APPENDIX 1

Shropshire Viability Study

Final report

May 2013

Contents

1. Executive Summary

The viability study informs the Shropshire Site Allocations & Management of Development (SAMDev) Final Plan, providing a timely evidence base regarding the viability and deliverability of development. Using the Homes and Communities' area-wide viability model, it compares residual land values against land prices in Shropshire to inform policy judgements about the right balance between providing affordable housing contributions on the one hand, and ensuring development is deliverable on the other.

For a scheme to be 'viable' a scheme must make financial sense to both the developer and the landowner, within the constraints imposed by the market and by planning policies. A scheme will only be delivered if both the developer and landowner are convinced that the scheme meets their financial interests, and in this context that the NPPF defines a viable scheme as one that provides competitive returns to a willing land owner and willing developer.

Shropshire has diverse housing markets, with great variety in house prices and in landowners' expectations of land value. The study divides Shropshire into three housing markets, with the strongest (area A) taking in much of the south of the county and the weakest (area C) covering most of the northern towns. Landowner expectations vary in line with the market, with land prices highest in area A and lowest in area C, on a sliding scale linked to sales values. The study recommends that the affordable housing target rates in Shropshire from 1st September 2013 are:

Market area	Recommended affordable housing target rate
Area A	20%
Area B	15%
Area C	10%

These rates are the starting point for a new dynamic viability index, against which annual change house prices and construction cost will be compared to ensure that each year the prevailing target rates reflect the market conditions that are prevailing at that point in time.

The degree of change each year is deemed to be the same across areas A, B and C, as the Land Registry house price index and the BIS all new construction tender price index do not provide a geographical breakdown into areas A, B and C. The target rate for areas A and C will be determined by the target rate for area B, keeping the proportions above constant.

The affordable housing target rate cannot be separated from policy judgements about threshold land values and the amount of competition in land. Local Plan policies and allocations of land for development have a very significant impact on the amount of land and in turn the level of competition between landowners, creating a strong positive relationship between policies for land supply and policies for contributions to affordable housing. Assumptions about threshold land values should be kept under review, with a review recommended at least every 2-3 years.

2. Introduction

This study replaces the previous Shropshire Affordable Housing Viability Study (AHVS) that was published alongside the Shropshire Core Strategy Final Plan in 2010, which was based on 2008 data. The Core Strategy anticipated the need for, "a five yearly review of the viability assessment to allow for adjustment of the index to ensure that it remains fit for purpose" (paragraph 5.17). Accordingly, it is appropriate to replace the 2008 baseline data with 2013 baseline data, and update all the inputs and assumptions to reflect the current economic conditions prevailing in Shropshire. The study provides a timely input into the Shropshire Site Allocations & Management of Development (SAMDev) Final Plan, informing judgements about the viability and deliverability of development.

The study uses the Homes and Communities' area-wide viability model, which is both authoritative and shareable. The model produces residual land values for given target rates for affordable housing contributions. These are then compared against current land prices and expectations of future land prices in Shropshire, and the comparison informs policy judgements about the right balance between providing affordable housing contributions on the one hand, and ensuring development is deliverable on the other.

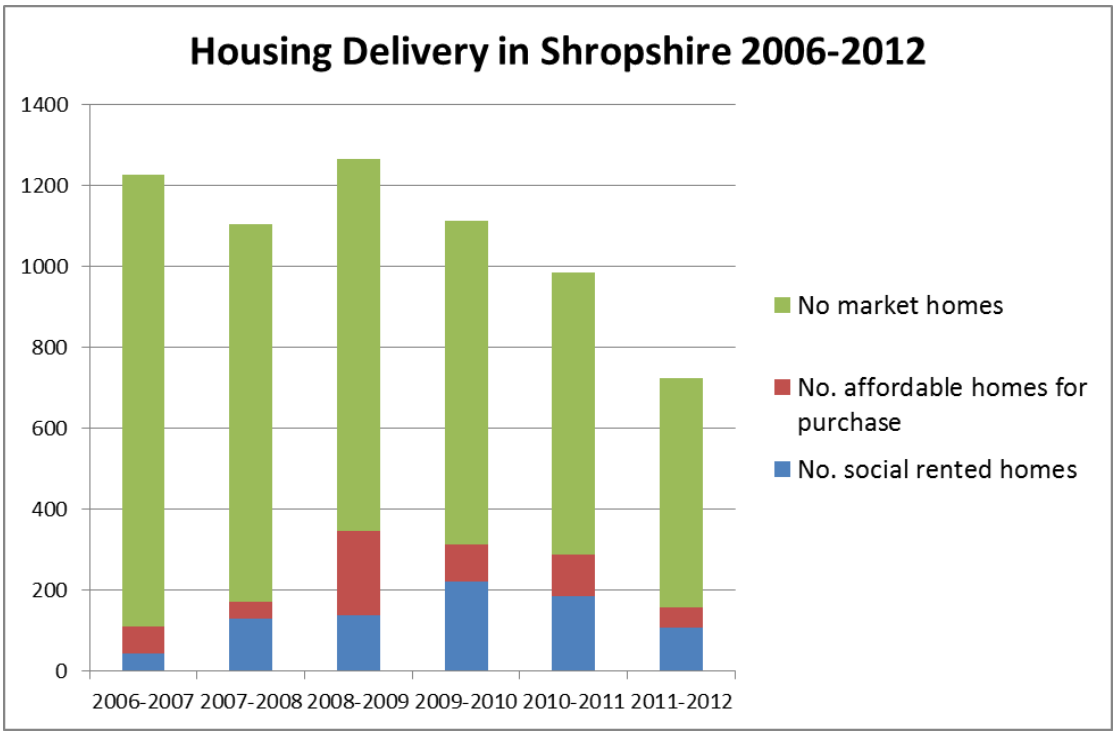
The NPPF states that,

> *"Pursuing sustainable development requires careful attention to viability and costs in plan-making and decision-taking. Plans should be deliverable. Therefore, the sites and the scale of development identified in the plan should not be subject to such a scale of obligations and policy burdens that their ability to be developed viably is threated. To ensure viability, the costs of any requirements likely to be applied to development, such as requirements for affordable housing, standards, infrastructure contributions or other requirements should, when taking account of the normal cost of development and mitigation, provide competitive returns to a willing land owner and willing developer to enable the development to be deliverable"* (NPPF paragraph 173).

Sections 7 and 8 of this report consider the results of the viability modelling in light of the NPPF's requirements for "competitive returns to a willing land owner and willing developer to enable the development to be deliverable". Such a judgement is inevitably linked to the expectations of landowners in Shropshire, which is in turn linked to the availability of land and the level of competitiveness between landowners.

Shropshire's Core Strategy Policy CS1 sets out a requirement for 27,500 new homes over the period 2006-2026, of which 9,000 (33%) will be affordable housing. This reflects a balance between development viability and the immense need for affordable housing. The Strategic Housing Market Assessment 2008 estimated the need for affordable housing in Shropshire to be 1,585 per annum, which would suggest 100% of housing should be affordable, while the Local Housing Market Assessment 2010 concluded that at least 55% of new housing in Shropshire needed to be affordable. The Core Strategy target of 33% affordable housing over 2006-2026 reflects the economic reality that housing need has to be balanced with the development viability.

Delivery of affordable housing in relation to total housing delivery over 2006-2012 is shown below.



Year	No. social rented homes	No. affordable homes for purchase	No market homes	Total Net Completions	% affordable
2006-2007	45	65	1,118	1,228	9.0%
2007-2008	131	40	935	1,106	15.5%
2008-2009	138	209	918	1,265	27.4%
2009-2010	223	91	798	1,112	28.2%
2010-2011	187	102	695	984	29.4%
2011-2012	109	48	567	724	21.7%
2006-2012	**833**	**555**	**5,031**	**6,419**	21.6%

The economic downturn has had its effect on the number of new homes built in recent years. The amount of affordable housing reflects (a) the contribution made as part of market development sites, and (b) the amount of 100% affordable "exception" sites built.

Shropshire Core Strategy policy CS11 requires:

> *"…all new open market housing development (to) make appropriate contributions to the provision of local needs affordable housing having regard to the current prevailing target rate, set using the Shropshire Viability Index and the viability of developments taking into account Policy CS9 in respect of infrastructure contributions."*

The policy requires an **"appropriate contribution"** that reflects viability considerations. This viability study underpins the target rate for contributions by developers towards affordable housing provision, setting appropriate rates for different areas in Shropshire and

providing a baseline calibration of the Shropshire Viability Index to inform future years' prevailing target rates.

Infrastructure contributions are now generally delivered through the Community Infrastructure Levy (CIL), which since its introduction in January 2011 is levied at the rate of £40/sqm in Shropshire's 18 market towns and key centres and £80/sqm in the rural areas. CIL contributions are fully reflected in the viability model that is used in this study.

One of the criticisms of the Shropshire target rate has been that it does not reflect the wide variations across the county in the viability of developments. Developments in the north of Shropshire are typically significantly less viable than developments in the south of the county. This study seeks to correct this by producing a Viability Index that will allow geographic variations to be easily accommodated when applying the Viability Index, therefore promoting development more equitably across Shropshire.

It is proposed that geographical variations are reflected by applying three sets of house price assumptions, to reflect the strong, medium and weak housing markets that occur in different parts of Shropshire. This results in three target rates.

Core Strategy Policy CS11 focuses on "appropriate contributions" and although it was originally envisaged that there would be one target rate, the wording of the policy does not preclude operation of three target rates. Indeed, three target rates more closely reflect the Viability Index and viability "on the ground", and is therefore more in-tune with the National Planning Policy Framework.

3. Dynamic Viability

The Shropshire Core Strategy was the first adopted plan in the country to apply a dynamic viability policy approach. This 'future proofs' a viability study by allowing changes in market conditions to be taken into account when applying the results of the viability study to planning decisions, in particular changes in the following significant variables:

- Sales prices
- Construction costs
- Land values

Dynamic viability enables changes in these three variables over time to be reflected in an annual readjustment to the prevailing target rate for affordable housing, using a table known as the Viability Index. The Viability Index presents not just the current results of the model, using current sales prices, construction costs and land values, but also presents the results of possible future changes in sales prices, construction costs and land values.

The Viability Index provides some certainty to developers and others that changes in the market will be reflected automatically in changes to the target rate for contributions to affordable housing. The process for doing this is explained in Shropshire Council's Type and Affordability of Housing Supplementary Planning Document (SPD), available at http://www.shropshire.gov.uk/planningpolicy.nsf.

Application of the Shropshire Viability Index based on the 2008 Affordable Housing Viability Study (AHVS) suggested a dramatic worsening of development viability over 2011-2012. Although it is widely accepted that the development industry remains in the doldrums, evidence on the ground was that viability had not deteriorated quite as badly as the index suggested. One of the reasons for this is that the original assumptions in the AHVS 2008

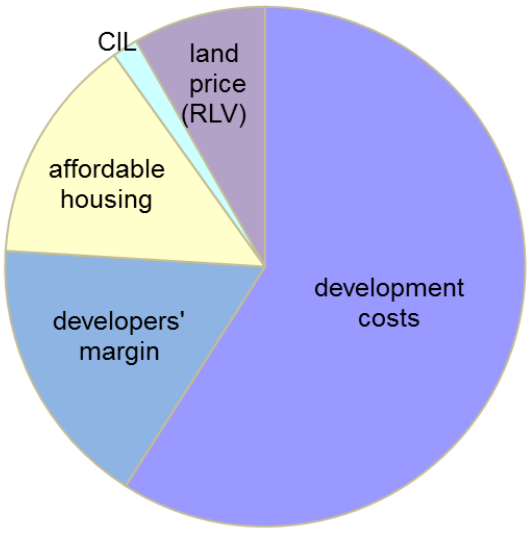
need recalibrating. Another is that dynamic viability needs a more sophisticated approach towards land values. A third consideration is whether the indexes used are the most appropriate for Shropshire. Chapters 6, 8 and 10 of this report deal with these issues respectively.

