Rother District Affordable Housing Viability Assessment

Report to Rother District Council

Final Report

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Rother Affordable Housing Viability Assessment

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Study Questions and Approach

The purpose of the assessment is to test the District Council's proposed affordable housing policies and ensure that they are consistent with securing the delivery of new homes within Rother. The key questions that this viability assessment addresses are:

- Can 40% affordable housing be achieved through new housing development within Rother on sites delivering 15 or more homes?
- Is it viable to seek a 50% affordable housing contribution on sites within the rural areas of Rother?
- It is viable to seek affordable housing on smaller sites: sites of 10 or more homes in Battle and Rye and sites of 3 or more homes in the Rural areas?
- How do different variables, including house price changes, the availability of grant, affordable housing tenure and increases in Section 106 contributions affect viability?

DTZ has appraised a number of typical but hypothetical development schemes within Rother to test how viable they are under different circumstances. For each of the development schemes, the residual land value has been calculated. This value is then compared to a series of benchmarks in terms of Existing Use Value, or Alternative Use Value. It is important to note that it is not possible to establish a single benchmark in terms of residential land value above which it can be deemed that residential development will be viable.

Key Findings and Implications for Policy

The base case analysis (which assumes affordable housing grant is not provided) shows that an affordable housing contribution of 40% could be set across the District with the expectation that this could be achieved in most locations without affordable housing grant. However, the modelling also reveals the following:

- Some sites within Bexhill may be unable to deliver affordable housing at this level (though the addition of grant improves viability).
- Sites elsewhere in the District, particularly the rural areas, appear to be able to deliver this level of affordable housing with ease.
- This assessment has therefore tested a somewhat lower affordable housing quota in Bexhill (35%) and higher quota in the rural areas (50%).

Although the base case modelling suggests that 40% affordable housing could be broadly achieved across the District it is also important to note that there are likely to be exceptions to this general pattern which cannot be captured through strategic viability modelling:

- It is important to bear in mind that no abnormal costs for infrastructure or access have been built into the modelling given the variability of these between different sites and that these have the potential to significantly affect viability.
- Existing use values on particular sites may be higher than assumed in this assessment, requiring schemes deliver a sufficient residual land value in order to ensure that there is an incentive for the developer to deliver the scheme.

In assessing an appropriate threshold for affordable housing contributions there is no evidence that suggests applying affordable housing quotas to sites smaller than 10 units in Battle and Rye would be any less viable than those above 10 units. Similarly in DTZ's view schemes of 3 or more units in the Rural areas are able to make a contribution to affordable housing provision, particularly with flexibility retained to deal with site specific considerations.

However, in setting affordable housing thresholds within policy it is important to consider a range of other factors in addition to viability:

- Whether reducing thresholds is likely to deliver a significant increase in affordable housing through the additional number of sites 'captured'
- Whether the cost of officer time in administering a lower threshold is worthwhile given the numbers of units involved.
- Whether small developers that typically focus on sites below thresholds (due to a variety of reasons, including access to capital) would be deterred from developing
- Whether local housing associations are willing and able to take on small numbers of affordable homes delivered by small sites
- Whether small sites are affected to a greater extent by site specific factors not accounted for in this viability assessment

When considering policy on commuted sums it is important to create a simple and transparent scheme so that developers know precisely what they will be expected to contribute. It would also be important to set a single payment applicable in each of the policy areas across the district, set at a level which ensures that all, or the greater majority of schemes, are viable. Our understanding is that the commuted sum should be equivalent to the 'developer/ landowner contribution' if the affordable housing was provided on site.

Rother District Council are considering requiring schemes of 1 or 2 units in Rural areas to contribute to affordable housing provision through commuted sums. If the council wish to require this, DTZ recommend ensuring this policy is in line with that for 3 units and above. The most appropriate method for this would be removing the existing threshold in Rural areas and requiring all units to contribute the same proportional amount to affordable housing provision. The Council would need to decide if it is more appropriate for the affordable housing contribution to be provided on site or as a payment in lieu (or a combination where applicable) in relation to schemes of 3 units or less.

Adopting these principles, Rother District Council could consider seeking the following sums on schemes that are viable at 40% affordable housing without grant, but where a commuted sum is agreed by the Housing Service where on-site delivery is not practicable:

- £58,700 per affordable unit on schemes within Bexhill
- £70,500 per affordable unit on schemes within Battle and Rye
- £91,200 per affordable unit on schemes within the Rural areas (assuming a policy of 50% affordable is applied)

In principle DTZ does believe it would be possible to extend affordable housing policies to development of one or two units in the Rural areas. On the basis of the modelling undertaken, an indicative contribution of around £45,600 per private market unit would be consistent with the policy option of seeking 50% affordable housing provision in connection with development in Rural areas. If this proposal is pursued, DTZ would recommend it is initially applied to the Rural areas, and any decision to extend it to Battle & Rye (and possibly Bexhill) is deferred until it is clear as to whether it works in the Rural areas.

The sensitivity tests presented in this report imply the following for affordable housing policies within Rother District:

- Affordable housing grant significantly improves the residual land values of all schemes in the four policy areas in Rother District. However, the analysis in this assessment suggests that affordable housing at 40% could be delivered across Battle, Rye and the Rural areas without grant, providing there are no abnormally high or unforeseen development costs which are significant enough to tip these schemes into unviable territory.
- An affordable housing contribution of 50% affordable housing could be achieved the Rural areas. The same caveats apply – providing there are no abnormally high or unforeseen development costs. The Hastings and Rother HMA (2006) and SHMA Update 2010 considers that a higher level of affordable housing could be justified in the rural areas of the District given the limited affordable housing stock available to meet need. Increasing the provision of affordable housing in these areas could serve a useful purpose in diversifying the housing stock. However, Rother District Council will also need to consider the appropriateness of securing 50% affordable housing in terms of how the scheme fits into and relates to the existing neighbourhood (eg in terms of existing tenure patterns and the nature of the existing housing stock).
- With the exception of schemes within Bexhill, the social rented component of affordable housing provision could be increased (to 75% of the affordable housing quota) without affecting viability. In Bexhill, some site archetypes will become unviable if the proportion of social rented accommodation accounts for more than 50% of the quota. However, it is important to keep in mind that this could be addressed through the addition of grant.
- Increased S106 contributions reduce residual land values across all of the schemes in all of the policy areas in Rother. However, this only presents a problem for schemes in Bexhill where sites were previously on the margins of viability under the base case.

- The introduction of the Code for Sustainable Homes Level 4 (planned for 2013) will impact on the viability of all sites across the four policy areas. It appears that some sites within Bexhill would be affected to the extent that they may become unviable or marginal.

- The additional cost of obtaining access to sites that are access constrained is considerable and would reduce the margin above existing use values across all site archetypes in all policy areas. The modelling suggests this would not be enough to make sites outside of Bexhill unviable under the base case, unless these sites are also affected by the cumulative impact of other costs.

- For rural exception sites and sites wholly or substantially for affordable housing, the availability of grant greatly affects the viability of schemes with high levels of affordable housing (i.e. 80% and 100% affordable). The modelling suggests that with grant all schemes offer uplifts in land values compared to existing uses, while without grant scheme viability is heavily dependent on existing use values (especially at 100% affordable).

In all of the sensitivity tests, certain site archetypes in Bexhill become unviable or marginal when additional costs on development are added. Rother District Council may wish to consider whether a lower affordable housing quota (eg 35%) would be appropriate to help to address this issue. However, the Greenfield sites (edge of settlement archetypes) appear to perform well under the 40% affordable housing quota so there is question as to whether it would be appropriate to universally reduce the affordable housing quota in Bexhill.

