being achieved in Doncaster [£1.5m per hectare] and Sheffield [£1.3m per hectare].
- 5.40 Rotherham's housing land market is currently heavily influenced by a tight green belt boundary and no "white" land designations. As the forward supply of former industrial and employment land [for a range of uses] declines, future housing sites will have to be met by releasing sites from their green belt designations as well as allowing for conversion, intensification and replacement of redundant uses and buildings on small sites as well as larger sites. The selection of the study's sites has attempted to recognise this situation.

Summary on Land Value Benchmarks

- 5.41 We can now put into perspective these relative land values for Rotherham and its environs; Figure 5.2 displays these key land value thresholds [see page 33]. We will compare these with the computed land values for the ten study sites.

Figure 5.1: Residential Building Land: Yorkshire & Humber Region, Autumn 1983 to July 2009



Source: The Property Market Report, VOA 2009

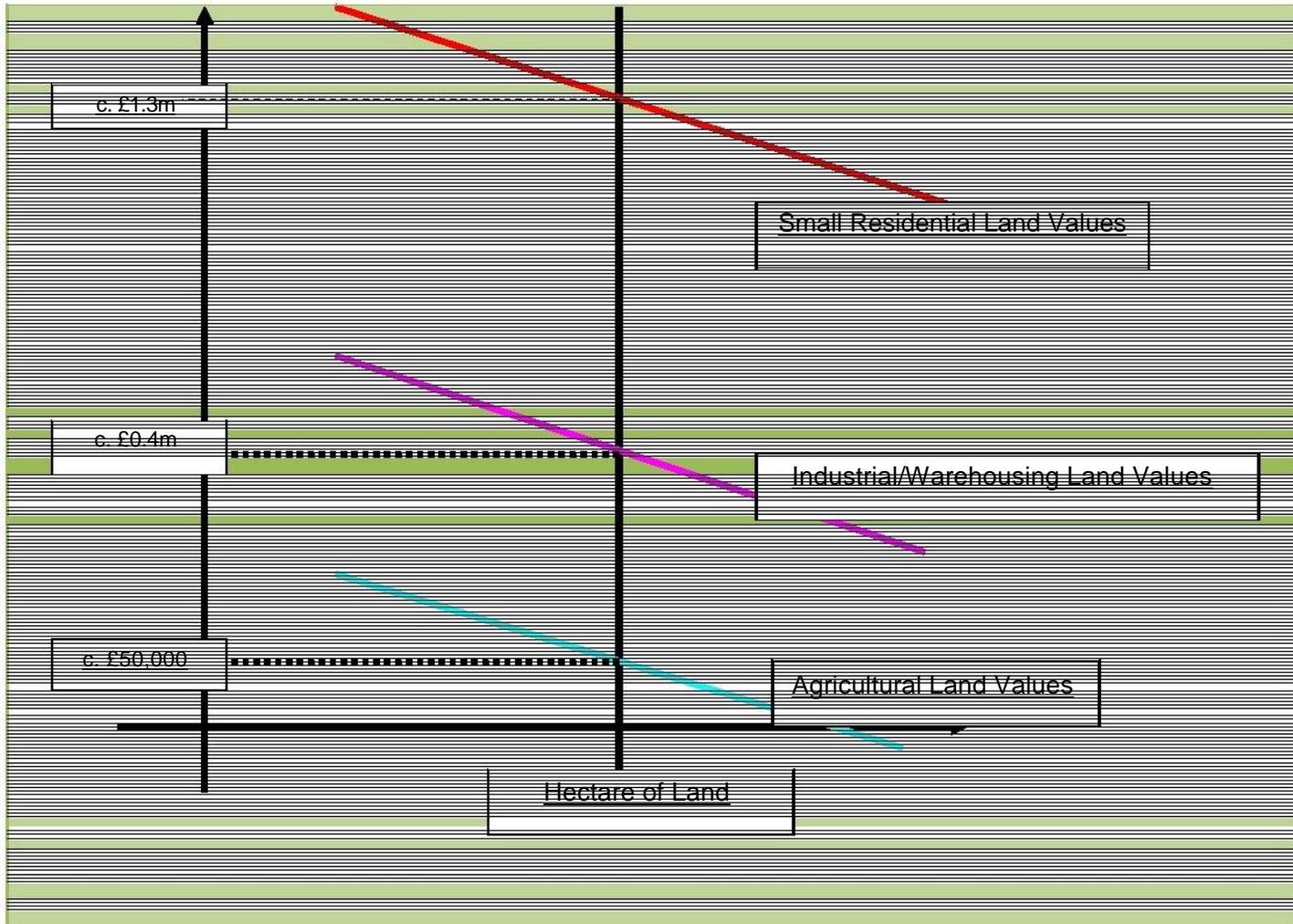
Rotherham's Housing Viability Study: Affordable Housing Requirements on Small Sites

Table 5.8 YORKSHIRE AND THE HUMBER REGION in January 2007, July 2009 and January 2010			
Sub- region	Small Sites (sites of less than five houses)	Bulk Land (sites in excess of two hectares)	Sites of flats or maisonettes
	£s per hectare	£s per hectare	£s per hectare
January 2007: Doncaster	2,600,000	2,100,000	2,600,000
July 2009: Doncaster	1,500,000	1,500,000	1,500,000
January 2010: Doncaster	n. a.	n. a.	n. a.
January 2007: Sheffield	3,100,000	2,600,000	3,400,000
July 2009: Sheffield	1,500,000	1,300,000	1,700,000
January 2010: Sheffield	1,500,000	n. a.	n. a.
January 2007: Leeds	4,000,000	3,500,000	4,000,000
July 2009: Leeds	2,100,000	1,800,000	2,100,000
January 2010: Leeds	1,450,000	n. a.	n. a.

Not Available [n. a.]

Source: The Property Market Report, VOA, July 2007, December 2009 and July 2010 [accessed November 2010]

Figure 5.2: Benchmark Land Values for Rotherham, at July 2010 [£/hectare equivalents]



6 RESULTS OF VIABILITY ANALYSIS

Preamble

- 6.1 This Section presents the results of financial appraisals conducted for assessing the viability of the twelve study sites.

The Residual Land Value [RLV]

- 6.2 On the basis of the development assumptions set out earlier in this Report, we have prepared financial appraisals for each of the twelve study sites, using specially designed spreadsheets. The appraisal uses a discounted residual cash flow valuation [appraisal] of land value. The resultant RLV is by definition a residual. It is the sum of money available to buy the land needed for the housing development to proceed. It is a derived sum based on the final development value, an accurate estimate of building costs and a sum of money to meet the developers target rate of profit. The RLV is the budget to buy the land. We can compare the generated RLV with transactions based data from The Land Registry and evidence from the Valuation Office Agency. The results of the valuation are commonly expressed in £ per hectare so that comparisons can be made on a like-for-like basis.
- 6.3 For a proposed development to pass the test of viability, it is necessary for the land value for housing to exceed the land value for any valid alternative use [i.e. requiring planning permission]. For virgin land or a green field site, where its current use is agricultural, its land value will be typically low. In contrast to the Viability Report on Large Sites [prepared in October 2010], ten of the study sites are brown-field [Sites 1,2,3,4,5,6,7,8,9 and10] with uses including farm buildings, nursery, back gardens, community and industrial buildings]. Clearly where such sites have been cleared, or are known to be contaminated or where derelict structures are evident, these sites' current use values are likely to be low and possibly negative. In Section 5, we provided comparative land values for alternative uses for Rotherham.
- 6.4 Efficient market hypothesis contends that markets ought to reflect all the relevant costs and values, so that a developer's land bid offer price reflects in a clear and true way the costs of providing affordable housing and other planning requirements. However, because of imperfect knowledge, landowners' price expectations may be higher than the offer prices being made by developers.
- 6.5 In the context of making a financial contribution towards the provision of affordable housing off-site, such costs will lead to lower land values. As a general principle there is an inverse relationship between the level of financial contributions and land values; as the requirements for the former increase the latter decrease.
- 6.6 It is also important to record how the cost of mitigating planning obligations affects the RLV, and whether the RLV is abnormally low or appears to be negative. As such we have stress-tested the appraisals for changes in build costs and house prices in order to ensure that the Borough's position regarding seeking financial contributions towards the provision of affordable housing off-site is enduring as well as reflecting current market conditions.

Financial Appraisal Results

- 6.7 We tested the viability position of the twelve study sites by subjecting them successively higher levels of financial contributions towards the provision of affordable housing. This specifically involved **twelve iterations** as follows:
1. Zero affordable housing, which is a baseline with all-market homes.

2. With a £5,000 per dwelling unit as a financial contribution
3. With a £7,500 per dwelling unit as a financial contribution
4. With a £10,000 per dwelling unit as a financial contribution
5. With a £15,000 per dwelling unit as a financial contribution
6. With a £20,000 per dwelling unit as a financial contribution
7. With a £25,000 per dwelling unit as a financial contribution
8. With a £30,000 per dwelling unit as a financial contribution
9. With a £50,000 per dwelling unit as a financial contribution
10. With a £75,000 per dwelling unit as a financial contribution
11. With a £100,000 per dwelling unit as a financial contribution
12. Applying the current affordable housing quota of 25% of all dwelling units as affordable homes.

6.8 A summary of the results is presented in Table 6.1. More detailed information for each of the twelve study sites is presented in a separate volume to this Report.

6.9 For each of the study sites Table 6.1 shows a number of important features

- The **cells coloured green** is the highest level of financial contribution towards the provision of affordable housing without compromising viability. The figures in Table 6.1 show that whilst Site 4 could only sustain a £15,000 per dwelling unit contribution towards the provision of affordable housing is tenable; the highest is over £75,000 per dwelling unit recorded for Site 10. Remember the RLVs in Table 6.1 values **must be higher** than their comparative alternative use values to retain their viability.
- The **cells coloured yellow** is the value of the land if the Borough's current affordable housing quota for large sites of 25% of all dwelling units was imposed. All the study sites' land values are positive except for site 1. The relevance of this test is that it allows us to locate an equivalent land value as if a financial contribution towards the provision of affordable housing is made; at this point the small sites are not being treated any differently from large housing sites. For example, for site 3, the land value with 25% affordable housing is about £0.75m which is equivalent to imposing a financial contribution of £10,000 per dwelling unit. Of course, it could be decided that in setting an affordable housing policy for small sites that such a comparison is not relevant.

6.10 We will discuss these results further alongside sensitivity analysis at paragraph 6.17. The next paragraphs simply summarize the findings as set out in Table 6.2.