A recalibrated dynamic viability index can be found in chapter 11. It reflects the updated inputs from chapter 6 and uses house prices and cost of construction as the two measures which determine the affordable housing target rate as land value is now integrated within the model as explained in chapter 8.

4. Methodology

Viability model

The HCA's area-wide viability model is being used as an authoritative and reproducible model. It is a residual value appraisal model, which reflects the approach typically used by developers when purchasing land. The model assumes that the residual land value (RLV) is the difference between the revenue generated by the scheme, namely the gross development value, and what it costs to develop in terms of construction costs, professional fees, marketing & legal costs, overheads & margin, finance costs, CIL and other infrastructure contributions. The key elements that have to be funded from the gross development value are shown graphically below.



The land price is the residual value left after the other elements have been deducted. Developers' margin is an absolute requirement because unless there is sufficient margin neither the bank nor the developer will be willing to invest in what is a fundamentally risky business. The residual value in the development funds the Community Infrastructure Levy (CIL) and affordable housing contributions, leaving the residual land value (RLV) as the price that the developer can offer the landowner.

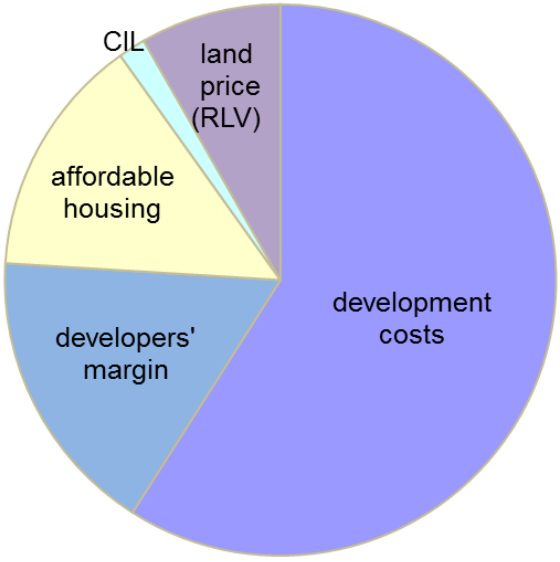
The local planning authority sets the value of the CIL and affordable housing contributions through its planning policies, and in doing so must ensure that these do not squeeze the land price so much as to close off the supply of land. Achieving the right balance requires judging what land price will be sufficient to entice landowners to bring sites forward.

The 'size of the cake' clearly varies between different developments. Where the development value is greater, the landowner generally expects and can obtain more for the land. However, when the development value increases there is also more scope for a greater proportion of the value to go to affordable housing. The higher development value can fund a higher land price for the landowner *and* a higher percentage of affordable housing, as illustrated by the graphs below. The landowner's slice can increase in absolute terms whilst declining as a proportion of the total development value.

The key decision of what represents a workable balance between the three variables of land price, affordable housing proportion and total development value is discussed in chapter 8.

Low development value scenario:
Lower land price and
smaller proportion of affordable housing

High development value scenario:
Higher proportion of affordable housing yet higher land price



The Shropshire Dynamic Viability Index produced as part of the previous Affordable Housing Viability Study (AHVS 2010) was based on a modelled 'typical' site for the Shropshire area which in turn was based on an example site in Craven Arms. The current viability study also uses a modelled 'typical' site, based on a range of data described in more detail in sections 5 and 6 below. The variables used in the model were all revised to reflect 2012/13 conditions. The first major change was to break Shropshire down into separate market areas.

Stakeholder collaboration

Guidance on "Viability Testing Local Plans" from the Local Housing Delivery Group[1] (June 2012) recommends that local planning authorities use a collaborative approach involving informed stakeholders at all stages of the study. Accordingly the study utilised the expertise of the established Shropshire Developer Panel and expert advice from HDH Planning & Development (Simon Drummond-Hay).

[1] Comprised of representatives from the Home Builders Federation, the NHBC, the Local Government Association, the Planning Inspectorate, the Planning Officers Society and the Homes and Communities Agency.

Meetings were held with the Developer Panel on 9th May 2012, 22nd October 2012, 22nd January 2013 and 29th April 2013 to discuss the affordable housing target rate; the viability model and its assumptions; and review the study's outputs. The composition of the Shropshire Developer Panel is listed in Appendix 2. In addition, input was sought from planning and land agents at the SHLAA Market Assessment Review Panel on 11th December 2012 and 29th April 2013.

At the October Developer Panel meeting the industry representatives suggested that the model should avoid being too complex, involve relatively few typologies and focus on the variables that have greatest effect on the results. There was discussion around the inability of any model (no matter how good) to reflect the complexity and variety of developments. It was agreed that there is a need to recognise that any area-wide figure is a simplification of reality, and that it needs to track below the average viability, allowing plenty of headroom. This was well understood at the CIL examination, where the test was assessing the risk to delivery. It was agreed that the bigger picture must be kept in mind; and the model was more robust and more easily understood if it was kept simple.

Costs were discussed in some detail at the January 2013 meeting, leading to agreement on a number of issues such as incorporating on-site infrastructure costs in the general build cost and using 20% gross development value as a realistic assumption for developers' profit. Discussion of land values revealed great variability across Shropshire, and over time with a particularly notable drop in land values around 2008, reflective of the slump in the general housing market in 2007/8. Discussions with the industry have informed the approach and are reflected in more detail in the chapters below.

The draft viability study was discussed at the 29th April Developer Panel and 30th April Planning Agents meetings, resulting in higher threshold land value assumptions for area A and a resulting 20% target rate. Minsterley and Pontesbury were moved into area B.

5. Market Value Areas

Sales values are the single most significant variable affecting the viability of development. An analysis of house prices across Shropshire shows marked differences across the county, as shown in table 5.2 below. The data is based on nearly 8,500 house transactions registered with the Land Registry over the period January 2009 to September 2012, broken down by town/key centre and five rural areas.

The rural areas are comprised of the rural hinterlands for the Place Plan areas shown below. The rural areas displayed the highest standard deviation scores, reflecting the very wide range in the value of rural properties, which include some of the cheapest and some of the most expensive homes in Shropshire.

Table 5.1. Rural areas

Rural area	**Hinterlands of Place Plan areas:**
Rural central	Shrewsbury; Minsterley & Pontesbury
Rural east	Much Wenlock, Broseley, Bridgnorth, Highley, Albrighton, Shifnal
Rural north east	Wem, Whitchurch, Market Drayton
Rural north west	Oswestry, Ellesmere
Rural south	Bishops Castle, Church Stretton, Craven Arms, Ludlow, Cleobury Mortimer

Table 5.2. House prices by area

Town or rural area	standard deviation (sd)	sd below mean	mean	sd above mean	no. records
Albrighton	£65,869	£109,627	£175,496	£241,366	82
Bishops Castle	£78,125	£129,295	£207,420	£285,545	50
Bridgnorth	£83,862	£117,121	£200,983	£284,845	501
Broseley	£57,879	£109,793	£167,671	£225,550	126
Church Stretton	£126,783	£127,890	£254,672	£381,455	171
Cleobury Mortimer	£73,170	£103,141	£176,311	£249,480	81
Craven Arms	£71,359	£89,669	£161,029	£232,388	64
Ellesmere	£60,914	£90,953	£151,868	£212,782	121
Highley	£52,570	£86,191	£138,761	£191,331	64
Ludlow	£96,310	£79,269	£175,579	£271,889	451
Market Drayton	£56,106	£96,946	£153,051	£209,157	324
Minsterley & Pontesbury	£71,561	£117,928	£189,489	£261,050	81
Much Wenlock	£101,067	£149,968	£251,036	£352,103	99
Oswestry	£66,835	£81,765	£148,601	£215,436	593
Rural Central	£127,844	£118,317	£246,161	£374,005	673
Rural East	£142,751	£146,680	£289,431	£432,183	353
Rural North East	£121,860	£131,139	£253,000	£374,860	553
Rural North West	£121,675	£80,452	£202,128	£323,803	638
Rural South	£145,126	£145,111	£290,236	£435,362	472
Shifnal	£69,428	£103,733	£173,161	£242,589	191
Shrewsbury North	£68,470	£82,180	£150,650	£219,120	793
Shrewsbury South	£105,523	£92,513	£198,036	£303,559	1529
Wem	£56,775	£99,057	£155,831	£212,606	220
Whitchurch	£65,076	£85,708	£150,784	£215,860	235

For use in the model, house prices were converted into sales values per square metre. We used the average floor areas for urban areas and village centres given in the English Housing Survey, of 80 sqm in towns and 117 sqm in villages. The resulting house prices per square metre are shown in table 5.3 below, sorted from highest to lowest.

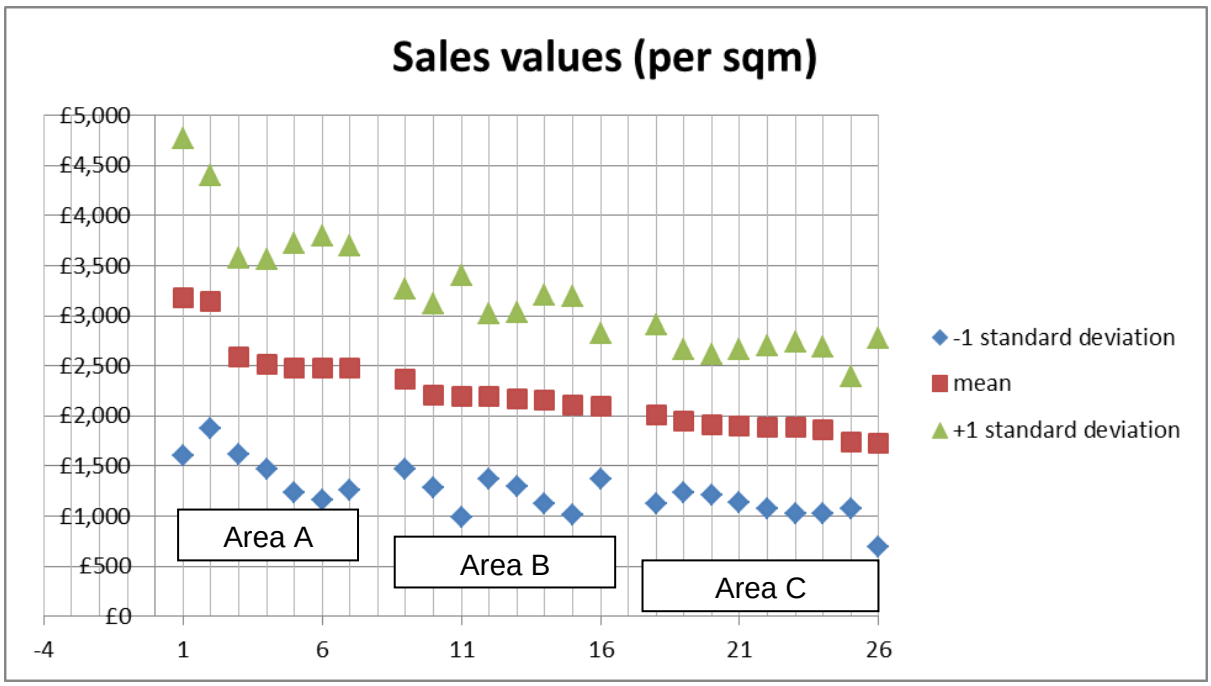
Even with the higher average floorspace in rural areas taken into account it is apparent that most towns have lower values than their surrounding rural area. While there is in very broad terms a division between north, central and south Shropshire in terms of house prices, the urban/rural division overlays this to provide a more complex picture. The Shropshire Developer Panel was consulted on the results, and concur that they reflect the real differences between towns in Shropshire, and between the towns and the surrounding villages.