- One option would be to apply a lower quota to brownfield sites only. However, some brownfield archetypes appear to be able to deliver 40% affordable housing viably under base case assumptions (eg 'Unused or Underused Land' archetypes).

- A second option would be to retain a 40% affordable housing quota for Bexhill but to apply flexibility in response to site specific circumstances.

Given that it will not always be possible to secure 40% affordable housing on all development sites within the Bexhill, Battle and Rye or 50% in the Rural areas, Rother District Council need to adopt a process for resolving what the contribution should be in the event that it is not possible for a site to deliver the affordable housing quota.

In practice, such a process already exists since the District Council have negotiated site specific contributions over the last 5 years, including commuted payments where on site affordable housing provision was unsuitable. However, it would make sense to acknowledge in the Council's policy documents that there is flexibility over the contribution that individual schemes will make, where it can be fully and financially demonstrated that a particular affordable housing contribution would make development unviable. The Council may wish to set out in policy some of the factors that are likely to affect the ability to deliver 40% in Bexhill, Battle and Rye or 50% in the Rural areas as a way of demonstrating to developers its intention to take into consideration site specific circumstances. These could include:

- A deteriorating market environment eg falling prices of new build homes (this is particularly applicable to Bexhill)

- Abnormal build costs eg associated with topography, contamination or complexity of the site

- Abnormal or unforeseen costs associated with access arrangements that were not evident prior to securing the site

- Lack of available affordable housing grant or housing associations unable to fund intermediate type products at a particular point in time (this is particularly applicable to Bexhill since the assessment suggests some schemes will be unviable without grant)

- Significant costs or contributions which are necessary for the development to proceed, in particular:

  - Strategic infrastructure requirements

  - Archaeological and heritage considerations/ requirements (this is particularly applicable in Battle and Rye where the central areas are defined Conservation Areas)

  - Ecological/ nature or wildlife considerations

1. Introduction and Objectives

1.1 DTZ has been commissioned by Rother District Council to carry out a viability assessment of its affordable housing policies. The work has been undertaken to inform the development of policy on affordable housing within the District and to satisfy the requirement set out in Planning Policy Statement 3 (PPS3) Housing.

National Policy

1.2 There is now explicit national policy, set out in Planning Policy Statement 3 (PPS3) Housing, that affordable housing targets set by local authorities should:

> *"reflect an assessment of the likely economic viability of land for housing within the area, taking account of risks to delivery and drawing on informed assessments of the likely levels of finance available for affordable housing, including public subsidy and the level of developer contribution that can reasonably be secured."* (PPS3, paragraph 29, p10)

1.3 PPS3 does not specify how a viability study is to be undertaken – merely that affordable housing policies should be tested. However, the Planning Inspectorate has made clear through its rulings on Blyth Valley, Poole and Slough its intention to test local authority affordable housing policies to ensure that they are viable. DTZ understand that the Planning Inspectorate expects:

- Councils to justify their affordable housing policies (for example, in their Core Strategy or relevant Development Plan Document) with a viability assessment.
- Any affordable housing target must have been tested – it is not acceptable to simply rely on clauses that promise flexibility. Authorities need to justify the maximum contribution they are seeking, even if in practice lower levels may be considered for schemes under particular circumstances. The same also applies to thresholds.
- The Inspectorate does not believe it is sensible to set affordable housing policy for the next 20 years based on the current 'abnormal' market, as this would artificially reduce thresholds and quotas below where they should be over the long term. There is a clear need therefore to understand the impact of changing market conditions on levels of viability and how to set policy accordingly.

Rother District Council Affordable Housing Policy Objectives

1.4 In developing affordable housing policy Rother District Council is seeking to achieve a number of different objectives:

- To maximise the delivery of affordable housing given the level of housing need (256 affordable homes required per annum) identified through the Rother housing need assessments undertaken by DCA.
- To devise policy that will maintain the pipeline of new housing developments coming forward to ensure provision of new homes, including market and affordable homes.

- The desire to foster mixed communities and to ensure a reasonable mix of incomes and ages within local neighbourhoods through the delivery of mixed tenure developments and, within the rural parts of the District in particular, securing a proportion of smaller homes to address biases within the existing stock.

Key Questions and Approach

1.5 The key questions that this viability assessment addresses relate to the policy proposals set out in Rother District Council's LDF Core Strategy – Consultations on Strategy Directions (November 2008):

- Can 40% affordable housing be achieved through new housing development within Rother on sites delivering 15 or more homes?
- Is it viable to seek a 50% affordable housing contribution on sites within the rural areas of Rother?
- It is viable to seek affordable housing on smaller sites: sites of 10 or more homes in Battle and Rye and sites of 3 or more homes in the rural areas?
- How do different variables, including house price changes, the availability of grant, affordable housing tenure and increases in Section 106 contributions affect viability?

1.6 In order to examine these questions, DTZ has appraised a number of typical but **hypothetical** development sites within Rother to test how viable they are under different circumstances.

1.7 The building blocks of the viability model are shown in Figure 1.1. Further information on the model is presented in Sections 4 and 5 of this report. The broad elements of the approach were presented to the Hastings and Rother Housing Market Partnership in November 2009. We comment in the report where the inputs or assumptions have been refined in response to feedback from the Partnership.

Figure 1.1: The Viability Modelling Approach

Framework for Analysis	Key Components	Key Variables for Testing	Viability Tests
Historic house price and sales rates	Revenues (price of market and affordable homes)	Percentage of affordable housing	Internal Rate of Return (target 15%)
Value geographies representing the 4 proposed policy areas within Rother District	Costs (build, non-AH s106, marketing, finance costs, etc)	Market prospects – different scenarios for prices	Residual land value (using land value as output)
Development archetypes – 9 different scheme types	Land value (an output of the modelling)	Addition of affordable housing grant and changes to tenure	% Profit on cost

What Defines Viability

1.8 It is important to stress that there can be no definitive answer to the question of viability, since it is dependent on a number of variables and judgements. However, it is useful to set out what defines whether a development scheme is likely to be viable.

1.9 There are two important components that determine whether a housing development is likely to be viable or not:

- The overall scheme needs to be **profitable** for the developer. This means that when all the costs of delivering the scheme are taken into consideration, they are exceeded by the revenues generated by the scheme by a sufficient margin. The extent of the profit required for a developer to proceed will vary and is now increasingly dictated by the banks, where they are lending development finance, to ensure that the returns justify the risk.

- The overall scheme needs to generate a **positive land value** so that the land owner is incentivised. The value of land is calculated as a residual (ie what is left over) when the costs of the development are subtracted from the revenues.

1.10 Whether a particular scheme is viable is not black and white. Theoretically, a scheme can be defined as viable if the revenues generated exceed the costs of delivering the development and generate both a reasonable profit for the developer and a positive land value for the land owners. In practice, whether the scheme is brought forward will depend on how the land value compares to values generated by existing or alternative uses.

1.11 Where land has an existing use (eg agriculture, car park, commercial premises etc) it needs also to be valued under its current activities. Developers and land owners are only likely to bring forward a residential development on such sites if the value generated by the scheme exceeds the value generated by current activities on the site.

1.12 The same issue applies to alternative uses to which the land might be put. However, it may not be appropriate to consider alternative use values on many sites since such development is subject to current planning policies which may mean that alternative uses are unlikely to secure planning consent.