**Table 6.1 Appraisal results relating to financial contributions towards the provision of affordable housing:
Residual Land Values [£m/hectare]**

Land Bid [£m/hectare] Equivalent	Site 1: Land adjacent 85 Scholes Lane, Scholes.	Site 2: Land rear of Goose Lane, Wickersley	Site 3: 2 Main Street, Aughton	Site 4: The Regis Hotel, Hall Road, Moorgate	Site 5: Land at View Road, Eastwood	Site 6: Church Farm, Sheffield Road, South Anston
1. Baseline [100% Market Homes]	<u>£547,344</u>	<u>£366,443</u>	<u>£1,145,382</u>	<u>£3,037,506</u>	<u>£1,216,313</u>	<u>£818,724</u>
2. Plus £5,000 per Unit for AH	<u>£415,564</u>	<u>£334,781</u>	<u>£980,098</u>	<u>£2,485,836</u>	<u>£1,062,791</u>	<u>£709,770</u>
3. Plus £7,500 per Unit for AH	<u>£349,673</u>	<u>£318,951</u>	<u>£897,456</u>	<u>£2,210,001</u>	<u>£986,030</u>	<u>£655,292</u>
4. Plus £10,000 per Unit for AH	<u>£283,783</u>	<u>£303,120</u>	<u>£814,814</u>	<u>£1,934,166</u>	<u>£909,270</u>	<u>£600,815</u>
5. Plus £15,000 per Unit for AH	<u>£152,003</u>	<u>£271,458</u>	<u>£649,531</u>	<u>£1,382,496</u>	<u>£755,748</u>	<u>£491,861</u>
6. Plus £20,000 per Unit for AH	<u>£20,223</u>	<u>£239,797</u>	<u>£484,247</u>	<u>£830,826</u>	<u>£602,227</u>	<u>£382,906</u>
7. Plus £25,000 per Unit for AH	<u>-£113,767</u>	<u>£208,135</u>	<u>£318,963</u>	<u>£279,156</u>	<u>£448,706</u>	<u>£273,951</u>
8. Plus £30,000 per Unit for AH	<u>-£271,478</u>	<u>£176,474</u>	<u>£153,679</u>	<u>-£274,804</u>	<u>£295,184</u>	<u>£164,997</u>
9. Plus £50,000 per Unit for AH	<u>-£902,321</u>	<u>£49,828</u>	<u>-£587,491</u>	<u>-£2,915,696</u>	<u>-£364,361</u>	<u>-£278,912</u>
10. Plus £75,000 per Unit for AH	<u>-£1,690,876</u>	<u>-£122,281</u>	<u>-£1,576,526</u>	<u>£6,216,811</u>	<u>-£1,283,011</u>	<u>-£896,178</u>
11. Plus £100,000 per Unit for AH	<u>£2,479,431</u>	<u>-£311,739</u>	<u>£2,565,560</u>	<u>£9,517,926</u>	<u>£2,201,661</u>	<u>-£1,513,444</u>
Extant AH Policy [25%]	<u>-£103,282</u>	<u>£135,459</u>	<u>£756,036</u>	<u>£2,273,298</u>	<u>£956,998</u>	<u>£293,763</u>
Comparator/Hope Value	£50,000	£50,000	Nominal	£1.3m	Nominal	£50,000
Site Capacity [number of dwelling units]	1	2	4	8	8	10
Planning Obligations Receipts@£7k/unit	£7,000	£14,000	£28,000	£56,000	£56,000	£70,000
Abnormal Costs	None	None	None	None	None	None

**Table 6.1[Continued] Appraisal results relating to financial contributions towards the provision of affordable housing:
Residual Land Values [£m/hectare]**

Land Bid [£m/hectare] Equivalent	Site 7: Adjacent to St. Marys Church, Rawmarsh	Site 8: Parkhurst, Doncaster Road, Eastwood	Site 9: Blenheim House, Ridge Road, Eastwood	Site 10: Land now known as Morthern Gardens, Morthern Road, Wickersley	Site 11: Land off Whinney Hill, Firvale, Harthill	Site 12: Part of land off Taylor Drive, Woodsetts
1. Baseline [100% Market Homes]	<u>£791,519</u>	<u>£978,403</u>	<u>£2,653,221</u>	<u>£1,412,305</u>	<u>£1,182,290</u>	<u>£1,755,396</u>
2. Plus £5,000 per Unit for AH	<u>£607,390</u>	<u>£797,233</u>	<u>£2,226,007</u>	<u>£1,337,823</u>	<u>£1,042,062</u>	<u>£1,621,151</u>
3. Plus £7,500 per Unit for AH	<u>£520,531</u>	<u>£713,859</u>	<u>£2,012,400</u>	<u>£1,300,581</u>	<u>£971,948</u>	<u>£1,554,029</u>
4. Plus £10,000 per Unit for AH	<u>£427,537</u>	<u>£622,350</u>	<u>£1,798,794</u>	<u>£1,263,340</u>	<u>£899,477</u>	<u>£1,486,907</u>
5. Plus £15,000 per Unit for AH	<u>£241,549</u>	<u>£443,770</u>	<u>£1,385,576</u>	<u>£1,188,857</u>	<u>£753,418</u>	<u>£1,352,663</u>
6. Plus £20,000 per Unit for AH	<u>£55,560</u>	<u>£258,903</u>	<u>£947,716</u>	<u>£1,114,374</u>	<u>£607,359</u>	<u>£1,217,704</u>
7. Plus £25,000 per Unit for AH	<u>-£132,645</u>	<u>£74,037</u>	<u>£493,657</u>	<u>£1,039,892</u>	<u>£466,007</u>	<u>£1,100,333</u>
8. Plus £30,000 per Unit for AH	<u>-£352,146</u>	<u>-£110,830</u>	<u>£39,598</u>	<u>£965,409</u>	<u>£321,674</u>	<u>£957,593</u>
9. Plus £50,000 per Unit for AH	<u>-£1,230,148</u> :	<u>-£941,391</u>	<u>-£1,964,433</u> :	<u>£667,478</u>	<u>-£285,221</u>	<u>£390,581</u>
10. Plus £75,000 per Unit for AH	<u>£2,327,651</u> :	<u>-£1,988,725</u>	<u>£4,536,834</u> :	<u>£295,064</u>	<u>-£1,129,584</u> :	<u>-£347,089</u>
11. Plus £100,000 per Unit for AH	<u>£3,425,154</u>	<u>-£3,036,060</u>	<u>£7,109,234</u>	<u>-£77,349</u>	<u>£1,973,947</u>	<u>-£1,172,262</u>
Extant AH Policy [25%]	<u>£567,599</u>	<u>£780,009</u>	<u>£2,103,994</u>	<u>£780,796</u>	<u>£850,894</u>	<u>£1,341,682</u>
Comparator/Hope Value	<u>£91,700</u>	Nominal	Nominal	<u>£50,000</u>	<u>£50,000</u>	<u>£50,000</u>
Site Capacity [number of dwelling units]	10	12	14	5	13	13
Planning Obligations Receipts @£7k/unit	<u>£70,000</u>	<u>£84,000</u>	<u>£98,000</u>	<u>£35,000</u>	<u>£91,000</u>	<u>£91,000</u>
Abnormal Costs	<u>£50,000</u>	None	None	None	None	None

- 6.11 Table 6.2 below, which summarizes the results of the viability appraisals, reveals that with NO financial contribution towards the provision of affordable housing off-site, the twelve study sites deliver a residual land value [RLV] of over £1.37m per hectare on average. This figure is in line with the Valuation Office Agency data for small sites of around £1.3 to £1.4m per hectare [see The Property Market Report, July 2010]. This finding indicates that the appraisals accurately estimate the level of profitability in the valuations.

Table 6.2 Summary of Appraisal Results: Residual Land Values [£/hectare]

Land Bid [£m/hectare] Equivalent	Average for ALL Study sites	% fall in RLV caused by Financial Contributions towards AH provision off-site
<u>13. Baseline [100% Market Homes]</u>	<u>£1,371,466</u>	0.00%
<u>14. Plus £5,000 per Unit for AH</u>	<u>£1,173,703</u>	-14.42%
<u>15. Plus £7,500 per Unit for AH</u>	<u>£1,075,951</u>	-21.55%
<u>16. Plus £10,000 per Unit for AH</u>	<u>£976,687</u>	-28.79%
<u>17. Plus £15,000 per Unit for AH</u>	<u>£779,734</u>	-43.15%
<u>18. Plus £20,000 per Unit for AH</u>	<u>£579,903</u>	-57.72%
19. Plus £25,000 per Unit for AH	£380,225	-72.28%
20. Plus £30,000 per Unit for AH	£172,759	-87.40%
21. Plus £50,000 per Unit for AH	-£734,834	-153.58%
22. Plus £75,000 per Unit for AH	-£1,902,211 -	-238.70%
23. Plus £100,000 per Unit for AH	£3,079,120	-324.51%
24. Extant AH Policy [25%]	£949,408	

- 6.12 As expected, as the financial contribution towards the provision of affordable housing off-site progressively rises, the residual land values are reduced. On average, once the financial contribution reaches over £40,000 per unit, the RLV approaches zero.
- 6.13 Imposing a £10,000 per unit financial contribution towards the provision of affordable housing off-site, will reduce average RLVs by nearly 30% across all study sites.
- 6.14 If a £10,000 per unit contribution was imposed on developers towards the provision of affordable housing off-site, this would be equivalent to requiring developers to provide 25% of a site's development as affordable housing units as required for large housing sites - see Table 6.2, where we simply compare the levels of RLV in the yellow and green cells.
- 6.15 However, the above findings are in the absence of sensitivity analysis which serves to inform and confirm that the Borough Council's new affordable housing policy for small sites does not

compromise overall viability and is enduring. In practice, the threshold of viability is not fixed. Viability will depend on the value from existing uses or any valid alternatives.

- 6.16 A final point, if in the future the planning authority intends to secure contributions from non-residential developments as part of their review of their current approaches, then any such contributions made by developers will also reduce the alternative use values which are used to benchmark viability.