Table 5.3 House prices per square metre

area	map ref		-1 standard deviation	mean	+1 standard deviation
A	1	Church Stretton	£1,599	£3,183	£4,768
	2	Much Wenlock	£1,875	£3,138	£4,401
	3	Bishops Castle	£1,616	£2,593	£3,569
	4	Bridgnorth	£1,464	£2,512	£3,561
	5	Rural South	£1,240	£2,481	£3,721
	6	Shrewsbury South	£1,156	£2,475	£3,794
	7	Rural East	£1,254	£2,474	£3,694
B	9	Minsterley & Pontesbury	£1,474	£2,369	£3,263
	10	Cleobury Mortimer	£1,289	£2,204	£3,119
	11	Ludlow	£991	£2,195	£3,399
	12	Albrighton	£1,370	£2,194	£3,017
	13	Shifnal	£1,297	£2,165	£3,032
	14	Rural North East	£1,121	£2,162	£3,204
	15	Rural Central	£1,011	£2,104	£3,197
	16	Broseley	£1,372	£2,096	£2,819
C	17	Craven Arms	£1,121	£2,013	£2,905
	18	Wem	£1,238	£1,948	£2,658
	19	Market Drayton	£1,212	£1,913	£2,614
	20	Ellesmere	£1,137	£1,898	£2,660
	21	Whitchurch	£1,071	£1,885	£2,698
	22	Shrewsbury North	£1,027	£1,883	£2,739
	23	Oswestry	£1,022	£1,858	£2,693
	24	Highley	£1,077	£1,735	£2,392
	25	Rural North West	£688	£1,728	£2,768

Sales values were grouped into a high (A), medium (B) and low (C) value area. These are shown on the map on page 11.

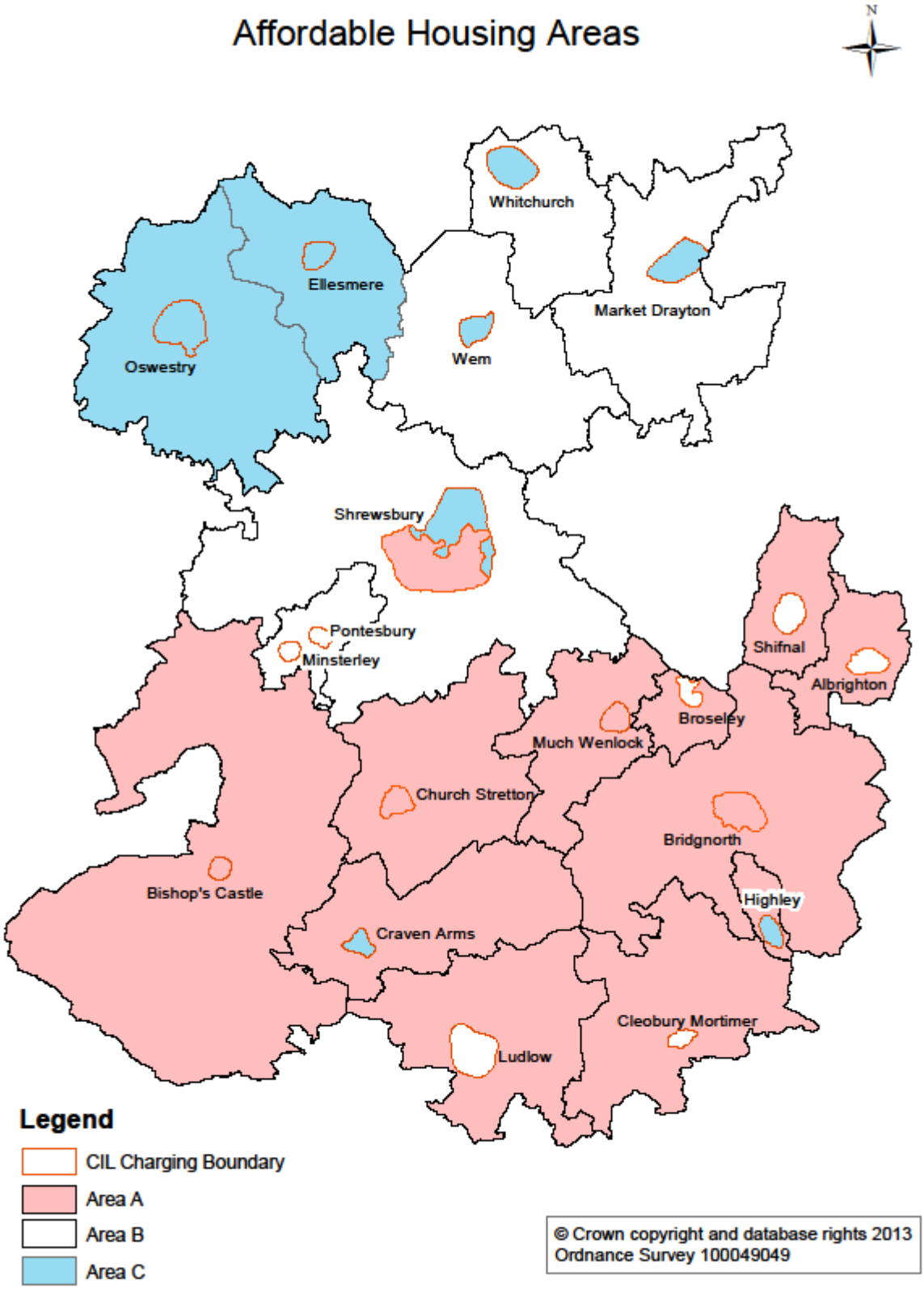
Within each area there is a range of prices, represented by the mean plus/minus one standard deviation (statistically 68% of properties lie within this range) as shown in the graph below. The three values shown for each area in the graph below represent the typical range of values in an area.



The third or fourth from bottom record in each area has been used to represent that area, namely area A is represented by the rural south; area B is represented by the rural north east; and area C is represented by Shrewsbury north. The HCA viability model allows three sales values to be entered for each modelled development, to represent the range of prices in an area. We have used prices shown in table 5.4 below to reflect the range in each area, assigning a third of properties to each value in each area.

Table 5.4. Sales values used in model £/sqm floorspace

Area	sd below mean	mean	sd above mean
A	£1,240	£2,481	£3,721
B	£1,121	£2,162	£3,204
C	£1,027	£1,883	£2,739


Affordable Housing Areas
N
Whitchurch
Ellesmere
Market Drayton
Oswestry
Wem
Shrewsbury
Pontesbury
Minsterley
Shifnal
Albrighton
Broseley
Much Wenlock
Church Stretton
Bridgnorth
Bishop's Castle
Highley
Craven Arms
Cleobury Mortimer
Ludlow
Legend
CIL Charging Boundary
Area A
Area B
Area C
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Ordnance Survey 100049049

6. Viability Model Assumptions

For the purposes of the model we have used a 'typical' mixed development based on averages for Shropshire. Variations on this model are explored in section 7 as part of sensitivity testing.

Floorspace

The following floorspaces were used in the model. They are based on the findings of the HDH report May 2012 and the comments of the Developer Panel 22/10/12.

Table 6.1. Average floorspaces

Average Floorspace	1-bed flat	2-bed flat	2-bed house	3-bed house	4-bed+
HDH report range (sq ft)	365-520	645-1,045	500-750	645-1,600	970-1,940
Developer Panel view sqm (sq ft)	450-520	1045 max	-	1,100 max	-
Modelled sq ft (sq m)	484 sq ft (45sqm)	786 sq ft (73sqm)	646 sq ft (60sqm)	915 sq ft (85sqm)	1,292sq ft (120sqm)

The breakdown of property types on completed dwellings in Shropshire over 2007-2012 is shown below.

Table 6.2. House types

Proportion of completed dwellings	1 bed flat	2+ bed flat	2 bed house	3 bed house	4+ bed house
Shropshire average 2007-2012	9%	19%	21%	29%	22%

Source: PLUMS team, Shropshire Council. The data is also available in the Development Trends Annual Monitoring Reports for 2008, 2009, 2010, 2011 & 2012, available on the Shropshire Council website.

Sales values

The sales values shown below were used in the model. In Shropshire affordable housing sales values are in the region of 45% of open market value for affordable rent and 65% open market value for shared ownership.

Table 6.3. Sales values (per square metre)

	sd below mean	mean	sd above mean	Affordable housing rent	Shared ownership
area A	£1,240	£2,481	£3,721	£1,116	£1,613
area B	£1,121	£2,162	£3,204	£973	£1,405
area C	£1,027	£1,883	£2,739	£847	£1,224

Construction costs

We have applied the median cost of construction for mixed housing in Shropshire of £801/sqm based on the BCIS costs for construction in Shropshire at February 2012 (appendix 1), with £911/sqm for flats. The Developer Panel agreed that the average BCIS would be appropriate for mixed developments but that conversions are significantly more expensive. Therefore where conversions are concerned the cost of construction is assumed to be 125% the norm, namely £1,000/sqm, while barn conversions are costed at £1,100/sqm.

The developer panel suggested that site infrastructure costs (roads, drainage and serives, parking, footpaths, etc) should be expressed in cost per square metre rather than cost per dwelling unit as assumed by the HCA model, and included in an aggregated cost of construction. Infrastructure costs vary between around £5,000/unit up to £20,000/unit. The AHVS benchmark site applied infrastructure costs of £16,900 per unit[2] or £180/sqm, and this figure has also been used in the current study as it reflects the generally higher site infrastructure costs of a rural area. It is at the higher end of the range of £86-£205/m2 (£8-£19/ft) suggested by the Shropshire Developer Panel. Infrastructure costs of £180/sqm have been added to the standard construction costs of £801/sqm to total £981/sqm.

Conversions have generally lower site infrastructure costs: the AHVS contained 7 case studies of conversions, averaging infrastructure costs of £7,622/unit. Assuming an average floorspace of 80sqm, this equates to £95/sqm. When added to the higher costs of construction we have an aggregated cost of construction of £1,095/sqm for conversions and £1,195 for barn conversions.