1.13 An important test for this viability assessment has involved establishing threshold values for existing/alternative uses. For residential development to be deemed viable, land values need to exceed these thresholds.

1.14 Landowners may also have expectations about what value they could achieve for their land under residential development. This is known as ‘hope value’ and can affect a landowner’s decision about whether to sell or develop their site if they perceive that a higher value could be achieved under different circumstances eg a change of policy or Government, a better market in 5 years time etc.

1.15 The rest of this report is structured as follows:

- **Section 2** sets out the assumptions about residential sales **values** within Rother and how these vary across the District
- **Section 3** develops scheme **archetypes** and provides the rationale for modelling viability on this range of sites
- **Section 4** presents the **model structure** and key assumptions
- **Section 5** sets out the results of the **base case** modelling
- **Section 6** tests the viability of affordable housing policies under different **scenarios** and considers the implications for policy

2. Residential Values in Rother

2.1 There are two overarching variables that determine whether a development is likely to be viable: revenues and costs. There are numerous inputs that determine what the scheme's revenues and costs are. Some of these are broadly standard across the country eg interest rates, level of profit a developer will expect etc. Others need to be defined locally. Specifically, these include:

- Sales prices of new homes which generate the majority of the scheme's revenues
- Build costs of new homes (see Section 4)
- Section 106 contributions required by the District (see Section 4)
- The nature of typical development schemes in terms of site size, mix and density (see Section 3).

2.2 This section sets out the inputs in relation to residential sales values. A key driver of development viability is the sales value per square metre that can be achieved on new residential development schemes. Higher sales values produce greater revenue streams, thus improving margins if costs are kept constant. However, in practice competitive bidding for land means that a development in a high value area may be no more profitable than that in a lower value area, as higher revenues are offset by higher land costs. An important part of the viability modelling is therefore to capture residential sales values and how these vary across Rother District.

Rother District Council's Proposed Policy Areas

2.3 The Rother LDF Core Strategy – Consultations on Strategy Directions identifies four policy areas: Bexhill, Battle, Rye and the Rural Areas. The District Council propose to apply different affordable housing policies to each of these areas. A brief overview of each of the policy areas is provided below:

1 **Bexhill:** Bexhill is a medium sized coastal town with a population of 40,450 at the 2001 Census. It is primarily residential in character with an established employment, shopping and service centre role. It is the largest town in Rother and accounts for just under half the population and is its administrative centre. The central core is a designated conservation area.

2 **Battle:** Battle is a historic town of over 6,000 people situated within the High Weald Area of Outstanding Natural Beauty. Battle's central area is a designated conservation area and development is constrained by protected heritage sites and National Trust Land.

3 **Rye:** Rye is a small historic town situated at the confluence of the Rivers Rother, Tillingham and Brede. Rye has a population of approximately 5,000 when including

the contiguous areas of Rye Harbour and Playden. The central core is a designated conservation area.

4 **Rural Areas:** This covers the remaining part of the District that is characterised by a network of rural settlements that act as service centres for the surrounding areas. Some of the larger settlements are the villages of Ticehurst and Robertsbridge to the north, Westfield to the South and Peasmarsh to the East.

Approach to Establishing Residential Sales Values

2.4 The residential sales values used in the model represent the averages achieved from the period 2004 to 2008. This approach was discussed with the Hastings and Rother Housing Market Partnership. Some developers in the group felt that current data should be used instead. However, DTZ strongly supports the use of values (and costs) for the period 2004-08 for the following reasons:

- The Planning Inspectorate has indicated that viability assessments should not be based on an 'abnormal market'. It is difficult if not impossible to define a normal market but it would seem sensible that the baseline for the study should not be based on values or costs at one specific point in time, which might not be representative of the past or future. Thus, taking an average of a 4 year period provides a reasonable and conservative basis for modelling since there is a reasonable expectation that these costs and values will be achieved in the future (as they have in the past) and they do not represent values or costs at either the peak or trough in the market.

- Using current values would represent a serious risk when analysing data at the localised level. Since the housing market downturn set in, transactions have fallen dramatically and are currently around half the levels experienced in the decade to mid 2007. Thus, house prices reported in 2009 have been based on very low numbers of transactions and are likely also to have been influenced by the type of properties traded. There is a risk that using current (2009) values could be affected by a very small sample size and skew the results, particularly when analysing prices at the sub-District scale.

- DTZ considered testing current (2009) values as a sensitivity test. However, on reviewing the house price data, sales prices reportedly achieved in 2009 in Rother do not vary significantly from the average for 2004-08 and would therefore have limited effect on the results of the modelling. Sales prices provided in confidence by one developer, on a site within the District which is currently being sold, appear to support this.

2.5 DTZ has defined the four policy areas in Rother using Lower Super Output Areas (LSOAs) [1]. This is the lowest spatial area that house price data can be captured using Hometrack. This is shown in Figure 2.3 at the end of this section. This has been done with reference to maps showing the development boundaries in the Rother District Local Plan.

2.6 Hometrack data is based upon mortgage valuations as well as data from the Land Registry which is cleaned and checked for duplicates before it is entered into system. For this reason, Hometrack data is based upon a larger sample of price points. It also enables Hometrack to provide price data per sq m which is unavailable from Land Registry data.

Residential Sales Values Inputted into the Model

2.7 For the purposes of the modelling residential sales values need to be identified for each of the policy areas. Figure 2.1 presents these values. The values that are inputted into the model represent the average sales values in £ per sq m (and £ per sq ft) for each of the four policy areas for the period 2004/5-2007/08.

Figure 2.1: Average Residential Sales Values (2004/05 to 2007/08) by Policy Area Per Sq M (per Sq Ft)

	Average Price Per Sq M	Average Price Per Sq Ft	New Build Price Per Sq M (plus premium +19%)	New Build Price Per Sq Ft (plus premium +19%)
Bexhill	£1,905	£177	£2,270	£211
Battle	£2,227	£207	£2,647	£246
Rye	£2,260	£210	£2,690	£250
Rural Areas	£2,399	£223	£2,851	£265

Source: Hometrack, CLG for Land Registry New Build Premium

2.8 The data in Figure 2.1 (columns 2 and 3) represents a mix of new build and existing dwelling prices. The viability assessment requires new build sales values as an input. Whilst these can be derived from Hometrack the sample size in any one year at the local authority level appears to be small, resulting in wide variations in the average sales prices (and premiums) for new and old properties in different years, depending on the stock that has been traded.

2.9 For this reason, we have assumed that under 'normal' market conditions there will be a premium associated with new build homes within the District (columns 4 and 5). This is well

[1] A Super Output Area (SOA) is a unit of geography used in the UK for statistical analysis. Lower super output areas are areas that have a minimum population of 1000 and a mean population of 1500.

established in data at the national and regional level.[2] In the absence of reliable local data, we have applied the average price premium (19%) associated with new build homes for the South East over the period 2004-2008 in Figure 2.1. This means that the average sales values in the four policy areas of Rother have been uplifted by 19% to reflect the likely higher average values associated with new build properties compared to the stock as a whole.

2.10 The values to be inputted into the model have been subject to review by DTZ's Residential team and cross checked with data provided by one local developer. Discussion of new build sales prices in different areas of Rother at the Housing Market Partnership meeting in November 2009 revealed *expectations* amongst some of the private sector developers in the current market of price range around £200-300 per sq ft (£2,100-3,200 per sq m), depending on location within the District. This appears to be consistent with the assumptions about sales prices, including new build premium, set out in Figure 2.1.