Sensitivity Analysis

- 6.17 To reiterate, a site is viable when the developer has enough money in their budget to buy the land, build out the scheme and meet their assumed target rate of profit. This means the developer's land bid budget is large enough to compete away other land uses that planning would permit at today's market prices and costs [i.e. at the time of the valuation (now)].
- 6.18 Sensitivity analysis has been conducted across all the affordable housing iterations, but our reference point is to test whether viability is compromised if the Borough Council imposes a requirement for developers to make a financial contribution towards the provision of affordable housing on small sites, when changes in the key variables are modelled.
- 6.19 A priori, viability of a site is a relative and thus a dynamic concept. To accommodate changes in market conditions, we have conducted sensitivity analysis - a kind of stress testing - in order to examine the vulnerability of viability to changes in the price/rents and costs of building out the sites. We have been guided by the fact that there are four key variables that affect the RLV and hence ultimately viability. According to Ratcliffe et al [2009], price [i.e. rents and yields], cost, time and interest rates are the most important of all variables. In respect of housing viability, price and cost are the most important of the four variables.
- 6.20 We have also been guided by market changes and recent forecasts so that the testing is realistic as far as it can be. Thus, for **price changes** we have modelled the effects of 2.5% and 5% per annum rises and falls; for **build cost changes** we have modelled the effects of 2.5%, 5%, 7.5% and 10% per annum increases [see Table 6.3].
- 6.21 If the build out time is longer than 12 months, then such increases in build costs and changes to house prices will be compounded. In this respect, compounding affects seven of the twelve study sites where projects are planned to run for up to 24 months [i.e. sites 6 through to 12]. Relative to the build out times for the sites covered by the study of Large Sites [Prepared in October 2010], the impact of compounding on viability is low.
- 6.22 Additionally, we have modelled the effects of **stepped increases in build costs per unit of £10,000; £20,000; and £30,000** [see Table 6.4]. With regard to this stress test, such one-off increases in build costs per unit attempt to emulate the consequence of trying to achieving higher energy efficiency ratings as envisaged by the Code for Sustainable Homes. We also reveal the level of such increases in build cost at the point when viability is compromised [i.e. at the point when the uplift multipliers fall below unity, but this ultimately depends on the sites' alternative use values; these are summarised next.
- 6.23 For the two green-field sites [i.e. sites 11 and 12], their current use value is typically quite low since their extant use relates to agricultural, which is valued at around £14,000 per hectare according to the Property Market Report [VOA, 2009 and 2010]. For this study, however, we have assumed a "hope" value of £50,000 per hectare to reflect their truer "market" worth for such sites.

- 6.24 The small brown-field sites may be worth more than agricultural land in their current use [e.g. as industrial or warehousing sites, nurseries], though specific site circumstances and conditions will ultimately dictate their true worth. In this regard, the study sites include:
- Cleared sites that have no economic activity currently operating from them, and hence their current use value is nominal [i.e. sites 3 and 5].
 - Redundant and derelict buildings on site in various states of disrepair; again these have no current operational use and thus they too have nominal values [i.e. sites 8 and 9].
 - Former redundant nursery grounds [site 10] or land annexed from the side or rear of existing houses [sites 1 and 2] that had no current operational worth; these sites have been valued at £50,000, which is similar to agricultural land without planning permission for residential development.
 - One site that has recently stopped trading as a hotel [Site 4]; it has reverted to residential use and accordingly it has been valued at £1.3m/hectare.
 - Finally, site 10 is currently trading as car park, storage and providing a valeting service and its current use land value is equivalent to £350,000 per hectare. This last site may be contaminated, and we have allowed £50,000 to cover abnormal costs associated in developing out the site, which in valuation terms will have an impact on its viability and thus reduce its ability to make a financial contribution towards the provision of affordable housing.
- 6.25 In order to simplify the presentation and to ease understanding of the analysis, we have presented the results in the form of uplift multipliers. The uplift multiplier measures the size of the rise in land value due to developing the site for housing relative to a current use value. This means, irrespective of the comparator land use value and the particular sensitivity test [at the head of each column], that so long as a site's uplift multiplier is greater than 1, then the site remains viable.
- 6.26 A full set of results of the sensitivity analysis for each site is presented in a separate Volume to this Report.

Results of Sensitivity Analysis: Individual Sites

The results from the sensitivity analysis are presented for each of the study sites [see Table 6.3 overleaf].

- 6.27 Specifically, Table 6.3 presents the level of financial contribution at which each of the twelve study sites are viable when specific sensitivity tests are applied. For baseline viability [see Column A in Table 6.3], the lowest contribution is £12,000 per unit for site 7 and the highest is over £90,000 per unit for site 10. The median is just under £36,000 per unit.

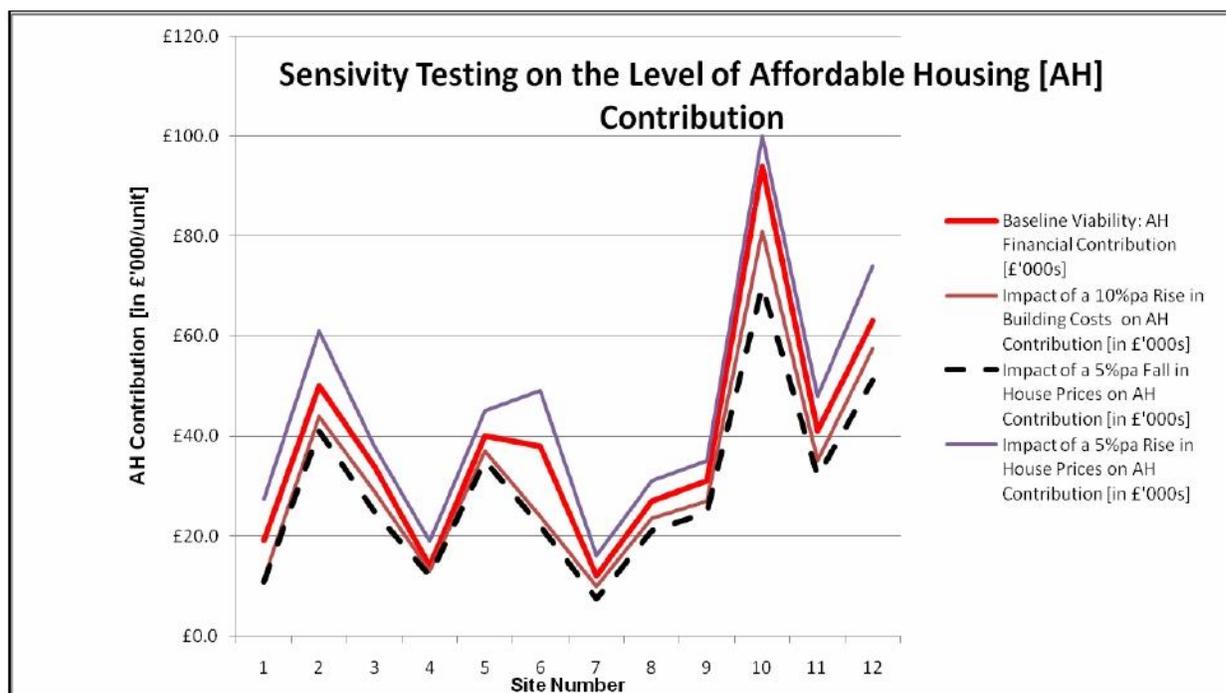
Table 6.3: Site Viability: Impact of Build Cost Rise and House Price Changes on Financial Contribution towards the Provision of Affordable Housing on Small Sites in Rotherham

Site Number	A Baseline Viability: Level of AH Contribution [in £'000s]	B Level of AH Contribution: Site is Viable after a 10%pa Rise in Building Costs [in £'000s]	C Level of AH Contribution: Site is Viable after a 5%pa Fall in House Prices [in £'000s]	D Level of AH Contribution: Site is Viable after a 5%pa Rise in House Prices [in £'000s]
1	£19.25	£11.5	£11.0	£27.5
2	£50.0	£44.0	£41.0	£61.0
3	£34.0	£29.0	£25.0	£38.0
4	£14.0	£13.0	£12.0	£19.0
5	£40.0	£37.0	£35.0	£45.0
6	£38.0	£24.0	£22.0	£49.0
7	£12.0	£10.0	£7.50	£16.0
8	£27.0	£23.5	£21.0	£31.0
9	£31.0	£27.0	£24.7	£35.0
10	£94.0	£81.0	£70.0	>£100.0
11	£41.0	£35.0	£32.0	£48.0
12	£63.0	£57.5	£51.25	£74.0
AVERAG	£38.60	£32.71	£29.37	£45.29
E	£12.0	£10.0	£7.5	£16.0
MIN	£94.0	£81.0	£70.0	£100.0
MAX	£36.00	£28.00	£24.85	£41.50

MEDIAN

- 6.28 Referring to the figures in Table 6.3, column D, in a rising market [i.e. pre October 2007], which is modelling a 5% annualised increase in house prices, the modelling reveals that the financial contribution towards the provision of affordable housing could range from £16,000 [Sites 7] to £100,000 per unit [Site 10] - see the upper most line in Figure 6.2. The median level of contribution is around £41,500 per unit.
- 6.29 In a falling market [see Table 6.3, column C], the modelling reveals that a 5% annualised fall in house prices significantly reduces the ability of the sites to make a financial contribution towards the provision of affordable housing if viability is to be retained - see the black dashed line in Figure 6.1. The highest contribution would fall to £70,000 per unit [for site 10] and the lowest would on site 7 at just £7,500 per unit; the median contribution falls to just under £25,000 per unit.
- 6.30 Similarly, the impact of a 10% annualised rise in build costs [see Table 6.3, column B] also reduces the sites' ability to make financial contributions, but not by the same amount as the fall in house prices. Accordingly, the median contribution has risen to £28,000 per unit.

Figure 6.1: Sensitivity Testing on the Level of Affordable Housing Contribution [£'000/unit]



6.31 We also sought to demonstrate how viability is affected by predicted increases in building costs arising directly from meeting the Code for Sustainable Homes. New homes are expected to generate lower carbon emissions as a result of the Code for Sustainable Homes. The consequential effect of this objective in the short to medium term will be to increase overall build costs. A report by consultants Cyril Sweett for The Housing Corporation and English Partnerships [now The Homes for Community Agency (HCA)] in 2006, showed that build costs could rise by between 2.5% and 24% depending upon the options and the target dates to reach energy performance over Part L Building Regulations.⁶ Research for the South West Housing Body in 2007 showed that costs would rise by up to 5% [maximum of £4,400/unit] to achieve improvement from Code Level 3 to Code Level 4; whilst costs would rise by up to 9% [maximum of £8,700/unit] to achieve improvement from Code Level 4 to Code Level 5. More recently, the CLG has provided a more comprehensive view of likely cost increases depending on particular carbon emissions' scenarios [CLG, 2010b & 2010c].

6.32 Mark Clare, Chief Executive of Barratt Developments - a major house builder - relating to their Zero carbon development at Hanham Hall, east of Bristol, claims that to achieve Code Level 6 they will incur an extra £20,000 per unit in costs [March 2010].

⁶DCLG [2008c] Research to Assess the Costs and Benefits of the Government's Proposals to Reduce the Carbon Footprint of New Housing Development, Department for Communities and Local Government: London. In particular see Table 4.2, p58.