Table 6.4. Construction costs (per square metre)

	Cost of construction	Site infrastructure costs	Aggregated construction costs
New build houses	£801/sqm	£180/sqm	£981/sqm (£91/sq ft)
New build flats	£911/sqm	£180/sqm	£1,091/sqm (£101/sq ft)
Conversions	£1,000/sqm	£95/sqm	£1,095/sqm (£102/sq ft)
Barn conversions	£1,100/sqm	£95/sqm	£1,195/sqm (£111/sq ft)

Community Infrastructure Levy and s106 contributions

The community infrastructure levy (CIL) rate of £40 in towns and £80 in rural areas was applied to the model. It is assumed that there are no s106 contributions other than for affordable housing.

Developer return

The AHVS 2008 assumed a 20% profit margin on costs. In practice banks now require 20% profit margin on sales or Gross Development Value (GDV). 20% private sales GDV has therefore been used in the model.

[2] table 5.4 & appendix 6 (A2a) of AHVS 2008; 20% x build costs (£899/sqm) x average floorspace of benchmark site (94sqm) = £16,900/unit

Professional fees, marketing & legal costs

Professional fees, including architects', surveyors', engineers', planners' and any specialist consultants fees, have been assumed to be 7% of costs. Sales, marketing, legal and site acquisition costs are assumed to total 4% GDV. Total fees are 11%, similar to the 10.8% used in the AHVS 2008 viability study.

Development finance & interest rate

To future-proof the interest rate, a rate of 7.0% has been assumed as a mid-point between the current, relatively low rates and historically higher rates.

Timings / build timescales

The time gap between the front loaded costs (land, infrastructure and building works) and income from sales is crucial to the finance costs incurred. The model assumes that a 30-unit site will have building works start in quarter 1 and continue for 4 quarters, with sales commencing in quarter 2 and continuing for 8 quarters.

7. High level results and sensitivity testing

The model's most useful results are in the form of the Residual Land Value (RLV). This can then be compared with the availability of land for sale in Shropshire at prices that fall within the development scheme's budget. If the RLV exceeds the price at which the site can be purchased (threshold value), then the development is usually considered viable. Key to deliverability in Shropshire is the threshold land values/prices at which landowners are currently prepared to sell land, which is discussed in section 9.

Figure 7.1. Viability of mixed housing development

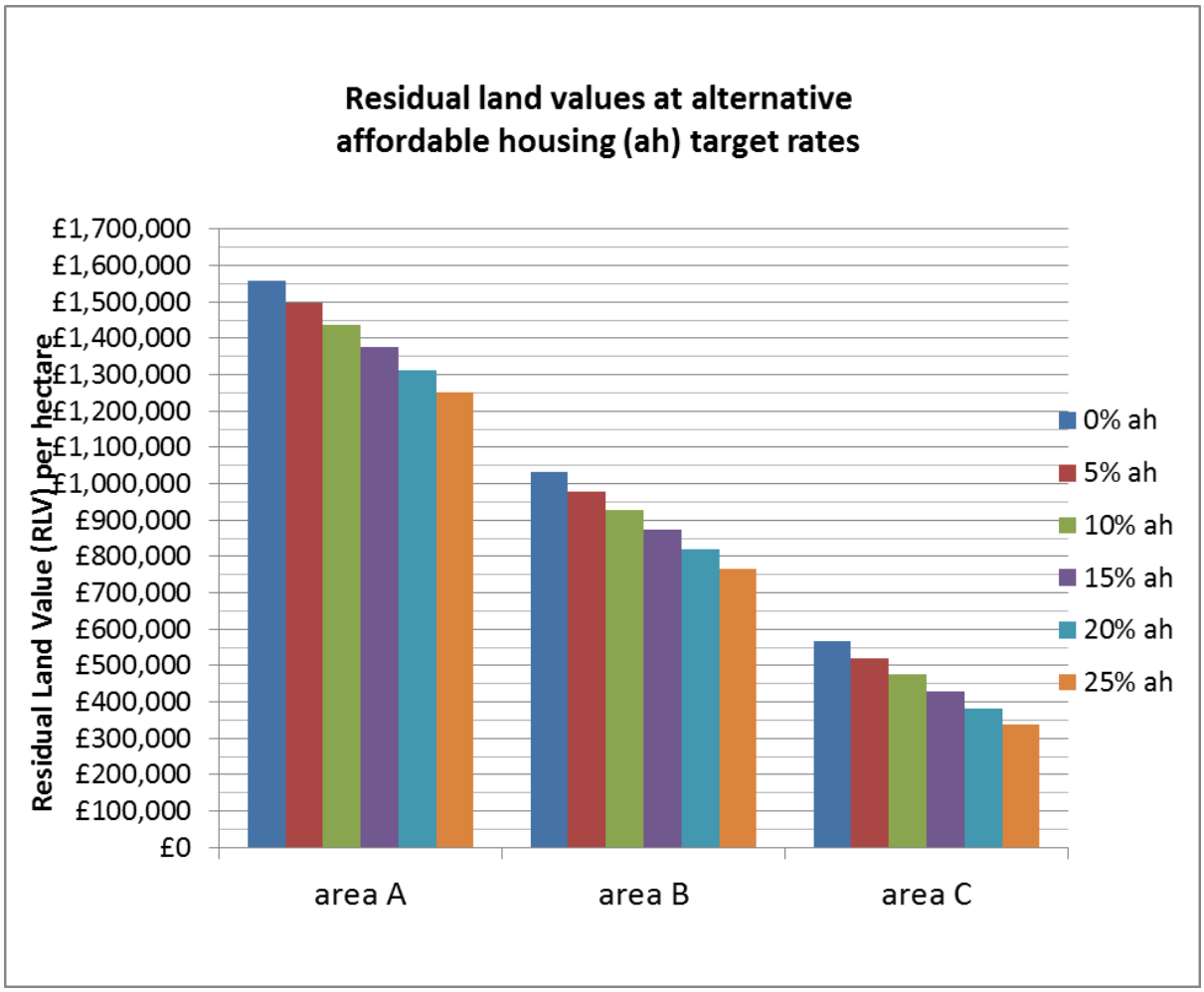


Figure 7.1 shows residual land values for a mixed site, with the proportions of flats and house sizes shown in table 7.2 below, using the average house prices from table 6.3 for each of the three areas mapped on page 10. In area A, land values of over £1.2 million per hectare (£486,000/acre) are achievable even at 30% affordable housing, whereas in area C land values are substantially lower, even with zero affordable housing. Area B ranges between around £1 million/hectare ((£405,000/acre) at very low proportions of affordable housing, down to under £800,000/hectare (£324,000/acre) once affordable housing contributions exceed 20%.

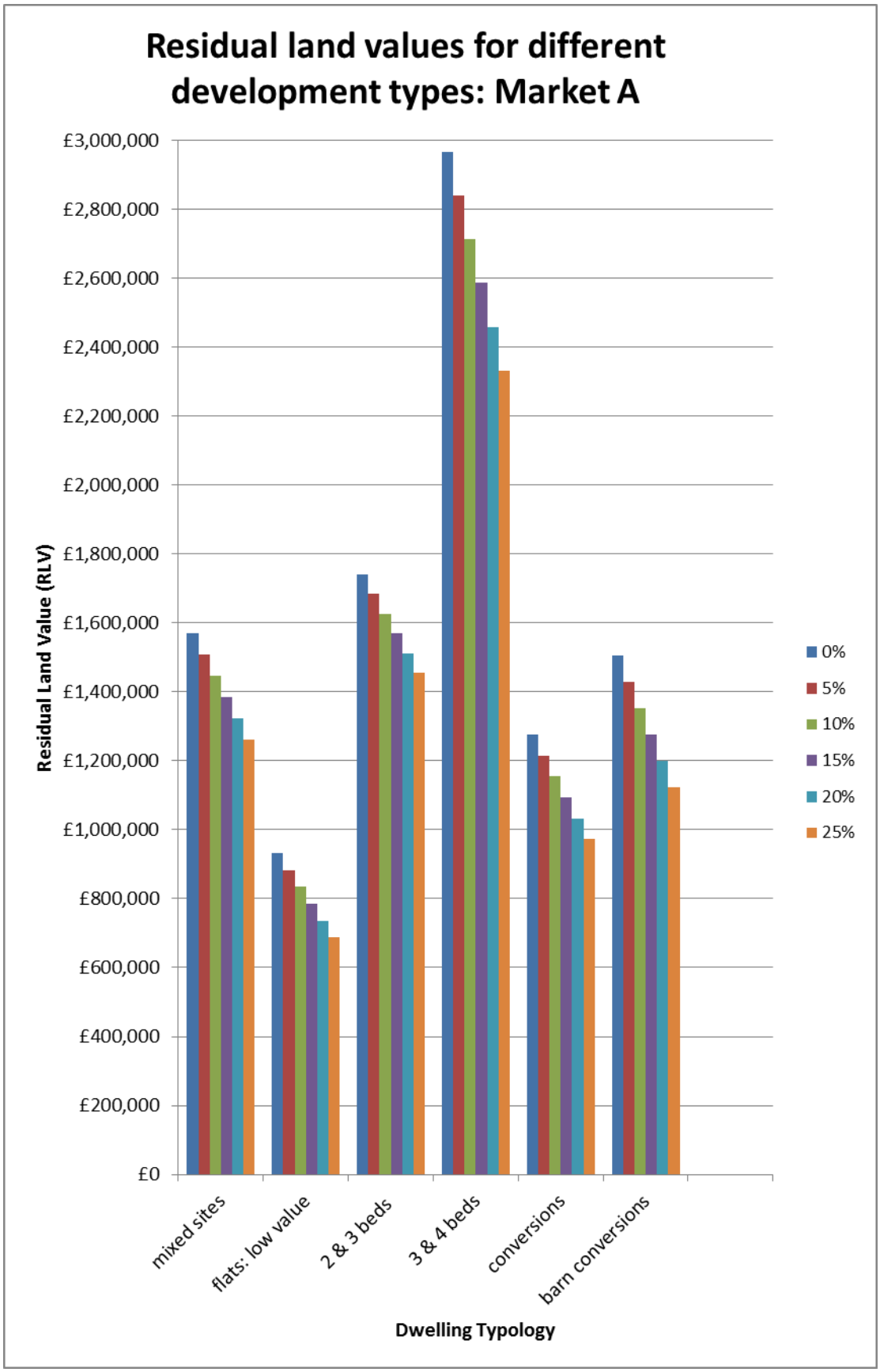
We tested the different development mixes shown in table 7.2 below. This sensitivity testing exercise kept the sales prices unchanged between each scenario, adjusting only the proportions of property types and the number of units. The results shown in the following graphs illustrate how the types of properties on a site can dramatically improve or reduce its viability. Generally a developer will select properties that he has confidence that he can sell. However, the site's specific location can greatly affect the market and dictate to some degree what is sellable.