Future Housing Market Scenarios

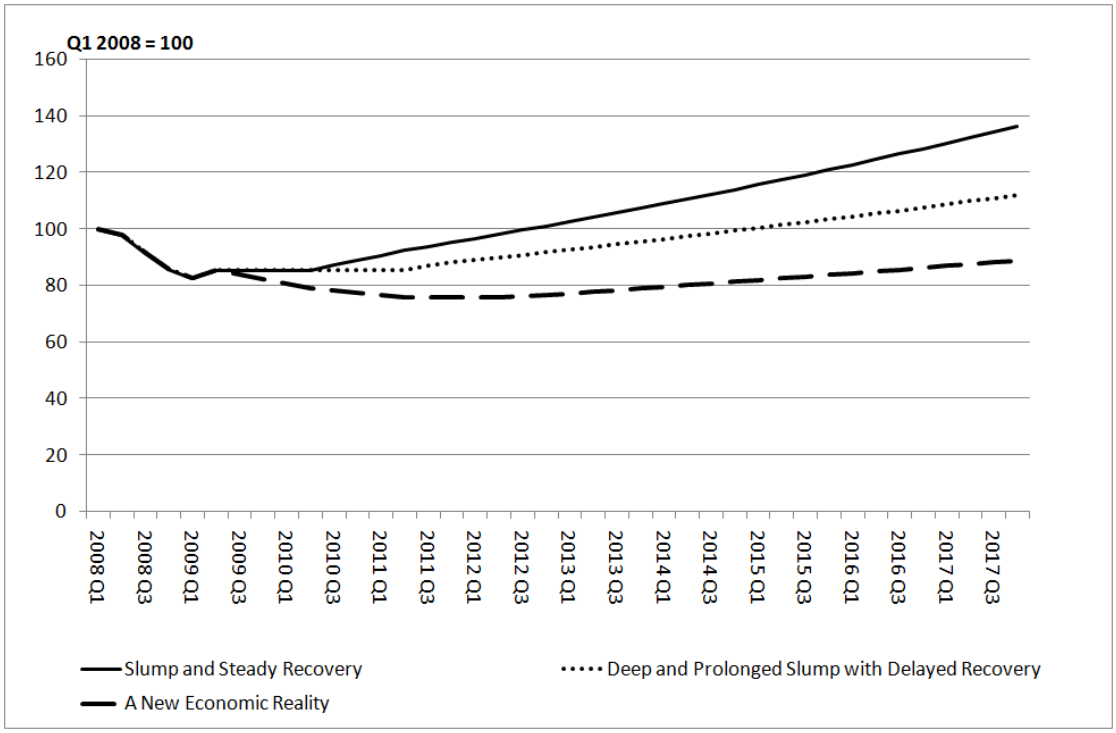
2.11 A key feature of DTZ's viability modelling is that it is cash flow based. This is extremely important in testing viability, since development is delivered over a period of time and the timing of revenues (sales of new homes) and the timing of costs (eg build costs, interest charges) will significantly affect the viability of development.

2.12 The recent housing market downturn has illustrated the importance of cash flow to development viability. Falls in prices and the contraction in mortgage availability led to a significant fall in sales. Transactions fell to just 40% of normal market levels in Q1 2009 in the South East as a whole. Data for Rother suggests that transactions in 2009 as a whole were around half the levels associated with the period up to mid 2007. For developers this meant that not only were prices of new homes lower than expected, the time taken to sell homes on new developments radically increased. But build costs still had to be met and interest payments made, seriously affecting the profile of cash flow on new developments and undermining viability.

2.13 For some sites, particularly larger ones, the profile of cash flow will extend over more than one year. This means that the model needs to include assumptions about value (house price) inflation or deflation over the period. Predicting the future course of house prices is difficult, if not impossible. DTZ has developed its own housing market scenarios which focus on the path of the recovery in the South East (see Figure 2.2). Cash flow in the modelling is explained in more detail in Section 4.

[2] CLG data (based on Land Registry) shows that there is a significant premium associated with new build sales in a rising market. The data suggests that when prices fall the premium is reversed ie the average price for new build homes falls below the average price for all stock. This is likely to reflect the fact that house builders need to sell their properties and therefore apply larger discounts whereas homeowners are often prepared to stay put rather than accepting a lower price for their properties.

Figure 2.2: DTZ House Price Scenarios for the Outer South East



Source: DTZ scenarios; actual data to Q2 2009 from Nationwide

2.14 However, the purpose of this viability assessment is to test and support the development of affordable housing policies for the plan period to 2026. We propose therefore a simplified set of scenarios to those presented in Figure 2.2 that test the impact on viability of the three possible states of the housing market:

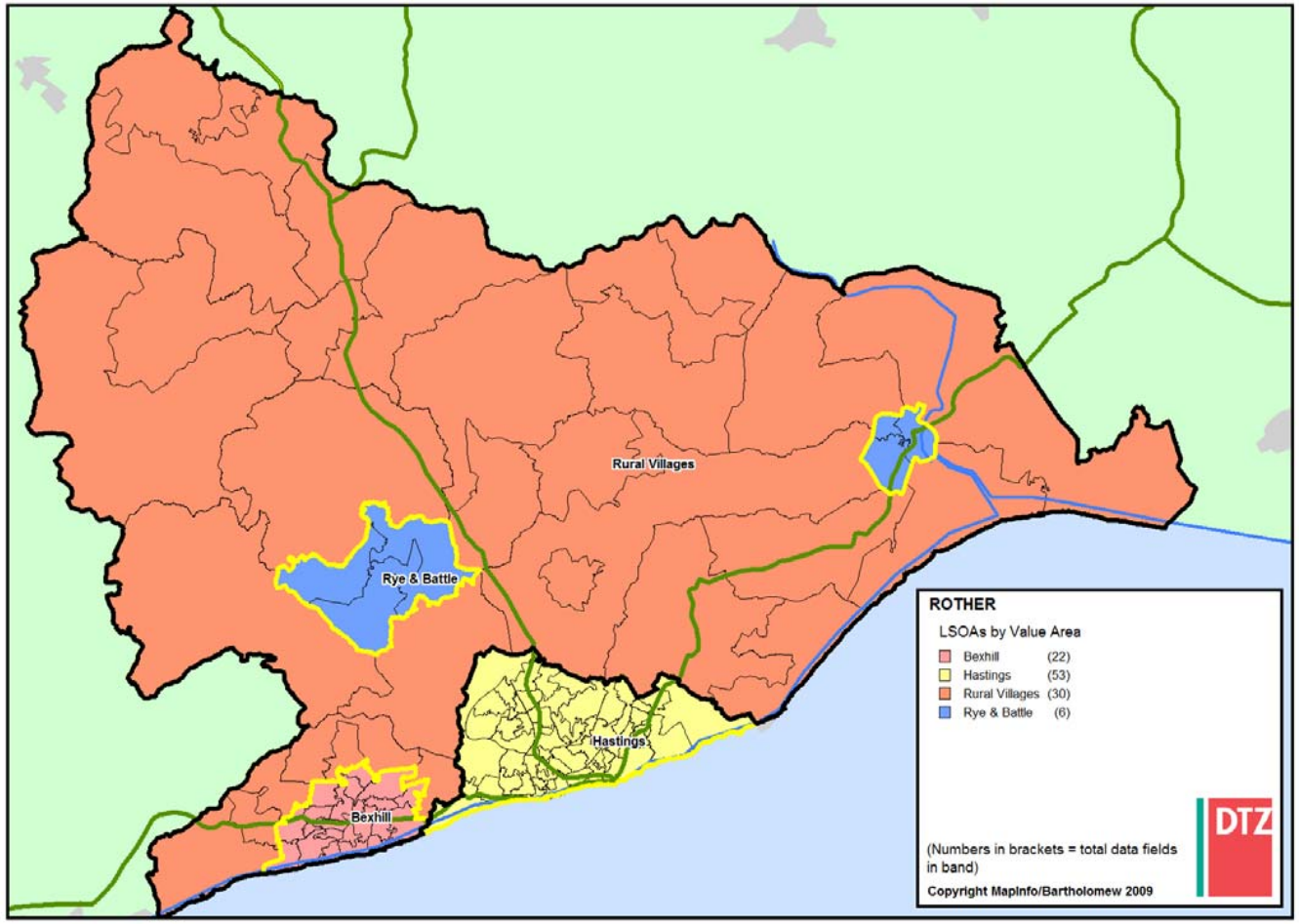
- House prices rising (+5% nominal price increase per annum and sales rates stable)
- House prices staying flat (0% per annum and sales rates stable) **(this scenario is used for the Rother base case)**
- House prices falling (-5% nominal price decrease per annum and sales rates fall by 50%)