⁷See South West Regional Assembly, 2007, Assessing the Impact of Higher Code Levels on Affordable

Delivery in the South West of England: A Policy Makers Summary, SWRA.

6.33 Thus, to embrace this range of build cost increases, we have modelled the effect on viability of three different stepped increases in build costs of £10,000, £20,000 and £30,000 per unit. The results of this modelling are presented in Table 6.4.

Table 6.4: Impact of Stepped Increase in Build Costs on Viability of Small Sites

Site Number	A	B
	Baseline: Site Viability is retained at Affordable Housing Contribution [£'000/unit]	Viability is Compromised if Build Costs Rise by more than £/unit @ the Affordable Housing Contribution
1	£19.3	£8,500
2	£50.0	£18,000
3	£34.0	£9,000
4	£14.0	£9,000
5	£40.0	£9,000
6	£38.0	£15,000
7	£12.0	£5,000
8	£27.0	£6,500
9	£31.0	£10,000
10	£94.0	£30,000
11	£41.0	£9,000
12	£63.0	£11,750

6.34 Table 6.4 shows that the majority of sites [i.e. 10 of the 12 sites] retain their viability when build costs rise by **around £9,000 per unit**. Only site 10 retains its viability when build cost rise by more than £20,000 per unit. The viability of sites 7 and 8 are most vulnerable to stepped increases in build costs. Despite such variations, the scale of the stepped increases in build costs in the short term does not compromise viability at the levels of financial contributions set out in Column A in Table 6.4.

6.35 Arising from the results of carrying out viability assessments and subjecting the twelve study sites to a number of stress tests [i.e. sensitivity analysis when build costs and house prices changes, including stepped increases in build costs to model the effect of meeting higher levels relating to the Code for Sustainable Homes] is the thorny issue of setting the level of the financial contribution towards affordable housing for small sites.

6.36 Building on the sensitivity analysis, Table 6.5 summarises for each small site, the position of their viability at specific levels of financial contributions towards the provision of affordable housing. Figure 6.2 shows the range within which viability becomes compromised in setting generic contribution levels.

6.37 If we set the policy at £30,000 per unit [See Figure 6.2], it shows that of the twelve sites, four sites [sites 1, 4, 7, and 8] would be unviable. If we set the policy at £20,000 per unit, it shows

that all the sites remain viable except three sites [sites 1, 4 and 7]. If we set the policy at £10,000 per unit, it shows that all the sites remain viable except one site [site 7].

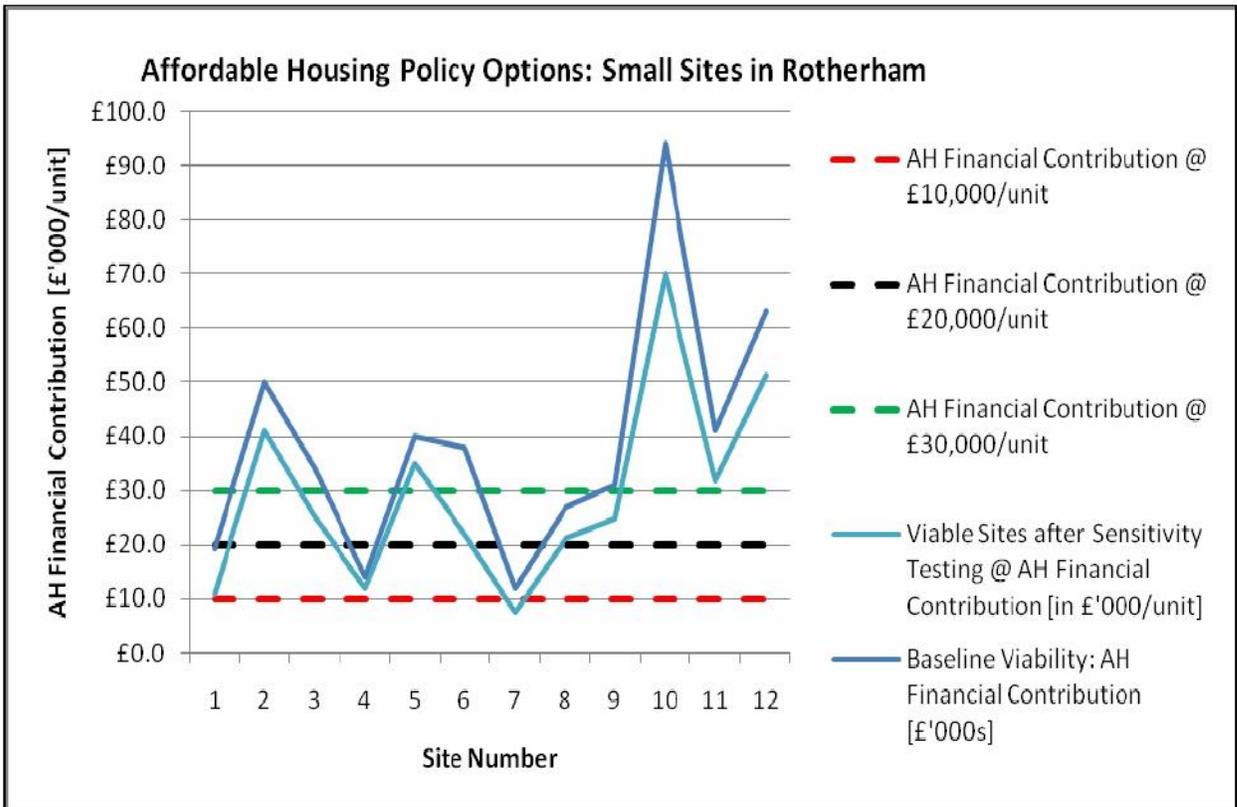
Table 6.5: Summary Viability of Small Sites: Financial Contributions towards the provision of Affordable Housing [£/unit] with annualised fall in house price by 5% pa.

Site Number/Name:	Financial Contribution [£/unit]	Site Size [m²]	Site Capacity	Link to Volume 2
Site 1: Land at 85 Scholes Lane, Scholes	£11,000	370	1	pp. 3-4
Site 2: Land rear of Goose Lane, Wickersley	£41,000	3,080	2	pp. 5-6
Site 3: 2 Main Street, Aughton	£25,000	1,180	4	pp. 7-8
Site 4: The Regis Hotel, 1 Hall Road, Moorgate	£12,000	700	8 [net 4]	pp. 9-10
Site 5: Land at View Road, Eastwood	£35,000	2,490	8	pp. 11-12
Site 6: Church Farm, Sheffield Road, South Anston	£22,000	4,370	10	pp. 13-14
Site 7: Land adjacent to St. Mary's Church, High Street, Rawmarsh	£7,500	2,620	10	pp. 15-16
Site 8: Parkhurst, Doncaster Road, Eastwood	£21,000	3,200	12	pp. 17-18
Site 9: Blenheim House, Ridge Road, Eastwood	£24,750	1,520	14	pp. 19-20
Site 10: Land now known as Morthern Gardens, Morthern Road, Wickersley	£70,000	3,200	5	pp. 21-22
Site 11: Land off Whinney Road, Firvale, Harthill	£32,000	4,300	13	pp. 23-24
Site 12: Part of land off Taylor Drive, Woodsetts	£51,250	4,400	13	pp. 25-26

Concluding Remark

6.38 The figures that we have generated in this report can provide a baseline for assessing the impact of alternative levels of financial contributions towards the provision of affordable housing upon the viability of the twelve small study sites.

Figure 6.2: Affordable Housing Policy Options: Small Sites in Rotherham



7 CONCLUSIONS AND IMPLICATIONS OF RESULTS

- 7.1 We have conducted financial appraisals for actual or notional housing developments, on twelve small sites identified by Rotherham Metropolitan Borough Council, in order to assess the impact of making a financial contribution towards the provision of affordable, off-site, upon development viability.
- 7.2 Our approach has involved modelling housing development for the study sites, using financial appraisal, to generate discounted cash flow residual land valuations for each site under a series of financial contributions towards the provision of affordable housing.
- 7.3 In adopting this approach to the twelve sites in Rotherham specific development challenges are posed by variations in house prices by type and across the borough and to address relevant variations housing design and build specification, including abnormal costs in developing brown-field sites. We sought to overcome these by applying specific price and costs bands; a necessary and effective device if modelling in the future is to be used for comparison and monitoring purposes.
- 7.4 Appraisals have been generated for the twelve sites for eleven different levels of financial contributions i.e. baseline, plus iterations involving sums from £5,000 per unit up to £100,000 per unit and assuming no public subsidy or Social Housing Grant.
- 7.5 The results of the appraisals confirm that in developing the study sites, the resultant land values, which are free of planning and development costs and includes a target rate of developers profit of 20% on costs] typically approach about £1.37m per hectare. This is similar to the most up-to-date Valuation Office Agency data of around £1.4m per hectare [at July 2010]. Additionally, our appraisals also include £7,000 per housing unit for planning obligations to cover the mitigation of local development impacts arising from the developing sites.
- 7.6 **In our view, the Borough Council is justified in formulating a new policy regarding small sites by setting a level of financial contributions towards the provision of affordable housing.**
- 7.7 We have stress tested the sites' viabilities, where increases in build costs or price falls have been modelled. We recommend that the Borough Council set a financial contribution that recognises that markets operate in a cyclical manner i.e. they rise and fall; and that they set a level for implementation which does not compromise viability in today's market. This means that **a financial contribution of between £10,000 and £20,000 per unit be considered** [see Figure 6.2].
- 7.8 In the future, market conditions may be return to be more growth orientated; under such circumstances, the Borough Council will be justified in repeating these tests of development viability and possibly raising the contribution level.
- 7.9 We have shown that viability is a relative and a dynamic concept.