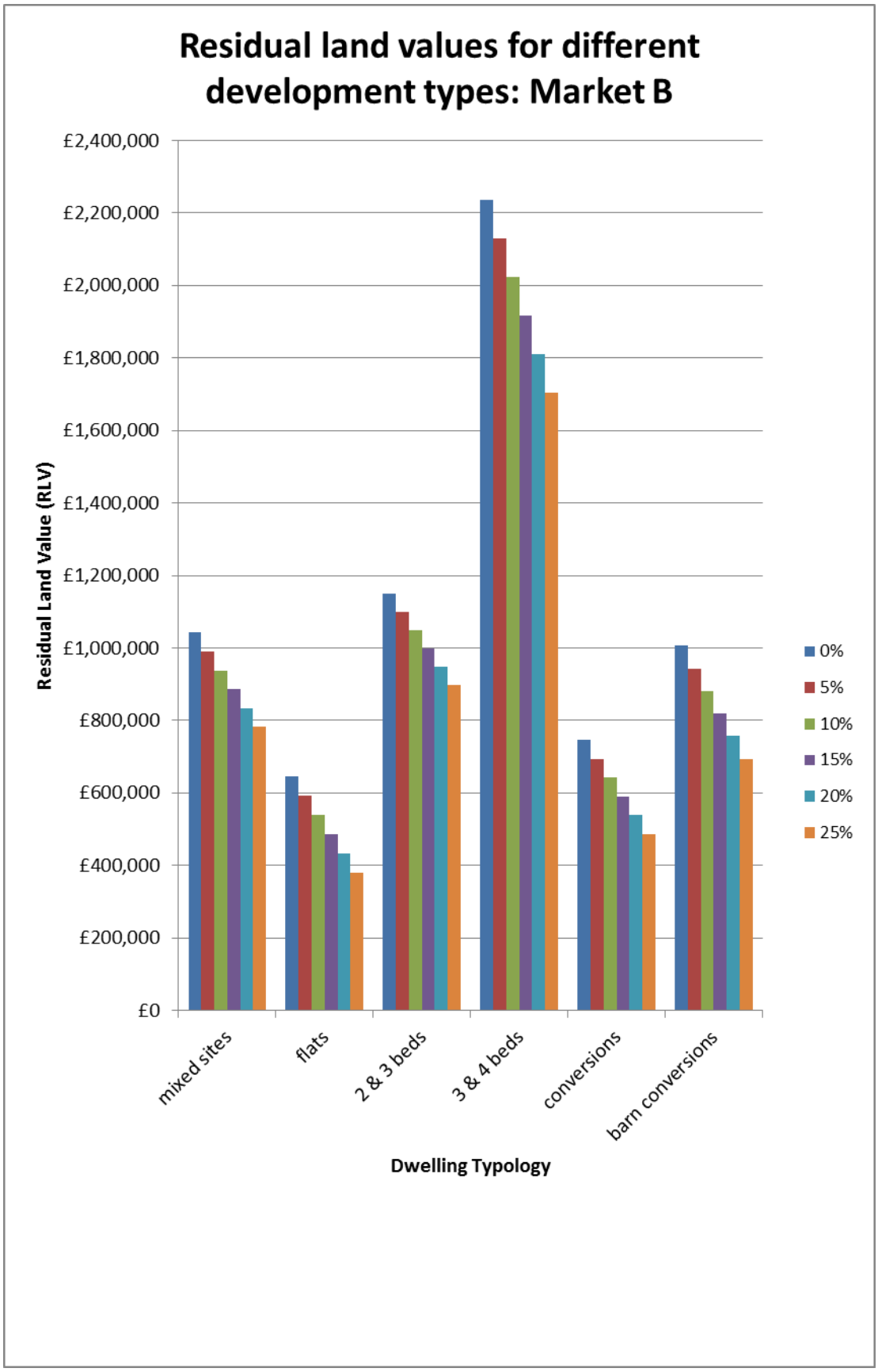
Table 7.2. sensitivity testing for different development mixes

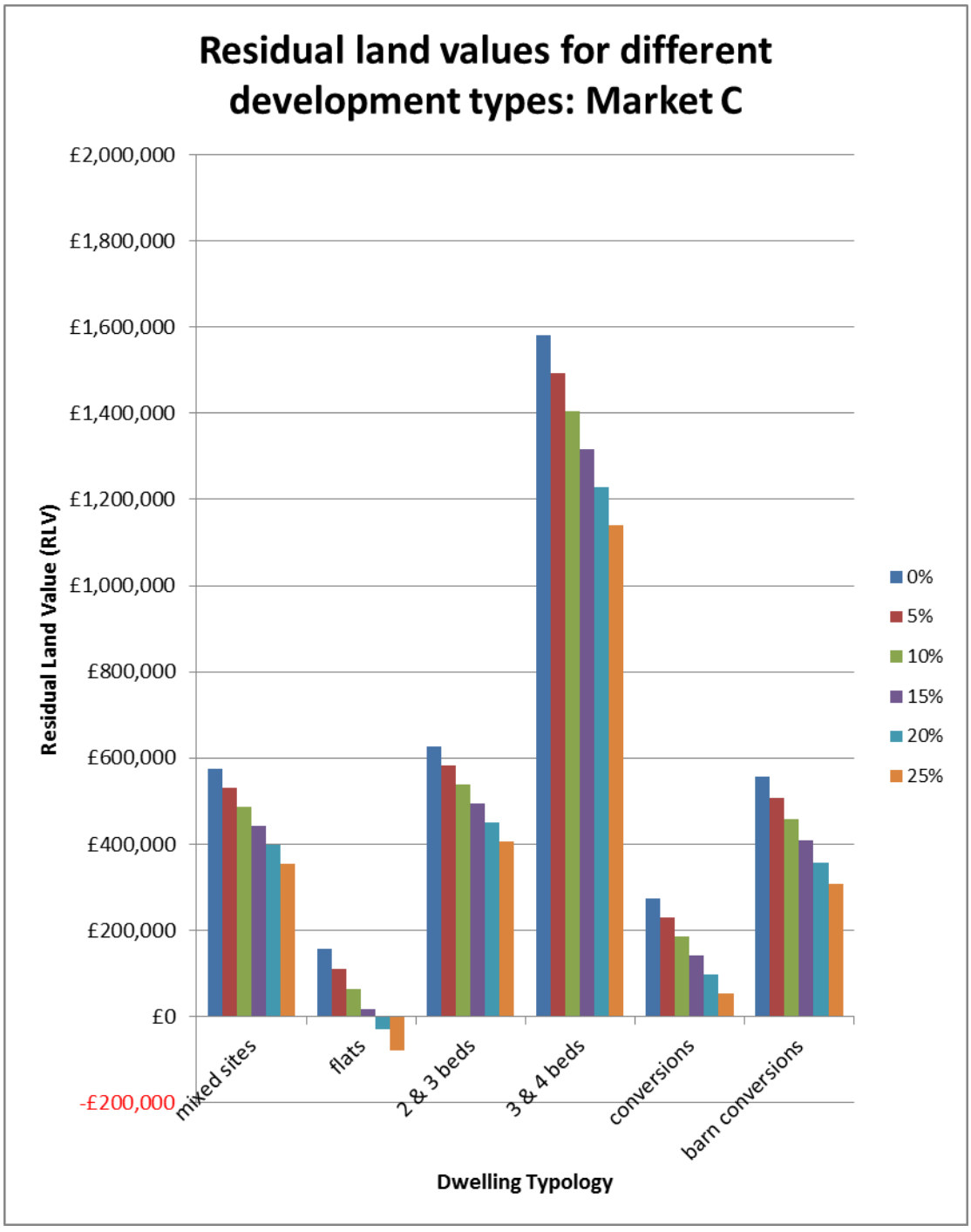
Scenarios	1-bed flat	2+bed flat	2-bed hse	3-bed hse	4+ bed hse	No. dwllg units per hectare	No. units at mean-1stdv	No. units at mean	No. units at mean +1stdv
Mixed site (average proportions)	9%	19%	21%	29%	22%	30	10	10	10
All flats	34%	66%				40	13	14	13
All 2 & 3 bed hses			42%	58%		40	15	15	10
All 3 & 4 bed hses				57%	43%	25		10	15
Conversions	9%	19%	21%	29%	22%	30	10	10	10
Barn conversions					100%	15		8	7

The graphs overleaf show the modelled residual land values for each mix, at contribution rates ranging from 0% to 30% affordable housing. For ease of comparison all scenarios assume a 1 hectare site, increasing the number of dwellings accordingly. For example, barn conversions typically occur as single developments on a site much smaller than a hectare, but in order to produce results that are easily comparable on a graph we have scaled up the number to 15 units to produce standardised land values per hectare.

The results graphically illustrate how a developer can improve viability by adjusting the mix of units and aiming for the higher end of the market. The degree to which he can do this is greatly influenced by factors such as neighbouring uses, local amenities, outlook, the local housing market, etc. For example, a strong local market for lower value terraces may be a safer bet for a developer than the seemingly more lucrative high value 4 bed properties, if the former is more sell-able than the latter on a particular site.


Residual land values for different development types: Market A
£3,000,000
£2,800,000
£2,600,000
£2,400,000
£2,200,000
£2,000,000
£1,800,000
£1,600,000
£1,400,000
£1,200,000
£1,000,000
£800,000
£600,000
£400,000
£200,000
£0
Residual Land Value (RLV)
mixed sites
flats: low value
2 & 3 beds
3 & 4 beds
conversions
barn conversions
Dwelling Typology
0%
5%
10%
15%
20%
25%


Residual land values for different development types: Market B
£2,400,000
£2,200,000
£2,000,000
£1,800,000
£1,600,000
£1,400,000
£1,200,000
£1,000,000
£800,000
£600,000
£400,000
£200,000
£0
Residual Land Value (RLV)
mixed sites
flats
2 & 3 beds
3 & 4 beds
conversions
barn conversions
Dwelling Typology
0%
5%
10%
15%
20%
25%



Viability clearly varies greatly between development mixes as well as between the three geographical areas, and this should be borne in mind when interpreting the results.

Sensitivity testing for the effect of changes in house prices and the cost of construction is effectively done through the dynamic viability index, as discussed further in section 10.

8. Land Supply

The threshold land value is key to making decisions on an appropriate level of affordable housing that does not jeopardise delivery of development in Shropshire. The threshold land value is the value at which a typical willing landowner is likely to release land for development. This value is a matter that most landowners keep close to their chests. Some landowners are prepared to accept less than others, but clearly it is not in their interests to be explicit about this fact. The 'going rate' is therefore an estimate as to what the majority of landowners are likely to accept, and one that can vary dramatically between locations, types of landowners, market conditions and general economic outlook. Local planning authorities have to keep a close eye on the price of land in their area to regularly reassess these general market factors. In Shropshire this is done through regular meetings of the Shropshire Developer Panel, the annual SHLAA market assessment review panel, and regular reviews of the viability assessment.

Three specific factors that landowners generally take into account when deciding at what price to sell their land are: (a) its existing use value, (b) the amount of uplift in value that the sale represents, and (c) the gross development value of what is likely to be built by the person acquiring the land.