2.15 The magnitude of inflation or deflation in these scenarios is somewhat arbitrary but the purpose is to demonstrate the broad impact on viability of price rises or falls. We believe +5% nominal house price inflation is a realistic assumption since the long term real trend in prices (ie adjusted for inflation) in the UK over the last 35 years has been close to 3%. Using data for the 35 year period takes account of whole cycles in the market and provides a realistic long term average price trend.

2.16 We propose that the price falls scenario is of the same magnitude as the price rises scenario for consistency. However, it is also important to adjust sales rate assumptions in the price falls scenario. Sales rates tend to remain steady in a rising market (averaging 1 per week for each sales outlet on a development site).[3] In a falling market, sale rates decline significantly as demand weakens, largely in anticipation of further price falls. Thus, we assume sales rates in a falling market are half the levels in a rising or flat market.

[3] Assumption based on discussions with the Home Builders' Federation and major developers in the South East for DTZ's study of viability in England for the HCA

Figure 2.3: Lower Super Output Area Definition of Each Policy Area



3. Rother District Site Archetypes

3.1 The challenge of a strategic viability assessment is that there are a wide range of factors that affect viability. These range from locally specific factors such as residential sales values and build costs and also include site specific factors including site size, dwelling mix, density and tenure mix of affordable housing provision. In order to limit the numerous variations that could be tested it is important to identify a number of **archetypes** – schemes that are typical within the District and which capture the inherent variability of development within the policy areas.

3.2 Based on the analysis of completions within the District and sites identified by the Strategic Housing Land Availability Assessment, Figure 3.1 presents a matrix which represents the range of development schemes that are likely to come forward within Rother. An initial version of this matrix was presented to the Hastings and Rother Housing Market Partnership in November 2009 and there was broad agreement that the type of sites identified represented the range of development scenarios within the District. The site archetypes have also been used within the Rother District Strategic Housing Land Availability Assessment.

Figure 3.1: Site Typologies within Rother District

Site Type	Bexhill	Battle	Rye	Rural Areas
Small edge of settlement Greenfield site	#	#	#	#
Large, edge of settlement Greenfield site	#	#	#	
Garden land (single plot or several)	#	#	#	#
Peripheral land in equestrian use		#	#	#
School Site	#	#	#	
Existing industrial sites	#	#	#	#
Unused or underused land with legacy of commercial activity	#	#	#	
Unused or underused areas for car parking (or otherwise unused)	#	#	#	#
Redevelopment of existing properties in large grounds	#	#	#	#
Access constrained land	**Cross cutting archetype which applies to the majority of the above site types and locations**			

Source: Rother District Council Planning Team, Rother District SHLAA

# denotes where site type may arise within the relevant policy area

3.3 The model also requires us to specify a range of site sizes, densities and dwelling mixes. Given that density and dwelling mix will impact on viability outcomes it is important that, as far as possible, these variables are varied independently. Thus, the model tests two density scenarios (30 and 50 dwellings per hectare) on each site. These are presented in Figures 3.2 to 3.5. Under each scenario we have held the dwelling mix broadly consistent although given the differences in site sizes and locations of some of the archetypes it is practical to alter the dwelling mix to reflect the reality of development opportunities. It is relevant to note that the model assumes that the mix (type and size) of affordable dwellings provided within the affordable housing quota mirrors the mix of the market housing. We take this approach for a number of reasons:

- It reflects the reality of housing need within the District – The Hastings and Rother SHMA (Update 2010) demonstrates the need for a range of dwelling sizes, including larger homes to meet priority needs amongst families on the Council's waiting list.

- It means that affordable housing quotas based on a proportion of units also translate into the same proportion of floorspace on site.

- It reflects local authority, HCA and national policy ambitions that affordable housing should be integrated within the overall scheme and as far as possible that design is 'tenure blind'. It is easier to achieve this integration if the type and size of dwellings delivered for the market and affordable sectors are the same or similar.

3.4 It is important to keep in mind that the archetypes presented in Figures 3.2 – 3.5 will not directly match past or future development sites in the District or sub-District policy areas, but they are designed to capture a range of scenarios so that the assessment can draw broad conclusions on the impacts on viability of different variables.

3.5 The principles which have informed the design (site size, density and dwelling mix) of these site archetypes are as follows:

Site Size: Range of 0.1 to 5 hectares

- Scheme information from the Rother District Strategic Housing Land Availability Assessment and data on past completions provided by Rother District Council show that the majority of sites tend to be below 1 hectare in size. However, it is prudent to test viability on larger sites and so the range of archetypes also includes sites of 3 and 5 hectares in size for Bexhill, Battle and Rye. The smaller site sizes (0.1 and 0.2 hectares) were included to reflect the proposed affordable housing threshold for the Rural Areas which would apply to developments of 3 or more dwellings.

- The number of dwellings is determined by the site size and density. However, completions data provided by Rother District Council shows that sites between 2004/05 and 2007/08 have delivered between 3 and 150 units. The largest of these - Bexhill College, Turkey Road - delivered 148 units between 2004/05 and 2007/08.

- In the Rother District SHLAA, the largest anticipated delivery of dwellings on an allocated site, other than the North East Bexhill Urban Extension, will be 55 units at the Former Galley Hill Depot. The urban extension of Bexhill is planned to deliver more than 1,200 units in total, with the focus of completions being from 2014 onwards. However, prior to 2014, 100 units are expected to be completed which is covered within our range of archetypes.

Density: 30 and 50 dwellings per hectare

- In the SHLAA the lowest density of any allocated site (under the Local Plan allocations) is 30 dph, these include the High School and Drill Halls in Bexhill and Harbour Road in Rye and Rye Harbour.

- The Assessment of Housing Land Supply shows that the highest density of any allocated site as at 1st April 2009 is 50 dph.

- Scheme information provided by Rother District Council shows that the average density of new house building within Rother District between 2004/5 and 2007/8 was 53 dwellings per hectare (dph).

- Scheme information provided by Rother District Council shows that apart from one scheme at Ticehurst primary school, delivering 8 units at 16 dph, all schemes in the District over the period 2004/05-2007/8 delivered dwellings at a density above 20 dph.