END

Bibliography

- Building Cost Information Service (BCIS) (2011) SURVEY OF TENDER PRICES: PROJECT PRICES, bi or tri-annual, RICS
- CLG [2010c] CODE FOR SUSTAINABLE HOMES AND ENERGY PERFORMANCE OF BUILDINGS: Cumulative and Quarterly Data, London: CLG
- CLG [2010b] CODE FOR SUSTAINABLE HOMES: A Cost Review, London: CLG
- CLG [2010a] COMMUNITY INFRASTRUCTURE PLANNING, London: TSO
- CLG [2010] PLANNING POLICY STATEMENT3: HOUSING, London: TSO
- CLG [2008c] RESEARCH TO ASSESS THE COSTS AND BENEFITS OF THE GOVERNMENT'S PROPOSALS TO REDUCE THE CARBON FOOTPRINT OF NEW HOUSING DEVELOPMENT, London: DCLG
- CLG (2008c) VALUING PLANNING OBLIGATIONS IN ENGLAND, London: TSO [This is a research Report prepared by The Halcrow Group and The University of Sheffield.]
- CLG (2008b) COMMUNITY INFRASTRUCTURE LEVY: A CONSULTATION. London: TSO
- CLG (2008a) PLANNING POLICY STATEMENT12: LOCAL SPATIAL PLANNING. London: TSO
- CLG (2006) PLANNING POLICY STATEMENT3: HOUSING, London: TSO
- CLG (2006) STRATEGIC HOUSING MARKET ASSESSMENTS: Practice Guidance, London: TSO
- CLG (2006) PLANNING OBLIGATIONS: PRACTICE GUIDANCE, London: TSO
- Davis, Langdon and Everest (editors) (2010) SPON'S ARCHITECTS' AND BUILDERS' PRICE BOOK, London: E and FN Spon.
- Havard, T. (2008) CONTEMPORARY PROPERTY DEVELOPMENT London: RIBA Publishing [2nd Edition]
- HCA [2009] INVESTMENT AND PLANNING OBLIGATIONS, RESPONDING TO THE DOWNTURN, Good Practice Note, London: HCA
- ODPM [2005] PLANNING OBLIGATIONS, Circular 05/2005, London HMSO
- ODPM [2005] PLANNING POLICY STATEMENT1: DELIVERING SUSTAINABLE DEVELOPMENT, London: HMSO
- Ratcliffe, J, Stubbs, M. & Keeping, M. (2009) URBAN PLANNING AND REAL ESTATE DEVELOPMENT Spon Press [3rd Edition]
- RICS (2009) RICS APPRAISAL AND VALUATION STANDARDS, London: RICS [6th Edition]
- South West Regional Assembly [2007], ASSESSING THE IMPACT OF HIGHER CODE LEVELS ON AFFORDABLE DELIVERY IN THE SOUTH WEST OF ENGLAND: A POLICY MAKERS SUMMARY, Taunton: SWRA.

Housing Viability Study Of Small Sites

Affordable Housing Requirements VOLUME 2: Uplift Multipliers and Financial Contributions towards the Provision of Affordable Housing on Small Sites

Prepared by Professor Stephen Walker

Draft: January 2011

Final: May 2012 [After Scrutiny]

NOTES: SMALL SITES: UPLIFT MULTIPLIERS

- 1.1 Viability testing is achieved by comparing the residual land values [the land budget available to buy the land] in its future use for housing against a site's current and/or alternative land use values. The ratio of these two values is termed the **uplift multiplier**. So long as this quotient is **greater than 1** for any level of financial contribution towards the provision of affordable housing and sensitivity testing, then the **development as housing is viable. Thus viability is retained when the cells are white.** Where the cells are brown; this is the level of financial contribution across all the sensitivity tests at which a site's viability is not compromised.

Comparator values: for the two green-field sites [i.e. sites 11 and 12], their current use value is typically quite low since their extant use relates to agricultural, which is valued at around £14,000 per hectare according to the Property Market Report [VOA, 2009 and 2010]. For this study, however, we have assumed a "hope" value of £50,000 per hectare to reflect their truer "market" worth for such sites; the small brown-field sites may be worth more than agricultural land in their current use [e.g. as industrial or warehousing sites, nurseries], though specific site circumstances and conditions will ultimately dictate their true worth. In this regard, the brown-field study sites include: cleared sites that have no economic activity currently operating from them, and hence their current use value is nominal [i.e. sites 3 and 5]; redundant and derelict buildings on site in various states of disrepair; again these have no current operational use and thus they too have nominal values [i.e. sites 8 and 9]; former redundant nursery grounds [site 10] or land annexed from the side or rear of existing houses [sites 1 and 2] that had no current operational worth; these sites have been valued at £50,000, which is similar to agricultural land without planning permission for residential development; another site has recently stopped trading as a hotel [Site 4] - it has reverted to residential use and accordingly it has been valued in that use; lastly, site 10 is currently trading as car park, storage and providing a valeting service and its current use land value is equivalent to £350,000 per hectare. This last site may be contaminated, and we have allowed £50,000 to cover abnormal costs associated in developing out the site, which in valuation terms will have an impact on its viability and thus reduce its ability to make a financial contribution towards the provision of affordable housing.

For each of the study sites, two tables of figures are presented.

- The **first table of figures** present the baseline uplift multipliers for eleven different levels of financial contributions towards the provision of affordable housing, plus an additional iteration as if the current affordable housing quota policy that requirements that 25% of all dwelling units should be affordable units. Additionally, uplift multipliers have been recalculated to take account of rises in building costs in four steps from 2.5%pa up to 10%pa.
- The **second table of figures** present recalculated uplift multipliers that take into account both rises and falls in house prices in two steps from 2.5%pa and 5%pa, as well the baseline uplift multipliers as in the first table.

Rotherham's Housing Viability Study: Affordable Housing Requirements on Small Sites

Site 1: Land adjacent to 85 Scholes Lane, Scholes	Baseline Housing Land Budget	With Rise in Building Costs [+2.5%pa]	With Rise in Building Costs [+5%pa]	With Rise in Building Costs [+7.5pa%]	With Rise in Building Costs [+10%pa]
Baseline [100% Market Homes]	10.95	9.94	8.95	7.97	7.00
Plus £5,000 per Unit for AH	8.31	7.31	6.32	5.33	4.36
Plus £7,500 per Unit for AH	6.99	5.99	5.00	4.01	3.04
Plus £10,000 per Unit for AH	5.68	4.67	3.68	2.70	1.72
Plus £15,000 per Unit for AH	3.04	2.04	1.04	0.06	-0.91
Plus £20,000 per Unit for AH	0.40	-0.60	-1.59	-2.57	-3.55
Plus £25,000 per Unit for AH	-2.28	-3.28	-4.27	-5.25	-6.23
Plus £30,000 per Unit for AH	-5.43	-6.43	-7.43	-8.41	-9.38
Plus £50,000 per Unit for AH	-18.05	-19.05	-20.04	-21.03	-22.00
Plus £75,000 per Unit for AH	-33.82	-34.82	-35.81	-36.80	-37.77
Plus £100,000 per Unit for AH	-49.59	-50.59	-51.58	-52.57	-53.54
Extant AH Policy [25%] for large sites	-2.07	-3.07	-4.06	-5.04	-6.02
UPLIFT MULTIPLIER - MINIMUM VIABILITY THRESHOLD	1	1	1	1	1

Rotherham's Housing Viability Study: Affordable Housing Requirements on Small Sites

Site 1: Land adjacent to 85 Scholes Lane, Scholes	With Real House Price Rise [+5%pa]	With Real House Price Rise [+2.5%pa]	Baseline Housing Land Bid Budget	With Real House Price Fall [-2.5%pa]	With Real House Price Fall [-5%pa]
Baseline [100% Market Homes]	14.91	12.93	10.95	8.95	6.93
Plus £5,000 per Unit for AH	12.27	10.30	8.31	6.31	4.30
Plus £7,500 per Unit for AH	10.96	8.98	6.99	4.99	2.98
Plus £10,000 per Unit for AH	9.64	7.66	5.68	3.68	1.66
Plus £15,000 per Unit for AH	7.00	5.03	3.04	1.04	-0.97
Plus £20,000 per Unit for AH	4.37	2.39	0.40	-1.60	-3.61
Plus £25,000 per Unit for AH	1.69	-0.29	-2.28	-4.28	-6.29
Plus £30,000 per Unit for AH	-1.47	-3.44	-5.43	-7.43	-9.44
Plus £50,000 per Unit for AH	-14.08	-16.06	-18.05	-20.05	-22.06
Plus £75,000 per Unit for AH	-29.85	-31.83	-33.82	-35.82	-37.83
Plus £100,000 per Unit for AH	-45.63	-47.60	-49.59	-51.59	-53.60
Extant AH Policy [25%] for large sites	1.40	-0.33	-2.07	-3.82	-5.58
UPLIFT MULTIPLIER - MINIMUM VIABILITY THRESHOLD	1	1	1	1	1

Rotherham's Housing Viability Study: Affordable Housing Requirements on Small Sites

Site 2: Land rear of Goose Lane, Wickersley	Baseline Housing Land Budget	With Rise in Building Costs [+2.5%pa]	With Rise in Building Costs [+5%pa]	With Rise in Building Costs [+7.5pa%]	With Rise in Building Costs [+10%pa]
Baseline [100% Market Homes]	7.33	7.03	6.73	6.44	6.15
Plus £5,000 per Unit for AH	6.70	6.40	6.10	5.81	5.52
Plus £7,500 per Unit for AH	6.38	6.08	5.78	5.49	5.20
Plus £10,000 per Unit for AH	6.06	5.76	5.47	5.17	4.89
Plus £15,000 per Unit for AH	5.43	5.13	4.83	4.54	4.25
Plus £20,000 per Unit for AH	4.80	4.50	4.20	3.91	3.62
Plus £25,000 per Unit for AH	4.16	3.86	3.57	3.28	2.99
Plus £30,000 per Unit for AH	3.53	3.23	2.93	2.64	2.35
Plus £50,000 per Unit for AH	1.00	0.70	0.40	0.11	-0.18
Plus £75,000 per Unit for AH	-2.45	-2.74	-3.04	-3.33	-3.62
Plus £100,000 per Unit for AH	-6.23	-6.53	-6.83	-7.12	-7.41
Extant AH Policy [25%] for large sites	2.71	2.41	2.11	1.82	1.53
UPLIFT MULTIPLIER - MINIMUM VIABILITY THRESHOLD	1	1	1	1	1

Rotherham's Housing Viability Study: Affordable Housing Requirements on Small Sites

Site 2: Land rear of Goose Lane, Wickersley	With Real House Price Rise [+5%pa]	With Real House Price Rise [+2.5%pa]	Baseline Housing Land Bid Budget	With Real House Price Fall [-2.5%pa]	With Real House Price Fall [-5%pa]
Baseline [100% Market Homes]	8.66	7.99	7.33	6.66	5.99
Plus £5,000 per Unit for AH	8.02	7.36	6.70	6.03	5.35
Plus £7,500 per Unit for AH	7.71	7.04	6.38	5.71	5.04
Plus £10,000 per Unit for AH	7.39	6.73	6.06	5.39	4.72
Plus £15,000 per Unit for AH	6.76	6.09	5.43	4.76	4.09
Plus £20,000 per Unit for AH	6.12	5.46	4.80	4.13	3.45
Plus £25,000 per Unit for AH	5.49	4.83	4.16	3.49	2.82
Plus £30,000 per Unit for AH	4.86	4.20	3.53	2.86	2.19
Plus £50,000 per Unit for AH	2.32	1.66	1.00	0.33	-0.35
Plus £75,000 per Unit for AH	-1.12	-1.78	-2.45	-3.12	-3.79
Plus £100,000 per Unit for AH	-4.91	-5.57	-6.23	-6.90	-7.58
Extant AH Policy [25%] for large sites	3.86	3.29	2.71	2.13	1.54
UPLIFT MULTIPLIER - MINIMUM VIABILITY THRESHOLD	1	1	1	1	1