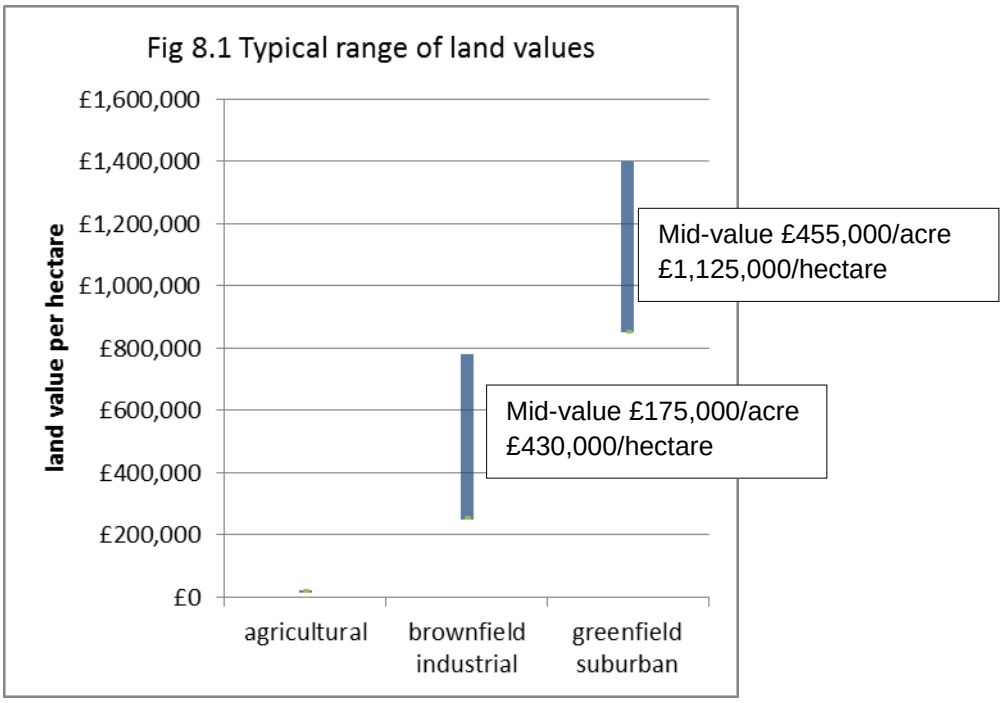
Existing use value

The price of agricultural land in Shropshire is reasonably well established, and is estimated by the Valuation Office Agency (VOA) at around £7,750/acre (£19,150/hectare)[3]. Land with planning permission for residential development is worth significantly more, and varies far more greatly in price.

Brownfield sites, often with existing industrial uses, range from £105,000/acre (£250,000/hectare)[4] up to £316,200/acre (£781,400/hectare)[5]. The previous Affordable Housing Viability Study in 2008 reported a narrower range of industrial land values for Shropshire of between £150,000 to £200,000/acre (£371,000 - £500,000/hectare). The mid-point of this latter range is £175,000/acre (£430,000/hectare).

Suburban greenfield sites with no abnormal site constraints and residential planning permission are generally valued significantly higher, ranging from around £350,000/acre (£850,000/hectare)[6] for sites with no ground problems up to £570,000/acre (£1,400,000/hectare) as reported by the Developer Panel in 2012.

[3] VOA annual report 2011
[4] VOA annual report 2011 for Wrexham (Shropshire is not separately listed). Stoke is slightly higher at £121,400/acre (£300,000/hectare).
[5] Viability assessments undertaken by Shropshire Council for specific sites in Shropshire over 2009-2011
[6] VOA annual report 2011 for Wrexham, assuming a reasonable site with no ground problems.



Clearly some developments are on brownfield sites, which generally have a lower land value, while others are on greenfield sites where landowner expectations can be extremely high. An analysis of housing developments over the past 3 years shown in table 8.2 reveals that 60.9% of residential development in Shropshire was on brownfield (ie. previously developed) land.

Table 8.2: Percentage gross housing completions 2009-2012

	Brownfield	Greenfield
New build	21.7%	29.2%
Change of use & conversions	39.2%	0.2%
Barn conversions	n/a	9.7%
Total	60.9%	39.1%

Source: Shropshire Annual Development Trends Monitoring Reports for 2010, 2011 & 2012, available at http://www.shropshire.gov.uk/factsfigures.nsf/open/9E4117D110651F1E802574EA0033148B.

Uplift in value

The report of the Local Housing Delivery Group[7] chaired by Sir John Harman into "Viability Testing Local Plans" recommended that threshold land value is based on a premium over existing use values. This method of valuation is not based on historic transactions, which may reflect different assumptions that prevailed at the time of the earlier transactions (including different planning policy requirements) but instead puts the emphasis on whether there is sufficient premium to persuade landowners to sell, which allows forward-looking assumptions (including future competition in land and emerging planning policy).

[7] Included representatives from the Home Builders Federation, the NHBC, the Local Government Association, the Planning Inspectorate, the Planning Officers Society and the Homes and Communities Agency.

The majority of landowners take a very long-term view of their land asset, and some are willing to hold on to land for decades in order to benefit from future increases in land value. The price at which landowners will consider selling their land for development obviously varies greatly, with the landowners' personal need to release equity from the land often being the trigger. An accepted industry norm is that between 20% and 30% uplift of existing land values is required before most landowners will be sufficiently incentivised to sell.

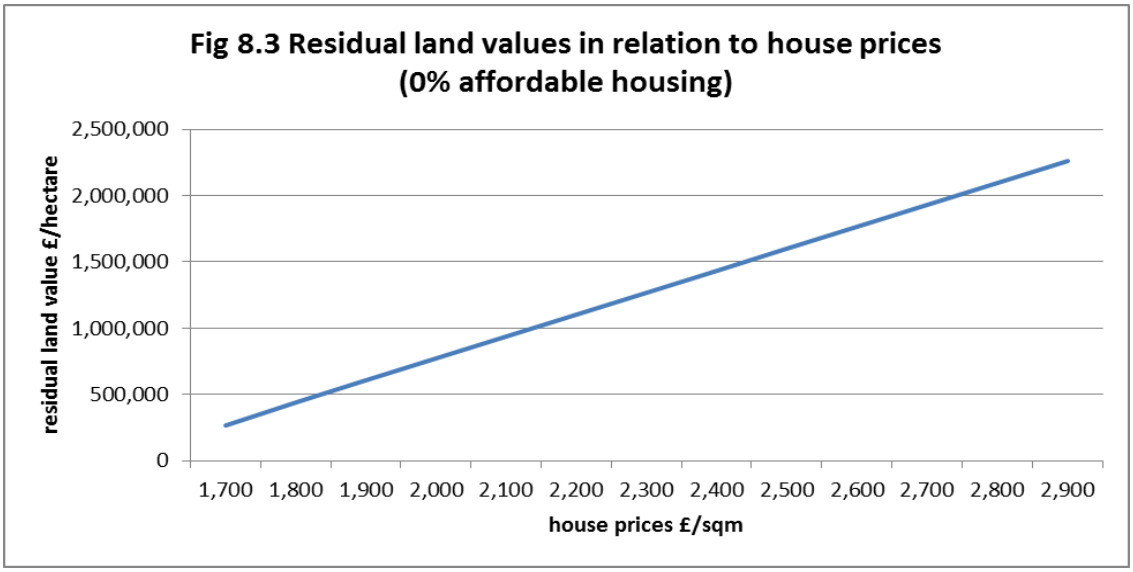
For agricultural land the multiplier is much greater. The AHVS 2008 assumed £75,000/acre (£185,000/ha) uplift would be required before a landowner would sell farmland for development. The Developer Panel (22/10/12) suggested that an uplift of £150,000/acre (£370,000/hectare) was more realistic. With agricultural land values currently around £7,750/acre (£19,150/hectare) we estimate that agricultural land is highly unlikely to come forward at less than £158,000/acre (£390,000/hectare). However, for many landholders taking a long-term view only double or treble this figure would incentivise them to release land.

Clearly the higher the land value, the larger the number of landowners who will be interested in making their sites available for development. Some may be tempted at the lowest likely figures of around £158,000/acre[8] (£390,000/hectare); others will expect a 30% increase on industrial land value of around £230,000/acre[9] (£580,000/hectare); others with a greenfield site will expect anything upwards of £350,000/acre (£850,000/hectare) with premium sites occasionally up to £570,000/acre (£1,400,000/hectare).

Gross development value

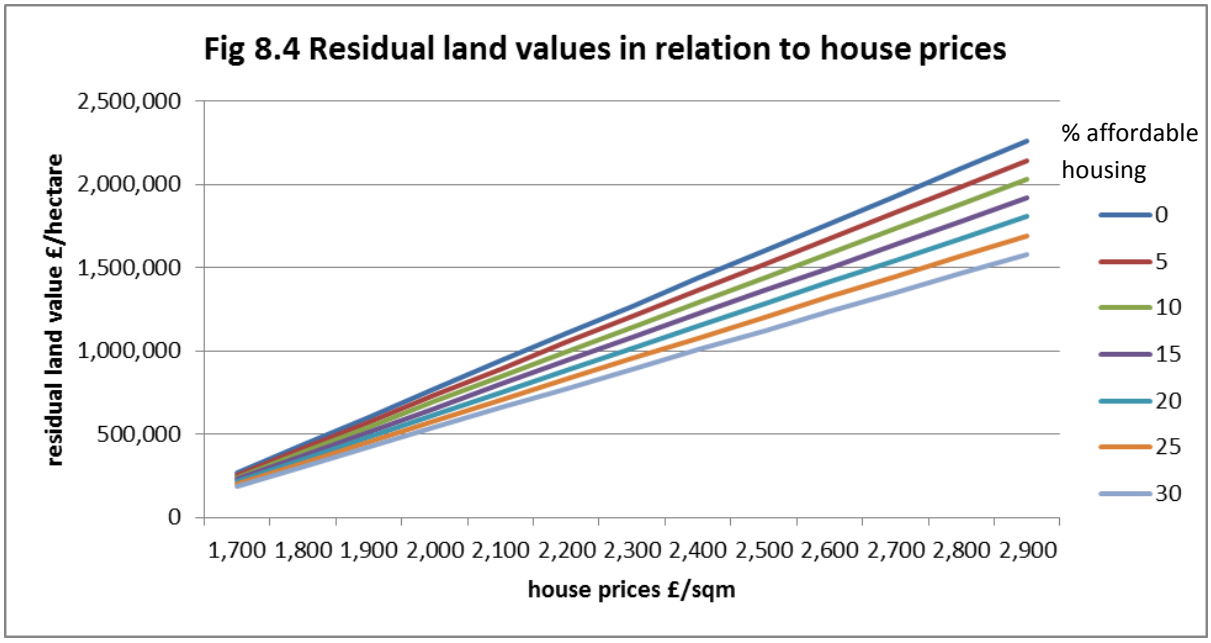
Landowners generally expect their land value to reflect the value of what is built on it. For example, if low market value properties are likely to be built, the landowner will have a lower price expectation than if very high value properties are likely to be built. Most landowners instinctively expect land values to rise with house prices, and adjust their expectations accordingly. The viability model confirms a direct relationship between house prices and residual land value, as shown in figure 8.3 below.

Fig 8.3 Residual land values in relation to house prices (0% affordable housing)



[8] Agricultural land of £7,750/acre plus uplift of £150,000/acre
[9] Mid-value industrial land of £175,000/acre plus 30% uplift (rounded)

A requirement by the local planning authority for a proportion of affordable housing reduces the rate of increase in land value, but nevertheless the landowner still benefits from higher house prices, as shown in the modelled results in figure 8.4 below. In essence, higher house prices can support a higher land value for the landowner *and* a higher proportion of affordable housing for the community – a 'win-win' situation. For example, a site with house prices of £2,500/sqm may provide over £1,000,000 per hectare value for the landowner even with 30% affordable housing. At the other end of the spectrum, lower house prices of £1,700/sqm may provide insufficient land value to a landowner, even with 0% affordable housing.