- The Hastings and Rother Housing Market Partnership felt that there were few sites likely to come forward outside of the range of 30 - 50 dwellings per hectare.

- Developers within the HMP acknowledged that in rural areas they would argue for lower density development, reflecting the size of dwellings they wish to build and existing densities. However, we have not tested densities lower than 30 dph because this was not consistent with national policy at the time the modelling was undertaken.

Dwelling Mix: Type and Size

- Rother District Council has proposed seeking a proportion (30%) of smaller (1 and 2 bed) dwellings across the District, with particular emphasis on development in rural areas given the bias in the existing stock towards larger homes. The SHMA Update (2010) suggests that such a policy should not be strictly enforced District wide but that it can be justified in the rural areas because of the significant bias in the profile of the stock. The mix tested at 30 dwellings per hectare (Figure 3.2 and 3.4) is consistent with securing 30% smaller dwellings, though under this scenario these are provided as 2 bedroom houses. The mix tested at 50 dwellings per hectare (Figures 3.3 and 3.5) contain a higher proportion of smaller properties (generally 50%) and these are delivered as a mix of 1 and 2 bed flats and 2 bed houses.

- The majority of past development in Rother has been houses rather than flats and developers at the HMP meeting felt there would be limited development of flats in the

future given current market conditions. Nevertheless, it is prudent to test the impact on viability of a proportion on flats delivered under the higher density scenario.

Figure 3.2: Site Archetypes with Size and Dwelling Mix Applied to Bexhill, Battle and Rye (30 dwellings per hectare)

Archetype	Site Size	Mix
Small Edge of Settlement Greenfield Site	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses
Large Edge of Settlement Greenfield Site	5 ha (150 units)	50 x 2 bed houses 50 x 3 bed houses 50 x 4 bed houses
Garden Land (Single or Several Plots)	0.5 ha (15 units)	5 x 2 bed houses 5 x 3 bed houses 5 x 4 bed houses
Peripheral Land in Equestrian Use	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses
School Site	3 ha (90 units)	30 x 2 bed houses 30 x 3 bed houses 30 x 4 bed houses
Existing Industrial Site	3 ha (90 units)	30 x 2 bed houses 30 x 3 bed houses 30 x 4 bed houses
Unused or Underused Land with Legacy of Commercial Activity	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses
Unused or Underused Areas for Car Parking	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses
Redevelopment of Existing Properties in Large Grounds	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses
Access Constrained Land	Cross cutting archetype which applies to majority of the above (considered in sensitivity testing in Section 6)	

Figure 3.3: Site Archetypes with Size and Dwelling Mix Applied to Rural Areas (30 dwellings per hectare)

Archetype	Site Size	Mix
Small Edge of Settlement Greenfield Site	0.5 ha (15 units)	5 x 2 bed houses 5 x 3 bed houses 5 x 4 bed houses
Garden Land (Single or Several Plots)	0.2 ha (6 units)	2 x 3 bed houses 2 x 4 bed houses 2 x 5 bed houses
Peripheral Land in Equestrian Use	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses
Existing Industrial Site	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses
Unused or Underused Areas for Car Parking	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses
Redevelopment of Existing Properties in Large Grounds	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses
Access Constrained Land	Cross cutting archetype which applies to majority of the above (considered in sensitivity testing in Section 6)	

Figure 3.4: Site Archetypes with Size and Dwelling Mix Applied to Bexhill, Battle and Rye (50 dwellings per hectare)

Archetype	Site Size	Mix	
		Flats	Houses
Small Edge of Settlement Greenfield Site	1 ha (50 units)	5 x 1 bed flats 20 x 2 bed flats	20 x 2 bed houses 5 x 3 bed houses
Large Edge of Settlement Greenfield Site	3 ha (150 units)	20 x 1 bed flats 30 x 2 bed flats	30 x 2 bed houses 50 x 3 bed houses 20 x 4 bed houses
Garden Land (Single or Several Plots)	0.5 ha (25 units)	5 x 1 bed flats 5 x 2 bed flats	10 x 2 bed houses 5 x 3 bed houses
Peripheral Land in Equestrian Use	1 ha (50 units)	5 x 1 bed flats 20 x 2 bed flats	20 x 2 bed houses 5 x 3 bed houses
School Site	3 ha (150 units)	20 x 1 bed flats 30 x 2 bed flats	30 x 2 bed houses 50 x 3 bed houses 20 x 4 bed houses
Existing Industrial Site	3 ha (150 units)	20 x 1 bed flats 30 x 2 bed flats	30 x 2 bed houses 50 x 3 bed houses 20 x 4 bed houses
Unused or Underused Land with Legacy of Commercial Activity	1 ha (50 units)	5 x 1 bed flats 20 x 2 bed flats	20 x 2 bed houses 5 x 3 bed houses
Unused or Underused Areas for Car Parking	1 ha (50 units)	5 x 1 bed flats 20 x 2 bed flats	20 x 2 bed houses 5 x 3 bed houses
Redevelopment of Existing Properties in Large Grounds	1 ha (50 units)	5 x 1 bed flats 20 x 2 bed flats	20 x 2 bed houses 5 x 3 bed houses

Figure 3.5: Site Archetypes with Size and Dwelling Mix Applied to Rural Areas (50 dwellings per hectare)

Archetype	Site Size	Mix	
		Flats	Houses
Small Edge of Settlement Greenfield Site	0.5 ha (25 units)	5 x 1 bed flats 5 x 2 bed flats	10 x 2 bed houses 5 x 3 bed houses
Garden Land (Single or Several Plots)	0.2 ha (10 units)		5 x 2 bed houses 5 x 3 bed houses
Peripheral Land in Equestrian Use	1 ha (50 units)	5 x 1 bed flats 20 x 2 bed flats	20 x 2 bed houses 5 x 3 bed houses
Existing Industrial Site	1 ha (50 units)	5 x 1 bed flats 20 x 2 bed flats	20 x 2 bed houses 5 x 3 bed houses
Unused or Underused Areas for Car Parking	1 ha (50 units)	5 x 1 bed flats 20 x 2 bed flats	20 x 2 bed houses 5 x 3 bed houses
Redevelopment of Existing Properties in Large Grounds	1 ha (50 units)	5 x 1 bed flats 20 x 2 bed flats	20 x 2 bed houses 5 x 3 bed houses

4. Viability Model Structure and Assumptions

4.1 This section of the report provides an overview of the structure of the viability model and the assumptions it uses.

How the Model Measures Viability

4.2 The model is based on the principles of Circle Developer which is a software package used by development specialists to appraise individual sites. These principles have been translated into an excel model which has been developed to test a large number of hypothetical sites simultaneously. In the model, viability is determined by examining residual land values and comparing these with existing use values.

4.3 In theory if a sites' residual value (at a given rate of return/profit margin) is above existing use value then it should be both viable and able to deliver that particular affordable housing contribution.[1] In practice the extent to which land value must exceed existing use value in order to incentivise development is the subject of much debate. However, for the purposes of this study we assume that if a residual land value exceeds existing use value then it should (in theory) be viable.

4.4 The model can also look at viability in terms of indicators of profitability which may be used within the development industry, including the achievement of a target Internal Rate of Return (IRR). The IRR is the discount rate needed to reduce the Net Present Value (NPV)[2] of a particular scheme to zero.

4.5 The IRR target - the requirement for a scheme to be deemed viable - is set at 15%. Before the onset of the credit crunch a 15% IRR was generally regarded by developers as the minimum needed to proceed with a scheme (though under current market conditions this has increased on many schemes due to stricter and costlier credit terms imposed by lenders).