Rotherham's Housing Viability Study: Affordable Housing Requirements on Small Sites

Site 3: 2 Main Street, Aughton	Baseline Housing Land Budget	With Rise in Building Costs [+2.5%pa]	With Rise in Building Costs [+5%pa]	With Rise in Building Costs [+7.5pa%]	With Rise in Building Costs [+10%pa]
Baseline [100% Market Homes]	22.91	22.32	21.74	21.17	20.60
Plus £5,000 per Unit for AH	19.60	19.02	18.44	17.87	17.30
Plus £7,500 per Unit for AH	17.95	17.36	16.79	16.21	15.65
Plus £10,000 per Unit for AH	16.30	15.71	15.13	14.56	13.99
Plus £15,000 per Unit for AH	12.99	12.41	11.83	11.25	10.69
Plus £20,000 per Unit for AH	9.68	9.10	8.52	7.95	7.38
Plus £25,000 per Unit for AH	6.38	5.79	5.22	4.64	4.08
Plus £30,000 per Unit for AH	3.07	2.49	1.91	1.34	0.77
Plus £50,000 per Unit for AH	-11.75	-12.33	-12.91	-13.49	-14.05
Plus £75,000 per Unit for AH	-31.53	-32.12	-32.69	-33.27	-33.83
Plus £100,000 per Unit for AH	-51.31	-51.90	-52.47	-53.05	-53.61
Extant AH Policy [25%] for large sites	15.12	14.54	13.96	13.38	12.82
UPLIFT MULTIPLIER - MINIMUM VIABILITY THRESHOLD	1	1	1	1	1

Rotherham's Housing Viability Study: Affordable Housing Requirements on Small Sites

Site 3: 2 Main Street, Aughton	With Real House Price Rise [+5%pa]	With Real House Price Rise [+2.5%pa]	Baseline Housing Land Bid Budget	With Real House Price Fall [-2.5%pa]	With Real House Price Fall [-5%pa]
Baseline [100% Market Homes]	25.95	24.43	22.91	21.37	19.82
Plus £5,000 per Unit for AH	22.65	21.13	19.60	18.07	16.52
Plus £7,500 per Unit for AH	20.99	19.48	17.95	16.41	14.87
Plus £10,000 per Unit for AH	19.34	17.82	16.30	14.76	13.21
Plus £15,000 per Unit for AH	16.03	14.52	12.99	11.45	9.91
Plus £20,000 per Unit for AH	12.73	11.21	9.68	8.15	6.60
Plus £25,000 per Unit for AH	9.42	7.91	6.38	4.84	3.30
Plus £30,000 per Unit for AH	6.12	4.60	3.07	1.54	-0.01
Plus £50,000 per Unit for AH	-8.71	-10.22	-11.75	-13.29	-14.83
Plus £75,000 per Unit for AH	-28.49	-30.00	-31.53	-33.07	-34.61
Plus £100,000 per Unit for AH	-48.27	-49.78	-51.31	-52.85	-54.39
Extant AH Policy [25%] for large sites	17.87	16.50	15.12	13.74	12.34
UPLIFT MULTIPLIER - MINIMUM VIABILITY THRESHOLD	1	1	1	1	1

Rotherham's Housing Viability Study: Affordable Housing Requirements on Small Sites

Site 4: The Regis Hotel, 1 Hall Road, Moorgate	Baseline Housing Land Budget	With Rise in Building Costs [+2.5%pa]	With Rise in Building Costs [+5%pa]	With Rise in Building Costs [+7.5pa%]	With Rise in Building Costs [+10%pa]
Baseline [100% Market Homes]	2.34	2.28	2.23	2.18	2.13
Plus £5,000 per Unit for AH	1.91	1.86	1.81	1.76	1.71
Plus £7,500 per Unit for AH	1.70	1.65	1.60	1.55	1.50
Plus £10,000 per Unit for AH	1.49	1.44	1.38	1.33	1.28
Plus £15,000 per Unit for AH	1.06	1.01	0.96	0.91	0.86
Plus £20,000 per Unit for AH	0.64	0.59	0.54	0.49	0.44
Plus £25,000 per Unit for AH	0.21	0.16	0.11	0.06	0.01
Plus £30,000 per Unit for AH	-0.21	-0.26	-0.31	-0.37	-0.42
Plus £50,000 per Unit for AH	-2.24	-2.29	-2.35	-2.40	-2.45
Plus £75,000 per Unit for AH	-4.78	-4.83	-4.89	-4.94	-4.99
Plus £100,000 per Unit for AH	-7.32	-7.37	-7.42	-7.48	-7.53
Extant AH Policy [25%] for large sites	1.75	1.70	1.65	1.61	1.56
UPLIFT MULTIPLIER - MINIMUM VIABILITY THRESHOLD	1	1	1	1	1

Rotherham's Housing Viability Study: Affordable Housing Requirements on Small Sites

Site 4: The Regis Hotel, 1 Hall Road, Moorgate	With Real House Price Rise [+5%pa]	With Real House Price Rise [+2.5%pa]	Baseline Housing Land Bid Budget	With Real House Price Fall [-2.5%pa]	With Real House Price Fall [-5%pa]
Baseline [100% Market Homes]	2.63	2.48	2.34	2.19	2.04
Plus £5,000 per Unit for AH	2.20	2.06	1.91	1.77	1.62
Plus £7,500 per Unit for AH	1.99	1.85	1.70	1.55	1.41
Plus £10,000 per Unit for AH	1.78	1.63	1.49	1.34	1.20
Plus £15,000 per Unit for AH	1.35	1.21	1.06	0.92	0.77
Plus £20,000 per Unit for AH	0.93	0.78	0.64	0.49	0.35
Plus £25,000 per Unit for AH	0.50	0.36	0.21	0.07	-0.08
Plus £30,000 per Unit for AH	0.08	-0.07	-0.21	-0.36	-0.50
Plus £50,000 per Unit for AH	-1.95	-2.10	-2.24	-2.39	-2.54
Plus £75,000 per Unit for AH	-4.49	-4.64	-4.78	-4.93	-5.07
Plus £100,000 per Unit for AH	-7.03	-7.18	-7.32	-7.47	-7.61
Extant AH Policy [25%] for large sites	2.02	1.88	1.75	1.63	1.49
UPLIFT MULTIPLIER - MINIMUM VIABILITY THRESHOLD	1	1	1	1	1

Rotherham's Housing Viability Study: Affordable Housing Requirements on Small Sites

Site 5: Land at View Road, Eastwood	Baseline Housing Land Budget	With Rise in Building Costs [+2.5%pa]	With Rise in Building Costs [+5%pa]	With Rise in Building Costs [+7.5pa%]	With Rise in Building Costs [+10%pa]
Baseline [100% Market Homes]	60.57	59.68	58.79	57.92	57.05
Plus £5,000 per Unit for AH	52.93	52.03	51.15	50.27	49.41
Plus £7,500 per Unit for AH	49.10	48.21	47.33	46.45	45.58
Plus £10,000 per Unit for AH	45.28	44.39	43.50	42.63	41.76
Plus £15,000 per Unit for AH	37.64	36.74	35.86	34.98	34.11
Plus £20,000 per Unit for AH	29.99	29.10	28.21	27.34	26.47
Plus £25,000 per Unit for AH	22.35	21.45	20.57	19.69	18.82
Plus £30,000 per Unit for AH	14.70	13.81	12.92	12.05	11.18
Plus £50,000 per Unit for AH	-18.15	-19.04	-19.92	-20.80	-21.67
Plus £75,000 per Unit for AH	-63.89	-64.79	-65.67	-66.55	-67.42
Plus £100,000 per Unit for AH	-109.64	-110.54	-111.42	-112.30	-113.16
Extant AH Policy [25%] for large sites	47.66	46.76	45.88	45.00	44.14
UPLIFT MULTIPLIER - MINIMUM VIABILITY THRESHOLD	1	1	1	1	1

Rotherham's Housing Viability Study: Affordable Housing Requirements on Small Sites

Site 5: Land at View Road, Eastwood	With Real House Price Rise [+5%pa]	With Real House Price Rise [+2.5%pa]	Baseline Housing Land Bid Budget	With Real House Price Fall [-2.5%pa]	With Real House Price Fall [-5%pa]
Baseline [100% Market Homes]	66.35	63.47	60.57	57.65	54.72
Plus £5,000 per Unit for AH	58.71	55.83	52.93	50.01	47.07
Plus £7,500 per Unit for AH	54.89	52.00	49.10	46.19	43.25
Plus £10,000 per Unit for AH	51.06	48.18	45.28	42.36	39.43
Plus £15,000 per Unit for AH	43.42	40.54	37.64	34.72	31.78
Plus £20,000 per Unit for AH	35.77	32.89	29.99	27.07	24.14
Plus £25,000 per Unit for AH	28.13	25.25	22.35	19.43	16.49
Plus £30,000 per Unit for AH	20.48	17.60	14.70	11.78	8.84
Plus £50,000 per Unit for AH	-12.36	-15.25	-18.15	-21.06	-24.00
Plus £75,000 per Unit for AH	-58.11	-60.99	-63.89	-66.81	-69.75
Plus £100,000 per Unit for AH	-103.86	-106.74	-109.64	-112.56	-115.50
Extant AH Policy [25%] for large sites	52.95	50.31	47.66	44.99	42.31
UPLIFT MULTIPLIER - MINIMUM VIABILITY THRESHOLD	1	1	1	1	1

Rotherham's Housing Viability Study: Affordable Housing Requirements on Small Sites