Threshold land values

The range of land prices at which landowners are prepared to sell land (the 'threshold value') varies tremendously, from around £158,000/acre (£390,000/hectare) for agricultural land on which development is an unexpected bonus up to £570,000/acre (£1,400,000/hectare) and beyond on prime sites with very high house prices. A single threshold value cannot be shown on the graph above. Instead a variable threshold value can be envisaged as a line that ranges from around £390,000/ha at the bottom end of the graph up to over £1,400,000/ha at the top end. On this spectrum, the threshold values for areas A, B and C are shown in table 8.5 below.

Table 8.5 Threshold land value assumptions

	Mean house prices £/sqm	Threshold land value
Area A	£2,481/sqm	£1,300,000/hectare (£525,000/acre)
Area B	£2,162/sqm	£885,000/hectare (£360,000/acre)
Area C	£1,883/sqm	£490,000/hectare (£200,000/acre)

Adjusting the dynamic viability approach

The previous Affordable Housing Viability Study introduced a dynamic viability approach in which a single threshold land value was applied (namely £85,000/acre / £210,000/hectare based on agricultural values of £10,000/acre plus a £75,000 uplift) and which was then adjusted annually in line with the rise or fall in land values reported by the Valuation Office Agency (VOA) in its annual report. The VOA stopped producing an annual report of land prices in 2011, and therefore this index is no longer available. Another approach is necessary that includes addressing the fundamental variability of land values in relation to development values. We have therefore amended the dynamic viability approach to integrate land value with house prices in the model, so that the threshold land value increases in proportion with house prices.

The resulting dynamic viability index (section 11) integrates land values with house prices to create a two-dimensional index that is easier to use than the previous two-dimensional index.

It is strongly recommended that land values are reassessed every 2-3 years and the underlying assumptions of the index adjusted accordingly to reflect prevailing land values, uplift assumptions and the relationship with house prices. The degree of competition in land and the influence of both national and local planning policy are also likely to change land values, perhaps very significantly, over the short to medium term.

9. Main findings and conclusions

For a scheme to be 'viable' a scheme must make financial sense to both the developer and the landowner, within the constraints imposed by the market and by planning policies. A scheme will only be delivered if both the developer and landowner are convinced that the scheme meets their financial interests.

The viability model produces figures from the developers' perspective, producing residual land value figures that represent the maximum that the developer can afford to offer a landowner for the site. The greater the affordable housing contribution, the less the developer can offer the landowner. Therefore in reaching policy decisions about an appropriate target rate for affordable housing we need to make some assumptions about what is a "reasonable" expectation of the price at which land will come forward. This is closely linked to policy decisions about how much land to identify for development, with an in-built allowance for the fact that not all sites will come forward.

The NPPF requires that plans should be deliverable, and the sites and scale of development identified in the development plan should not be subject to such as scale of obligations and policy burdens that their ability to be developed viably is threatened (paragraph 173 of the NPPF). To ensure viability, development should provide competitive returns to a willing land owner and willing developer to enable the development to be deliverable.

There is some degree of consensus on what is a "competitive return" to a willing developer, as the rate of return required by banks in order to lend money on a scheme. There is more debate as to what constitutes a "competitive return" to a willing landowner, or "threshold land value" at which a willing landowner will sell. The threshold land value is the existing use value plus an uplift (or landowner profit). The amount of uplift that a landowner expects before he/she is motivated to sell the land varies greatly between landowners, and is linked

to their confidence in whether or not this is the best deal they are likely to realise. This is in turn linked to their assessment of what the development is worth. Landowners' expectations are higher where they expect the gross development value (GDV) to be high, and drop for schemes where they can see the GDV will be lower.

In area C landowners' expectations reflect the weaker market. There is also a greater supply of industrial and other brownfield sites that bring land prices downwards. In the higher value areas pressure for development over many years has reduced the supply of brownfield sites, making greenfield sites more essential to ensure delivery of housing in the future. Landowners' expectations are raised and prices are generally higher for all possible development sites.

In applying this to Shropshire, we have interpreted "competitive returns to a willing land owner and willing developer" as:

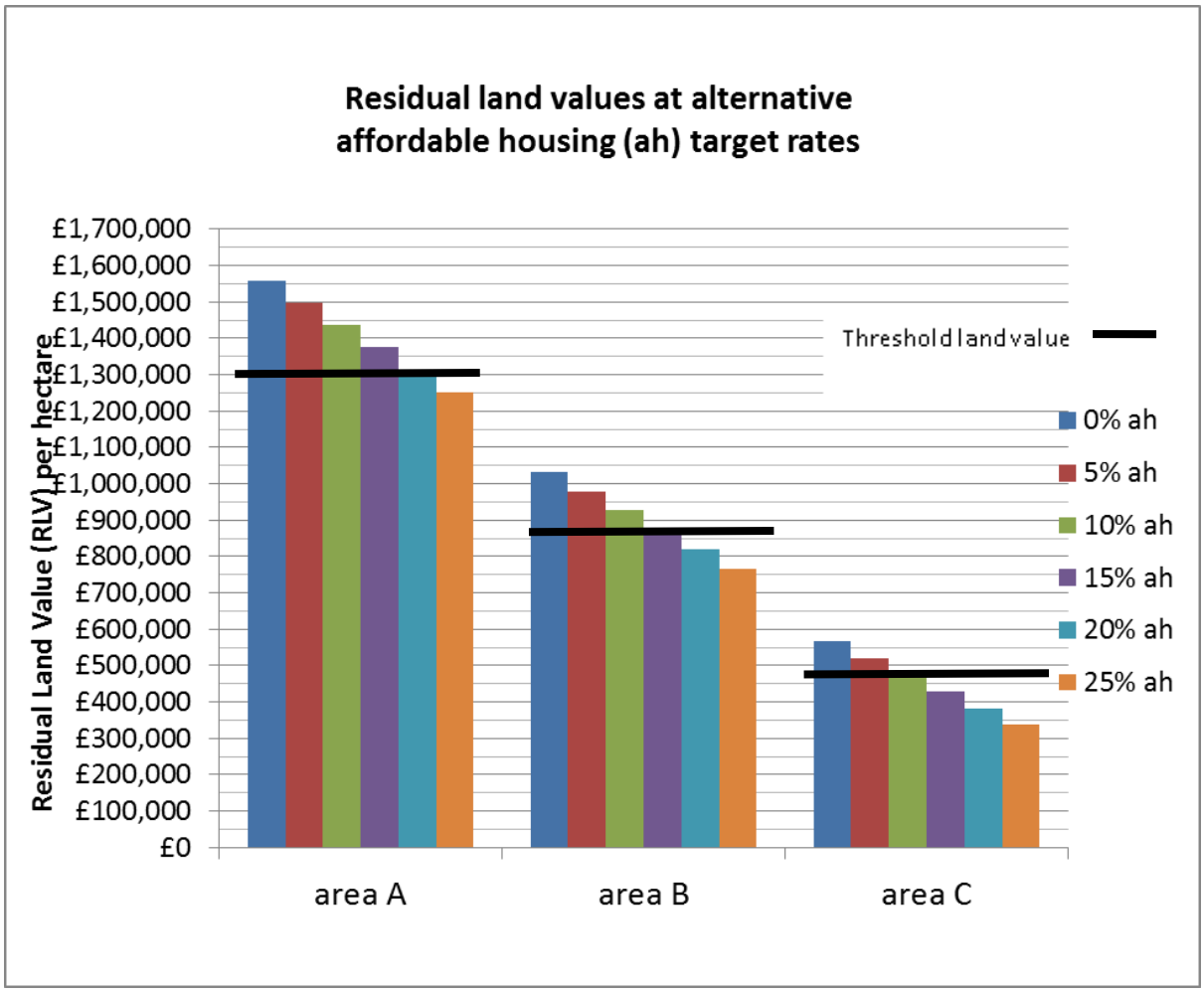
Assumptions applied in the model

willing developers:	Profit margin of 20% of Gross Development Value (based on the average figure currently required by banks in order to finance a scheme)
willing land owners:	Threshold land values in the region of: Area A: £525,000/acre (£1,300,000/hectare) Area B: £360,000/acre (£885,000/hectare) Area C: £200,000/acre (£490,000/hectare)

The resulting threshold land values of £1,300,000/hectare, £885,000/hectare and £490,000/hectare are shown on the graph overleaf. At these threshold land values the recommended affordable housing target rates are:

Market area	Recommended affordable housing target rate
Area A	20%
Area B	15%
Area C	10%

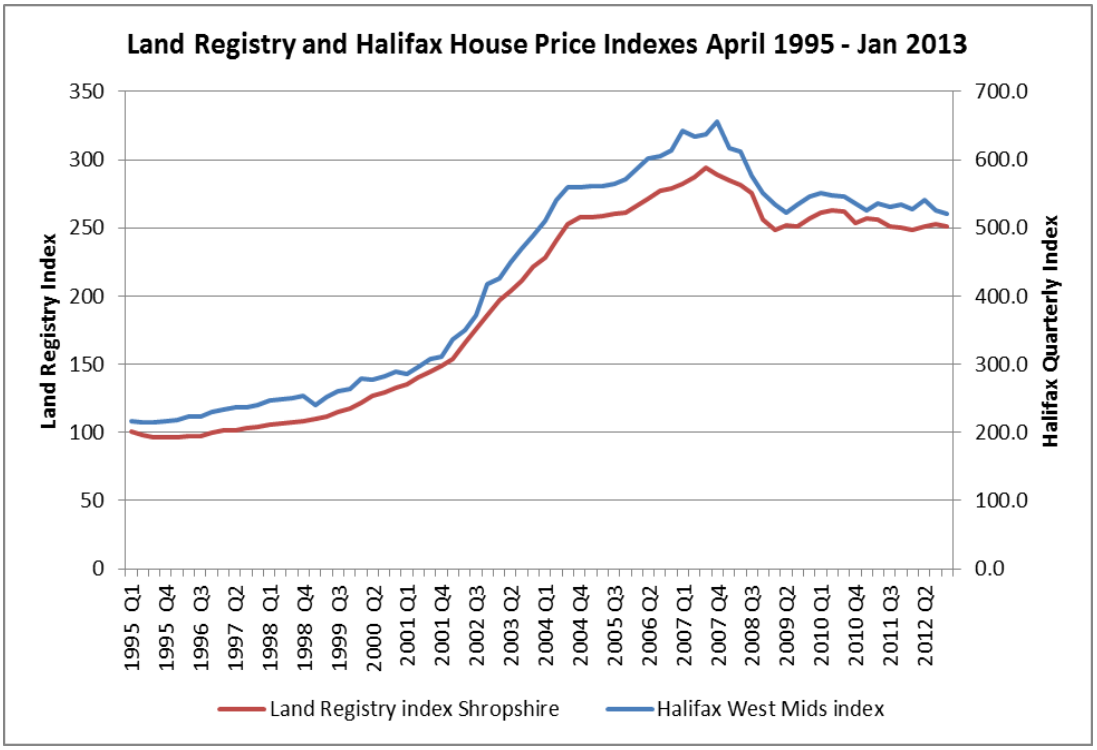
Threshold land values should be kept under review, particularly in light of the forthcoming Shropshire Site Allocations Development Plan (SAMDev) and anticipated major changes to the national planning system over the next few years. In addition, the macro economic situation, the availability of bank finance and the value of land relative to other investments is all liable to change. It is therefore recommended that threshold land values are thoroughly reviewed within 2-3 years.