4.6 The model can also measure scheme profitability, as defined by scheme surplus divided by scheme cost (profit on cost) and scheme surplus divided by scheme revenue (profit on Gross Development Value). This differs from the IRR approach as it does not use a discount rate to attach a 'worth' to when costs or revenues arise. Nevertheless, it still provides a useful measure of profitability and many developers use these to decide whether a scheme is viable.

4.7 Whilst each measure is calculated by the model, for the purposes of this study we focus upon the **residual land value** to establish whether a scheme is viable. This measure is typically used by developers, landowners and public authorities and so provides common ground in the assessment of viability. This approach was also broadly endorsed by the Hastings and Rother Housing Market Partnership.

[1] However, if it is below existing use value the affordable housing contribution may need to fall, which, keeping margin constant, will have the effect of increasing the residual land value.

[2] The net present value of a scheme is the sum of the present values of the individual amounts in the net income stream. Each future net income amount in the stream is discounted, meaning that it is divided by a number representing the opportunity cost of holding capital from now (year 0) until the year when income is received or the outgoing is spent.

Model Inputs

4.8 The model is structured on the basis of a time series cash flow for a particular development. The main input into the model is the configuration of the scheme (its archetype), in terms of the number of dwellings, density, dwelling mix (size, type and tenure) and disposal period (period from construction to sale). The scheme archetypes, which have been developed to reflect a representative range of different schemes across Rother District, are described in Section 3 of this report.

4.9 The other major inputs into the model are the assumptions around costs and values. DTZ has developed different residential sales value assumptions for each of the different policy areas within Rother. Analysis of how these values have been formulated is contained in Section 2. Each scheme therefore correlates to a specific set of inputs. These are described below.

Revenue (£ per sq m) by unit type, size and tenure

4.10 For the market housing an average £ per sq m value is calculated for each area, as shown in the analysis in Section 2.

4.11 For the revenue streams generated by the affordable housing we have applied a proportion to the market value of a unit which a developer would receive for a comparable unit of affordable housing with or without grant payment. **The base case model assumes that grant is not available**.

4.12 DTZ's experience is that, on average and on a like for like basis, a developer would receive around 40% of market value for a social rented unit and 60% of market value for a shared ownership unit (without grant). With grant the figure on average rises to 60% of market value for a social rented unit and 80% on a shared ownership unit (an increase of 20% for both).[3] This is presented using a simple illustration below.

Figure 4.1: Generation of Affordable Values Using Proportionate Approach

	Without Grant (%)	With Grant (%)	Without Grant (£)	With Grant (£)
Market Value of Property in Value Geography (£ per sq m)	*100%*	*100%*	*£100*	*£100*
Shared Ownership Value Flat (£ per sq m)	60%	80%	£60	£80
Social Rent Value Flat (£ per sq m)	40%	60%	£40	£60

4.13 It is acknowledged that local housing associations are unlikely to calculate what they pay for affordable housing on this basis. In reality, the amount that housing associations will bid for affordable housing on a market led development will depend on their own financial resources, their strategy for development and the proven need for grant on the scheme (following full disclosure of costs). These factors are likely to vary between schemes, associations and over time. Because of this complexity DTZ has used assumptions developed at the national level

[3] An alternative approach would be to capitalise housing association rents in Rother (DTZ assumes a 12 year period) and add grant (eg using HCA's target grant rate for social rented homes at £65k) to arrive at a value for the affordable housing component.

for HCA research into affordable housing delivery.[4] These indicative values are based on DTZ's market experience nationally prior to the market downturn, and it is acknowledged that in the current market conditions housing associations may not pay for affordable housing at this level. However new benchmarks have yet to be established of what associations will pay for affordable housing. The revenue stream for affordable units is realised in parallel with construction to reflect the fact that affordable housing revenues are often received earlier than those for market homes (which rely on sales).

Unit Area Assumptions

4.14 The £ per sq m values (both market and affordable) are combined with assumptions on floorspace to generate total unit prices within the modelling process. The floorspace assumptions, based upon DTZ's experience nationally and cross checked with the Hastings and Rother Housing Market Partnership are shown in Figures 4.2 (sq m) and 4.3 (sq ft).

Figure 4.2: Sq M Unit Area Assumptions Used For Generating Revenue per Unit – Rother District

	Floorspace (Sq M) Assumed in Assessment			HCA Standards[5]	
Number of Bedrooms	**Private**	**Shared Ownership**	**Social Rented**	**Bed Spaces**	**Minimum Size / Range**
One bedroom flat	51	51	51	2	48
Two bedroom flat	60	60	60	3-4	61-80
Two bedroom house	84	84	84	3-4	70-80
Three bedroom house	88	88	88	5	86-101
Four bedroom house	111	111	111	6	99-114
Five bedroom house	135	135	135	10 sq m for each additional bed space	

Source: DTZ and cross checked with the HMP

4.15 We have used bedrooms and floorspace in our assumptions and the figures used are consistent with the HCA standards for affordable housing (former Housing Corporation and English Partnerships standards) which generally refer to bed spaces. Figure 4.2 illustrates how the HCA bed space standards broadly relate to the model assumptions about number of bedrooms and floor space. Our assumptions deliberately assume the size of the affordable dwellings, in terms of floor space, will be the same as the private dwellings for simplicity within the model.

4.16 The output of this process provides the total revenue stream for each archetypal scheme, which is then subject to phasing and discounted cash flow analysis, as outlined below.

[4] HCA study of the Scope for Affordable Housing Delivery through S106 in a Post Credit Crunch Residential Land Market

[5] Derived from the HCA Housing Quality Calculator

Figure 4.3: Sq Ft Unit Area Assumptions Used For Generating Revenue per Unit – Rother District

Square Feet	Private	Shared Ownership	Social Rented
One bedroom flat	550	550	550
Two bedroom flat	650	650	650
Two bedroom house	900	900	900
Three bedroom house	950	950	950
Four bedroom house	1,200	1,200	1,200
Five bedroom house	1,450	1,450	1,450

Build Costs

4.17 We have obtained data from the Building Cost Information Service (BCIS) on average build costs (shown as £ per sq m in Figure 4.4 and £ per sq ft in Figure 4.5) for Rother District. Our approach to build costs matches that to sales values by using the average build cost for the study period 2004-08[6]. The build costs used in the model can be regarded as broadly representative of current build costs[7] and are sufficient to meet Code for Sustainable Homes Level 3.[8] The introduction of Code for Sustainable Homes Level 4 (planned for 2013) is tested as a sensitivity in Section 6.

Figure 4.4: Rother District Build Costs £ per Sq M Average 2004-08

Build Costs £ Per Sq M	New Build	Conversion	Listed Conversion
Up to 75m2 (GFA per unit) **Flat**	£850	£807	£1,022
75 to 100m2 (GFA per unit) **Flat**	£882	£839	£1,054
100 to 125m2 (GFA per unit) **Flat**	£936	£882	£1,119
Over 125m2 (GFA per unit) **Flat**	£1,076	£1,022	£1,302
75 to 100m2 (GFA per unit) **Houses**	£687	£473	£829
100 to 125m2 (GFA per unit) **Houses**	£710	£495	£850
Over 125m2 (GFA per unit) **Houses**	£742	£506	£882

(Source: BCIS/DTZ)

[6] Achieved by adjusting current build costs according to the BCIS build cost inflation index

[7] 2009 build costs for Rother are 7% lower according to the BCIS

[8] A large proportion of the BCIS sample is comprised of developments by RSLs / RPs, which are required to meet CSH Level 3 standards. Furthermore, final build costs used in the modelling have been uplifted by 25% to take account of external work. This is a generous uplift and therefore also sufficient to capture the relatively modest additional cost of achieving CSH Level 3.