Site 6: Church Farm, Sheffield Road, South Anston	Baseline Housing Land Budget	With Rise in Building Costs [+2.5%pa]	With Rise in Building Costs [+5%pa]	With Rise in Building Costs [+7.5pa%]	With Rise in Building Costs [+10%pa]
Baseline [100% Market Homes]	16.37	15.13	13.88	12.63	11.38
Plus £5,000 per Unit for AH	14.20	12.95	11.70	10.45	9.20
Plus £7,500 per Unit for AH	13.11	11.86	10.61	9.36	8.11
Plus £10,000 per Unit for AH	12.02	10.77	9.52	8.27	7.02
Plus £15,000 per Unit for AH	9.84	8.59	7.34	6.09	4.84
Plus £20,000 per Unit for AH	7.66	6.41	5.16	3.91	2.66
Plus £25,000 per Unit for AH	5.48	4.23	2.98	1.73	0.48
Plus £30,000 per Unit for AH	3.30	2.05	0.80	-0.45	-1.70
Plus £50,000 per Unit for AH	-5.58	-6.83	-8.08	-9.33	-10.58
Plus £75,000 per Unit for AH	-17.92	-19.17	-20.42	-21.67	-22.92
Plus £100,000 per Unit for AH	-30.27	-31.52	-32.77	-34.02	-35.27
Extant AH Policy [25%] for large sites	5.88	4.63	3.38	2.13	0.88
UPLIFT MULTIPLIER - MINIMUM VIABILITY THRESHOLD	1	1	1	1	1

Rotherham's Housing Viability Study: Affordable Housing Requirements on Small Sites

Site 6: Church Farm, Sheffield Road, South Anston	With Real House Price Rise [+5%pa]	With Real House Price Rise [+2.5%pa]	Baseline Housing Land Bid Budget	With Real House Price Fall [-2.5%pa]	With Real House Price Fall [-5%pa]
Baseline [100% Market Homes]	22.89	19.61	16.37	13.18	10.03
Plus £5,000 per Unit for AH	20.71	17.43	14.20	11.00	7.85
Plus £7,500 per Unit for AH	19.62	16.34	13.11	9.91	6.76
Plus £10,000 per Unit for AH	18.53	15.25	12.02	8.82	5.67
Plus £15,000 per Unit for AH	16.35	13.07	9.84	6.64	3.49
Plus £20,000 per Unit for AH	14.17	10.89	7.66	4.46	1.32
Plus £25,000 per Unit for AH	11.99	8.72	5.48	2.29	-0.86
Plus £30,000 per Unit for AH	9.82	6.54	3.30	0.11	-3.04
Plus £50,000 per Unit for AH	0.94	-2.34	-5.58	-8.77	-11.92
Plus £75,000 per Unit for AH	-11.41	-14.69	-17.92	-21.12	-24.27
Plus £100,000 per Unit for AH	-23.75	-27.03	-30.27	-33.46	-36.61
Extant AH Policy [25%] for large sites	11.59	8.71	5.88	3.08	0.32
UPLIFT MULTIPLIER - MINIMUM VIABILITY THRESHOLD	1	1	1	1	1

Rotherham's Housing Viability Study: Affordable Housing Requirements on Small Sites

Site 7: Land adjacent St. Mary's Church, High Street, Rawmarsh	Baseline Housing Land Budget	With Rise in Building Costs [+2.5%pa]	With Rise in Building Costs [+5%pa]	With Rise in Building Costs [+7.5pa%]	With Rise in Building Costs [+10%pa]
Baseline [100% Market Homes]	2.26	2.20	2.15	2.09	2.04
Plus £5,000 per Unit for AH	1.74	1.68	1.64	1.58	1.53
Plus £7,500 per Unit for AH	1.49	1.43	1.37	1.32	1.26
Plus £10,000 per Unit for AH	1.22	1.16	1.11	1.05	1.00
Plus £15,000 per Unit for AH	0.69	0.63	0.58	0.52	0.46
Plus £20,000 per Unit for AH	0.16	0.10	0.04	-0.01	-0.07
Plus £25,000 per Unit for AH	-0.38	-0.44	-0.49	-0.55	-0.61
Plus £30,000 per Unit for AH	-1.01	-1.06	-1.12	-1.18	-1.23
Plus £50,000 per Unit for AH	-3.51	-3.57	-3.63	-3.69	-3.74
Plus £75,000 per Unit for AH	-6.65	-6.71	-6.76	-6.82	-6.88
Plus £100,000 per Unit for AH	-9.79	-9.84	-9.90	-9.96	-10.01
Extant AH Policy [25%] for large sites	1.62	1.56	1.51	1.45	1.40
UPLIFT MULTIPLIER - MINIMUM VIABILITY THRESHOLD	1	1	1	1	1

Site 7: Land adjacent St. Mary's Church, High Street, Rawmarsh	With Real House Price Rise [+5%pa]	With Real House Price Rise [+2.5%pa]	Baseline Housing Land Bid Budget	With Real House Price Fall [-2.5%pa]	With Real House Price Fall [-5%pa]
Baseline [100% Market Homes]	2.68	2.47	2.26	2.05	1.84
Plus £5,000 per Unit for AH	2.15	1.94	1.74	1.54	1.33
Plus £7,500 per Unit for AH	1.89	1.68	1.49	1.28	1.06
Plus £10,000 per Unit for AH	1.64	1.43	1.22	1.01	0.80
Plus £15,000 per Unit for AH	1.11	0.90	0.69	0.48	0.27
Plus £20,000 per Unit for AH	0.58	0.37	0.16	-0.05	-0.26
Plus £25,000 per Unit for AH	0.04	-0.17	-0.38	-0.59	-0.80
Plus £30,000 per Unit for AH	-0.58	-0.79	-1.01	-1.22	-1.43
Plus £50,000 per Unit for AH	-3.09	-3.30	-3.51	-3.73	-3.94
Plus £75,000 per Unit for AH	-6.23	-6.44	-6.65	-6.86	-7.07
Plus £100,000 per Unit for AH	-9.36	-9.57	-9.79	-10.00	-10.21
Extant AH Policy [25%] for large sites	1.99	1.80	1.62	1.43	1.23
UPLIFT MULTIPLIER - MINIMUM VIABILITY THRESHOLD	1	1	1	1	1

Rotherham's Housing Viability Study: Affordable Housing Requirements on Small Sites

Site 8: Parkhurst, Doncaster Road, Eastwood	Baseline Housing Land Budget	With Rise in Building Costs [+2.5%pa]	With Rise in Building Costs [+5%pa]	With Rise in Building Costs [+7.5pa%]	With Rise in Building Costs [+10%pa]
Baseline [100% Market Homes]	62.62	60.88	59.14	57.40	55.64
Plus £5,000 per Unit for AH	51.02	49.79	48.03	46.27	44.50
Plus £7,500 per Unit for AH	45.69	43.93	42.17	40.41	38.64
Plus £10,000 per Unit for AH	39.83	38.08	36.32	34.55	32.79
Plus £15,000 per Unit for AH	28.40	26.63	24.85	23.07	21.29
Plus £20,000 per Unit for AH	16.57	14.80	13.02	11.24	9.45
Plus £25,000 per Unit for AH	4.74	2.97	1.19	-0.59	-2.38
Plus £30,000 per Unit for AH	-7.09	-8.86	-10.64	-12.42	-14.21
Plus £50,000 per Unit for AH	-60.25	-62.02	-63.80	-65.58	-67.36
Plus £75,000 per Unit for AH	-127.28	-129.05	-130.83	-132.61	-134.39
Plus £100,000 per Unit for AH	-194.31	-196.08	-197.86	-199.64	-201.42
Extant AH Policy [25%] for large sites	49.92	48.17	46.41	44.64	42.88
UPLIFT MULTIPLIER - MINIMUM VIABILITY THRESHOLD	1	1	1	1	1

Rotherham's Housing Viability Study: Affordable Housing Requirements on Small Sites

Site 8: Parkhurst, Doncaster Road, Eastwood	With Real House Price Rise [+5%pa]	With Real House Price Rise [+2.5%pa]	Baseline Housing Land Bid Budget	With Real House Price Fall [-2.5%pa]	With Real House Price Fall [-5%pa]
Baseline [100% Market Homes]	75.74	69.13	62.62	56.20	49.87
Plus £5,000 per Unit for AH	64.15	57.54	51.02	45.06	38.67
Plus £7,500 per Unit for AH	58.35	51.74	45.69	39.20	32.81
Plus £10,000 per Unit for AH	52.55	46.41	39.83	33.34	27.22
Plus £15,000 per Unit for AH	41.37	34.70	28.40	21.85	15.39
Plus £20,000 per Unit for AH	29.96	23.22	16.57	10.02	3.56
Plus £25,000 per Unit for AH	18.13	11.39	4.74	-1.81	-8.27
Plus £30,000 per Unit for AH	6.30	-0.45	-7.09	-13.65	-20.10
Plus £50,000 per Unit for AH	-46.86	-53.60	-60.25	-66.80	-73.26
Plus £75,000 per Unit for AH	-113.89	-120.63	-127.28	-133.83	-140.29
Plus £100,000 per Unit for AH	-180.92	-187.66	-194.31	-200.86	-207.32
Extant AH Policy [25%] for large sites	61.52	55.43	49.92	43.94	38.04
UPLIFT MULTIPLIER - MINIMUM VIABILITY THRESHOLD	1	1	1	1	1

Rotherham's Housing Viability Study: Affordable Housing Requirements on Small Sites

Site 9: Blenheim House, Ridge Road, Eastwood	Baseline Housing Land Budget	With Rise in Building Costs [+2.5%pa]	With Rise in Building Costs [+5%pa]	With Rise in Building Costs [+7.5pa%]	With Rise in Building Costs [+10%pa]
Baseline [100% Market Homes]	80.66	78.43	76.19	73.95	71.70
Plus £5,000 per Unit for AH	67.67	65.44	63.20	60.96	58.71
Plus £7,500 per Unit for AH	61.18	58.95	56.71	54.47	52.22
Plus £10,000 per Unit for AH	54.68	52.45	50.22	48.46	46.19
Plus £15,000 per Unit for AH	42.12	39.87	37.61	35.34	33.07
Plus £20,000 per Unit for AH	28.81	26.54	24.25	21.97	19.67
Plus £25,000 per Unit for AH	15.01	12.73	10.45	8.16	5.87
Plus £30,000 per Unit for AH	1.20	-1.07	-3.35	-5.64	-7.94
Plus £50,000 per Unit for AH	-59.72	-61.99	-64.28	-66.56	-68.86
Plus £75,000 per Unit for AH	-137.92	-140.20	-142.48	-144.77	-147.06
Plus £100,000 per Unit for AH	-216.12	-218.40	-220.68	-222.97	-225.26
Extant AH Policy [25%] for large sites	63.96	61.73	59.50	57.25	55.00
UPLIFT MULTIPLIER - MINIMUM VIABILITY THRESHOLD	1	1	1	1	1

Rotherham's Housing Viability Study: Affordable Housing Requirements on Small Sites