10. Indexes for the dynamic viability approach

The recommended affordable housing target rate reflects current values at 2013, but clearly these will change over time. To ensure that the target rate does not diverge from market conditions it is important to have some way of adjusting the target rate in future. The Shropshire dynamic viability index does this, by allowing the two most significant variables that affect viability to be taken into account each year, and the target rate adjusted accordingly. These two variables are house prices and the cost of construction.

The previous Shropshire Viability Index, based on the AHVS 2008, used the quarterly Halifax house price index for the West Midlands to gauge changes in house prices. More recently the Land Registry has produced its own index, which is now easily available on its website. These two indexes are similar but not identical, as the comparison graph below illustrates.



Both indexes are seasonally adjusted and statistically robust, but the Land Registry index is considered preferable to the Halifax for two main reasons: (1) the Land Registry index is the most comprehensive available, reflecting all sales including cash buyers, whereas the Halifax house price index is based on mortgage offers approved by them; and (2) the Land Registry index is specific to Shropshire, whereas the Halifax house price index is only available at a regional or national level. Therefore the Land Registry index is recommended for future use.

The previous Shropshire Viability Index, based on the AHVS 2008, used the national Building Cost Information Service's (BCIS) all-in cost of construction index. A major disadvantage of this approach was that the BCIS index is a costly subscription-only service and therefore not readily accessible. A more appropriate and freely accessible measure is the quarterly Department for Business, Innovation and Skills (BIStender price index for new construction. This is one of a number of construction price and cost indices that are published as an online service by BIS and are derived from data provided by the BCIS under contract to BIS. The all construction (ALLCON) tender price index for new construction is recommended as a suitable index for use in future.

Shropshire Dynamic Viability Index

The index below is calibrated on the house prices and cost of construction for area B. In future years, a rise or fall in house prices will result in a move right or left along the row, while a rise or fall in the cost of construction will result in a move up or down the column in accordance with the degree of change. For house prices, the degree of change will be determined by the percentage change in the Land Registry house price index for Shropshire. For cost of construction, the degree of change will be determined by the percentage change in the BIS all construction (ALLCON) tender price index for new construction. The latest firm figure in December each year will be used to calculate the degree of change from the starting point, to inform the target rate for the next financial year.

		HOUSE PRICES								
CONSTRUCTION COSTS		**-20**	**-15**	**-10**	**-5**	**0**	**+5**	**+10**	**+15**	**+20**
	-20	49%	50%	50%	50%	50%	50%	50%	50%	50%
	-15	34%	46%	50%	50%	50%	50%	50%	50%	50%
	-10	19%	32%	39%	39%	39%	39%	39%	39%	42%
	-5	4%	18%	26%	26%	27%	29%	29%	30%	33%
	0%	0%	7%	13%	14%	15%	18%	19%	20%	24%
	+5	0%	0%	0%	1%	3%	7%	9%	10%	15%
	+10	0%	0%	0%	0%	0%	0%	0%	0%	5%
	+15	0%	0%	0%	0%	0%	0%	0%	0%	0%
	+20	0%	0%	0%	0%	0%	0%	0%	0%	0%

The degree of change is deemed to be the same across areas A, B and C, as neither the Land Registry house price index nor the BIS all new construction index provides geographical detail for sub-markets within Shropshire. The target rate for areas A and C will be determined by the target rate for area B, keeping the proportions constant as shown below.

	Target rate from 1st October 2013	proportions
Area A	20%	1.333
Area B	15%	1
Area C	10%	0.666

Appendix 1 BCIS Construction Costs

Rate per m2 gross internal floor area for the building Cost including prelims.
Last updated 11-Feb-2012 12:02.

Location adjusted to Shropshire (Location index 97, sample 88).

Building Function (Maximum age of projects)		£/m² gross internal floor area						Sample
		Mean	Lowest	Lower Quartile	Median	Upper Quartile	Highest	
	New build							
810.	Housing, mixed developments (15)	827	418	699	**801**	928	1835	640
810.1	Estate Housing							
	Generally (15)	801	305	687	**782**	888	1681	1139
	Single storey (15)	879	305	760	**848**	980	1527	228
	2-storey (15)	781	417	679	**764**	867	1514	824
	3-storey (15)	786	523	654	**736**	878	1681	85
	4-storey or above (25)	1197	855	-	**1213**	-	1507	4
810.11	Estate Housing detached (15)	827	642	678	**868**	909	1107	13
810.12	Estate housing semi detached							
	Generally (15)	799	422	686	**782**	892	1527	233
	Single storey (15)	931	596	790	**925**	1049	1527	45
	2-storey (15)	771	422	672	**761**	868	1144	177
	3-storey (15)	706	562	630	**667**	772	982	11
810.13	Estate housing terraced							
	Generally (15)	823	417	687	**798**	933	1681	264
	Single storey (15)	873	546	733	**824**	993	1358	53
	2-storey (15)	810	417	694	**795**	901	1202	173
	3-storey (15)	809	529	660	**737**	843	1681	38

816.	Flats (apartments)							
	Generally (15)	951	378	790	**911**	1062	2906	635
	1-2 storey (15)	914	539	788	**880**	1018	1708	177
	3-5 storey (15)	936	378	784	**916**	1059	1930	413
	6+ storey (15)	1297	719	968	**1198**	1465	2906	38
818.	Housing with shops, offices, workshops or the like (15)	1029	543	818	**955**	1147	2101	45
820.1	'One-off' housing detached (3 units or less)							
	Generally (15)	1275	566	964	**1141**	1523	2859	98
	Single storey (15)	1064	566	923	**1026**	1194	1581	40
	2-storey (15)	1308	666	959	**1141**	1634	2700	42
	3-storey (15)	1710	1067	1527	**1611**	1898	2859	13
	4-storey or above (25)	1578	1038	-	**1342**	-	2591	4
820.2	'One-off' housing semi-detached (3 units or less) (15)	925	613	812	**916**	1025	1347	109
820.3	'One-off' housing terraced (3 units or less) (15)	1269	745	807	**867**	1005	4408	13
841.	Housing provided in connection with other facilities (15)	1069	842	949	**1088**	1139	1330	5
843.	Sheltered Housing							
	Generally (15)	969	540	798	**921**	1055	1966	77
	Single storey (15)	1014	592	753	**948**	1223	1966	16
	2-storey (15)	938	540	797	**906**	1008	1648	32
	3-storey (15)	983	715	885	**940**	1032	1466	16
	4-storey or above (15)	923	701	764	**894**	982	1397	8

Appendix 2 Shropshire Developer Panel

The Shropshire Developer Panel is comprised of representatives from large and small housebuilders land agents and registered providers (RPs) active in Shropshire. It's current composition is:

Anwyl Construction
Barratt Homes
Bromford Housing Association (RP)
Galliers Homes
J Ross Developments
Persimmon Homes
Peter Richards Ltd (land agent)
Severnside Housing (RP)
Shropshire Homes
Shropshire Housing Group (RP)
Taylor Wimpey

Appendix 3 Viability Appraisal Detailed Results for Area B

HCA AREA WIDE VIABILITY MODEL
Version 3.1 March 2013
DEVELOPMENT PERIOD CASHFLOW

				Project	Qtr 1 Year 1	Qtr 2 Year 1	Qtr 3 Year 1	Qtr 4 Year 1	Qtr 5 Year 2	Qtr 6 Year 2	Qtr 7 Year 2	Qtr 8 Year 2	Qtr 9 Year 3
		Revenue per Qtr		**Totals**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**
Revenue													
Private Sales Value	£ 4,497,729	£562,216	4	£ 4,497,729	0	562,216	562,216	562,216	562,216	562,216	562,216	562,216	562,216
Gross Development Value of private sales before costs of sale				**£4,497,729**	**0**	**562,216**	**562,216**	**562,216**	**562,216**	**562,216**	**562,216**	**562,216**	**562,216**
Costs of Sale													
Marketing costs	1.50%			£ 67,466	0	8,433	8,433	8,433	8,433	8,433	8,433	8,433	8,433
Legal fees	1.50%			£ 67,466	0	8,433	8,433	8,433	8,433	8,433	8,433	8,433	8,433
	Sub Total			**-£134,932**	0	16,866	16,866	16,866	16,866	16,866	16,866	16,866	16,866
Development Value private sales				**£ 4,362,797**	**0**	**545,350**	**545,350**	**545,350**	**545,350**	**545,350**	**545,350**	**545,350**	**545,350**
No fees on sale		*Revenue per Qtr*		£ -									
Affordable Housing Revenue	£ 389,897	*97,474*	4	£ 389,897	97,474	97,474	97,474	97,474	0	0	0	0	0
Net Development Value	**Total**			**£ 4,752,695**	**97,474**	**642,824**	**642,824**	**642,824**	**545,350**	**545,350**	**545,350**	**545,350**	**545,350**
Build & Infrastructure costs		*Cost per Qtr*											
Construction totals before inflation	£ 2,505,135	*626,284*	4	£ 2,505,135	626,284	626,284	626,284	626,284	0	0	0	0	0
	Sub Total			**£ 2,505,135**	**626,284**	**626,284**	**626,284**	**626,284**	**0**	**0**	**0**	**0**	**0**
Professional Fees													
Professional fees	7.00%			£ 175,359		43,840	43,840	43,840	43,840	0	0	0	0
	Sub Total			**£ 175,359**	**0**	**43,840**	**43,840**	**43,840**	**43,840**	**0**	**0**	**0**	**0**
Community Infrastructure Levy	£ 85,029			£ 85,029	0	0	0	85,029	0	0	0	0	0
	Sub Total			**£ 85,029**	**0**	**0**	**0**	**85,029**	**0**	**0**	**0**	**0**	**0**
Total Costs				**£ 2,765,523**		**670,124**	**670,124**	**670,124**	**755,153**	**0**	**0**	**0**	**0**
Developer's return on GDV													
% of GDV private sale (net of sales costs)	20.00%			£ 872,559		0	109,070	109,070	109,070	109,070	109,070	109,070	109,070

% of Affordable build costs	0%	£ -			0	0	0	0	0	0	0	0
Residual Sum before interest		**£**	**1,114,612**		**-572,649**	**-136,369**	**-136,369**	**-221,399**	**436,280**	**436,280**	**436,280**	**436,280**
Cumulative residual balance for interest calculation				0	-572,649	-718,384	-866,503	-1,102,074	-683,818	-258,723	173,326	609,605
Development finance interest rate	7.00%	-£	68,727	0	-9,366	-11,749	-14,172	-18,025	-11,184	-4,231	0	0
Residual Sum for quarter after interest		**£**	**1,045,885**	**0**	**-582,015**	**-148,119**	**-150,541**	**-239,423**	**425,096**	**432,048**	**436,280**	**436,280**

Gross Residual Land Value		**£**	**894,693**
Site acquisition costs	1.00%	£	8,947
Residual Value for Results sheet		**£**	**885,746**