Site 9: Blenheim House, Ridge Road, Eastwood	With Real House Price Rise [+5%pa]	With Real House Price Rise [+2.5%pa]	Baseline Housing Land Bid Budget	With Real House Price Fall [-2.5%pa]	With Real House Price Fall [-5%pa]
Baseline [100% Market Homes]	95.27	87.93	80.66	73.47	66.35
Plus £5,000 per Unit for AH	82.28	74.94	67.67	60.48	53.36
Plus £7,500 per Unit for AH	75.79	68.44	61.18	53.98	47.35
Plus £10,000 per Unit for AH	69.29	61.95	54.68	47.98	40.79
Plus £15,000 per Unit for AH	56.31	49.46	42.12	34.86	27.95
Plus £20,000 per Unit for AH	43.28	35.86	28.81	21.47	14.21
Plus £25,000 per Unit for AH	29.92	22.42	15.01	7.67	0.41
Plus £30,000 per Unit for AH	16.11	8.62	1.20	-6.13	-13.40
Plus £50,000 per Unit for AH	-44.81	-52.30	-59.72	-67.06	-74.32
Plus £75,000 per Unit for AH	-123.01	-130.50	-137.92	-145.26	-152.52
Plus £100,000 per Unit for AH	-201.21	-208.70	-216.12	-223.46	-230.72
Extant AH Policy [25%] for large sites	77.43	70.66	63.96	57.33	50.77
UPLIFT MULTIPLIER - MINIMUM VIABILITY THRESHOLD	1	1	1	1	1

Rotherham's Housing Viability Study: Affordable Housing Requirements on Small Sites

Site 10 Land now known as Morrthern Gardens, Morrthern Road, Wickersley	Baseline Housing Land Budget	With Rise in Building Costs [+2.5%pa]	With Rise in Building Costs [+5%pa]	With Rise in Building Costs [+7.5pa%]	With Rise in Building Costs [+10%pa]
Baseline [100% Market Homes]	28.25	27.27	26.29	25.32	24.35
Plus £5,000 per Unit for AH	26.76	25.78	24.80	23.83	22.86
Plus £7,500 per Unit for AH	26.01	25.03	24.06	23.09	22.12
Plus £10,000 per Unit for AH	25.27	24.29	23.31	22.34	21.37
Plus £15,000 per Unit for AH	23.78	22.80	21.83	20.85	19.88
Plus £20,000 per Unit for AH	22.29	21.31	20.34	19.36	18.39
Plus £25,000 per Unit for AH	20.80	19.82	18.85	17.87	16.90
Plus £30,000 per Unit for AH	19.31	18.33	17.36	16.38	15.41
Plus £50,000 per Unit for AH	13.35	12.37	11.40	10.43	9.46
Plus £75,000 per Unit for AH	5.90	4.92	3.95	2.98	2.01
Plus £100,000 per Unit for AH	-1.55	-2.52	-3.50	-4.47	-5.44
Extant AH Policy [25%] for large sites	15.62	14.64	13.66	12.69	11.72
UPLIFT MULTIPLIER - MINIMUM VIABILITY THRESHOLD	1	1	1	1	1

Rotherham's Housing Viability Study: Affordable Housing Requirements on Small Sites

Site 10: Land now known as Morthern Gardens, Morthern Road, Wickersley	With Real House Price Rise [+5%pa]	With Real House Price Rise [+2.5%pa]	Baseline Housing Land Bid Budget	With Real House Price Fall [-2.5%pa]	With Real House Price Fall [-5%pa]
Baseline [100% Market Homes]	35.70	31.95	28.25	24.59	20.98
Plus £5,000 per Unit for AH	34.21	30.46	26.76	23.10	19.49
Plus £7,500 per Unit for AH	33.46	29.71	26.01	22.36	18.75
Plus £10,000 per Unit for AH	32.72	28.97	25.27	21.61	18.00
Plus £15,000 per Unit for AH	31.23	27.48	23.78	20.12	16.51
Plus £20,000 per Unit for AH	29.74	25.99	22.29	18.63	15.02
Plus £25,000 per Unit for AH	28.25	24.50	20.80	17.14	13.53
Plus £30,000 per Unit for AH	26.76	23.01	19.31	15.65	12.04
Plus £50,000 per Unit for AH	20.80	17.05	13.35	9.69	6.08
Plus £75,000 per Unit for AH	13.35	9.60	5.90	2.25	-1.36
Plus £100,000 per Unit for AH	5.90	2.15	-1.55	-5.20	-8.81
Extant AH Policy [25%] for large sites	22.08	18.83	15.62	12.44	9.31
UPLIFT MULTIPLIER - MINIMUM VIABILITY THRESHOLD	1	1	1	1	1

Rotherham's Housing Viability Study: Affordable Housing Requirements on Small Sites

Site 11: Land off Whinney Hill, Firvale, Harthill	Baseline Housing Land Budget	With Rise in Building Costs [+2.5%pa]	With Rise in Building Costs [+5%pa]	With Rise in Building Costs [+7.5pa%]	With Rise in Building Costs [+10%pa]
Baseline [100% Market Homes]	23.65	22.85	22.05	21.24	20.44
Plus £5,000 per Unit for AH	20.84	20.04	19.24	18.44	17.63
Plus £7,500 per Unit for AH	19.44	18.64	17.84	17.04	16.23
Plus £10,000 per Unit for AH	17.99	17.19	16.39	15.59	14.78
Plus £15,000 per Unit for AH	15.07	14.27	13.47	12.67	11.86
Plus £20,000 per Unit for AH	12.15	11.46	10.66	9.84	9.03
Plus £25,000 per Unit for AH	9.32	8.51	7.70	6.96	6.14
Plus £30,000 per Unit for AH	6.43	5.62	4.80	3.98	3.16
Plus £50,000 per Unit for AH	-5.70	-6.52	-7.34	-8.16	-8.98
Plus £75,000 per Unit for AH	-22.59	-23.41	-24.22	-25.04	-25.86
Plus £100,000 per Unit for AH	-39.48	-40.29	-41.11	-41.93	-42.75
Extant AH Policy [25%] for large sites	17.02	16.22	15.42	14.62	13.81
UPLIFT MULTIPLIER - MINIMUM VIABILITY THRESHOLD	1	1	1	1	1

Rotherham's Housing Viability Study: Affordable Housing Requirements on Small Sites

Site 11: Land off Whinney Hill, Firvale, Harthill	With Real House Price Rise [+5%pa]	With Real House Price Rise [+2.5%pa]	Baseline Housing Land Bid Budget	With Real House Price Fall [-2.5%pa]	With Real House Price Fall [-5%pa]
Baseline [100% Market Homes]	28.05	25.59	23.65	21.20	18.78
Plus £5,000 per Unit for AH	25.30	22.84	20.84	18.39	15.98
Plus £7,500 per Unit for AH	23.93	21.92	19.44	16.99	14.58
Plus £10,000 per Unit for AH	22.98	20.47	17.99	15.54	13.13
Plus £15,000 per Unit for AH	20.05	17.55	15.07	12.62	10.31
Plus £20,000 per Unit for AH	17.13	14.62	12.15	9.80	7.36
Plus £25,000 per Unit for AH	14.21	11.70	9.32	6.92	4.45
Plus £30,000 per Unit for AH	11.41	8.87	6.43	3.94	1.47
Plus £50,000 per Unit for AH	-0.62	-3.18	-5.70	-8.20	-10.67
Plus £75,000 per Unit for AH	-17.50	-20.06	-22.59	-25.09	-27.55
Plus £100,000 per Unit for AH	-34.39	-36.95	-39.48	-41.98	-44.44
Extant AH Policy [25%] for large sites	21.52	19.26	17.02	14.81	12.62
UPLIFT MULTIPLIER - MINIMUM VIABILITY THRESHOLD	1	1	1	1	1

Rotherham's Housing Viability Study: Affordable Housing Requirements on Small Sites

Site 12: Part of land off Taylor Drive, Woodsetts	Baseline Housing Land Budget	With Rise in Building Costs [+2.5%pa]	With Rise in Building Costs [+5%pa]	With Rise in Building Costs [+7.5pa%]	With Rise in Building Costs [+10%pa]
Baseline [100% Market Homes]	35.11	34.34	33.58	32.81	32.04
Plus £5,000 per Unit for AH	32.42	31.66	30.89	30.12	29.35
Plus £7,500 per Unit for AH	31.08	30.32	29.55	28.78	28.01
Plus £10,000 per Unit for AH	29.74	28.97	28.21	27.44	26.67
Plus £15,000 per Unit for AH	27.05	26.29	25.52	24.75	23.98
Plus £20,000 per Unit for AH	24.35	23.59	22.82	22.51	21.73
Plus £25,000 per Unit for AH	22.01	21.23	20.44	19.66	18.87
Plus £30,000 per Unit for AH	19.15	18.37	17.59	16.80	16.02
Plus £50,000 per Unit for AH	7.81	7.02	6.30	5.49	4.69
Plus £75,000 per Unit for AH	-6.94	-7.74	-8.54	-9.34	-10.14
Plus £100,000 per Unit for AH	-23.45	-24.24	-25.04	-25.84	-26.64
Extant AH Policy [25%] for large sites	26.83	26.07	25.30	24.53	23.76
UPLIFT MULTIPLIER - MINIMUM VIABILITY THRESHOLD	1	1	1	1	1

Rotherham's Housing Viability Study: Affordable Housing Requirements on Small Sites

Site 12: Part of land off Taylor Drive, Woodsetts	With Real House Price Rise [+5%pa]	With Real House Price Rise [+2.5%pa]	Baseline Housing Land Budget	With Real House Price Fall [-2.5%pa]	With Real House Price Fall [-5%pa]
Baseline [100% Market Homes]	40.78	37.93	35.11	32.32	29.57
Plus £5,000 per Unit for AH	38.10	35.24	32.42	29.64	26.89
Plus £7,500 per Unit for AH	36.76	33.90	31.08	28.29	25.54
Plus £10,000 per Unit for AH	35.41	32.56	29.74	26.95	24.20
Plus £15,000 per Unit for AH	32.73	29.87	27.05	24.27	21.96
Plus £20,000 per Unit for AH	30.03	27.17	24.35	22.02	19.21
Plus £25,000 per Unit for AH	27.23	24.38	22.01	19.16	16.35
Plus £30,000 per Unit for AH	24.44	22.03	19.15	16.31	13.50
Plus £50,000 per Unit for AH	13.53	10.72	7.81	4.99	2.12
Plus £75,000 per Unit for AH	-1.03	-4.00	-6.94	-9.84	-12.71
Plus £100,000 per Unit for AH	-17.53	-20.51	-23.45	-26.35	-29.21
Extant AH Policy [25%] for large sites	31.91	29.36	26.83	24.34	22.34
UPLIFT MULTIPLIER - MINIMUM VIABILITY THRESHOLD	1	1	1	1	1

END