Figure 4.5: Rother District Build Costs £ per Sq ft Average 2004-08

Build Costs £ Per Sq Ft	New Build	Conversion	Listed Conversion
Up to 807 sq ft (GFA per unit) **Flat**	£79	£75	£95
807 to 1,075 sq ft (GFA per unit) **Flat**	£82	£78	£98
1,075 to 1,345 sq ft (GFA per unit) **Flat**	£87	£82	£104
Over 1,345 sq ft (GFA per unit) **Flat**	£100	£95	£121
807 to 1,075 sq ft (GFA per unit) **Houses**	£64	£44	£77
1,075 to 1,345 sq ft (GFA per unit) **Houses**	£66	£46	£79
Over 1,345 sq ft (GFA per unit) **Houses**	£69	£47	£82

(Source: BCIS/DTZ)

4.18 BCIS provide differential build cost values for new build and conversion and for different gross floor areas (GFA) per unit as shown in Figure 4.4 and 4.5. These have been matched to unit sizes using the process shown in Figure 4.6.

Figure 4.6: BCIS Unit Costs – Type and Size Matching Assumptions – Rother District

BCIS £ per sq m/ per sq ft	1 Bed Flat	2 Bed Flat	2 Bed House	3 Bed House	4 Bed House	5 Bed House
Up to 75m2 / 805 sq ft GFA per unit) **Flats**	●	●				
75 to 100m2 / 807 to 1,075 sq ft GFA per unit) **Houses**			●	●		
100 to 125m2 / 1,075 to 1,345 sq ft GFA per unit) **Houses**					●	
Over 125 m2/ GFA per unit						●

(Source: BCIS/DTZ)

4.19 However, in DTZ's experience, at the localised level, costs from BCIS tend to be on the low side and a small number of particular schemes can skew the data as the sample size BCIS has at the Local Authority level is relatively small. BCIS costs also do not include the full costs of external works (including the costs of providing car parking). External works are those

works that take place outside of the building footprint but inside of the development site footprint.

4.20 An investigation into the difference between BCIS cost data compared with that in the Greater London Authority Toolkit found that BCIS data needs to be inflated by 35% to provide a more realistic set of build costs. In this study we have reduced this uplift to take into account the fact that external works are less complex outside of London. DTZ assumes that 25% uplift should be applied.

4.21 This 25% assumption was sense-checked by analysing a sample of 50 actual schemes (nationally) submitted to BCIS. These are available on the BCIS homepage under 'Analyses'. Some of this submitted data is sufficiently detailed to allow investigation into what proportion of total costs on a scheme are made up of external works. This exercise confirmed that 25% would be an appropriate uplift to use. Whilst this assumption about the additional costs of external works is not specific to Rother District it represents a very generous uplift on the raw BCIS data for Rother and therefore represents a cautious estimate about build costs within the District, with the aim of avoiding under-estimating build costs. It is important to keep in mind that this approach to establishing build costs for the modelling process is designed for a strategic assessment such as this. Individual site specific appraisals are likely to be able to identify specific costs associated with external works, which could avoid the need to uplift build costs provided by BCIS.

4.22 The final build costs used in this viability assessment for Rother District are summarised in Figures 4.7 (£ per sq m) and 4.8 (£ per sq ft).

Figure 4.7: Final Build Costs Used In Model For Rother District 2004-08 (£ per sq m)

Build Costs £ Per Sq m	Applies To	New Build	Conversion	Listed Conversion
Up to 75m2 / 805 sq ft GFA per unit) **Flats**	**Rother** 1, 2 and 3 bed flats	£1,134	£1,007	£1,273
75 to 100m2 / 807 to 1,075sqft GFA per unit) **Houses**	**Rother** 2 and 3 bed house	£918	£634	£1,102
100 to 125m2 / 1,075 to 1,345 sqft GFA per unit) **Houses**	**Rother** 4 bed house	£949	£656	£1,139
125m2 + / 1,345 sq ft GFA per unit **Houses**	**Rother** 5 bed house	£988	£683	£1,186

(Source: BCIS, uplifted by 25% by DTZ to take account of external works)

Figure 4.8: Final Build Costs Used In Model For Rother District 2004-08 (£ per sq ft)

Build Costs £ Per Sq Ft	Units Applied To	New Build	Conversion	Listed Conversion
Up to 75m2 / 805 sqft GFA per unit) **Flats**	**Rother** 1, 2 and 3 bed flats	£105	£94	£118
75 to 100m2 / 807 to 1,075sqft GFA per unit) **Houses**	**Rother** 2 and 3 bed house	£85	£59	£102
100 to 125m2 / 1,075 to 1,345 sqft GFA per unit) **Houses**	**Rother** 4 bed house	£88	£61	£106
125m2 + / 1,345 sq ft GFA per unit **Houses**	**Rother** 5 bed house	£92	£63	£110

(Source: BCIS, uplifted by 25% by DTZ to take account of external works)

Build Costs Between Tenures and Net to Gross

4.23 DTZ has not used tenure cost differentials for the base case. Where the affordable housing component is tenure blind or clustered ie designed to be indistinguishable from the market housing and integrated within the development; build costs will be broadly similar. This reflects the fact that although the cosmetic finish on private housing is determined by the cost/value ratio of maximising revenue in the short term (because developers will generally have less interest in the longevity of the product) which may increase costs, an RSL / RP may not require the same level of "cosmetic" finish but will require higher quality of basic construction aimed at minimising repairs and maintenance in the longer term (and so total costs will be broadly similar).

4.24 The above process provides build costs for the different type, size and tenure of units.

4.25 To convert build costs per sq m / per sq ft to build costs per unit, costs per sq m / sq ft are multiplied by gross external areas for each type and size of unit, which are set out in Figures 4.9 and 4.10. Gross external build areas are used for calculating unit costs (as opposed to gross internal areas for unit values) as the cost of the entire building, including its ancillary areas, has to be borne by the developer.

4.26 Based upon DTZ's market knowledge, gross internal build areas are around 80% of the gross external area for flats and around 95% of the gross external area for houses.

Figure 4.9: Gross Area Assumptions (sq m)

Type and Size of Unit	Gross Internal Area (Sq m) *(80% Flats, 95% Houses)*	Gross External Area (Sq m)
One bedroom flat	51	63
Two bedroom flat	60	75
Two bedroom house	84	88
Three bedroom house	88	93
Four bedroom house	112	117
Five bedroom house	135	142

Figure 4.10: Gross Area Assumptions (sq ft)

Type and Size of Unit	Gross Internal Area (Sq ft) *(80% Flats, 95% Houses)*	Gross External Area (Sq ft)
One bedroom flat	550	688
Two bedroom flat	650	813
Two bedroom house	900	945
Three bedroom house	950	998
Four bedroom house	1,200	1,260
Five bedroom house	1,450	1,523

4.27 Combining the relevant build cost per unit with the relevant gross external area assumption above therefore provides the total construction costs associated with each archetypal scheme, which is then subject to phasing and discounted cash flow analysis, as outlined below.

Additional Cost Components

4.28 The analysis above shows the way that build/construction costs within the model are generated based upon the particular scheme.

4.29 Construction costs tend to form the largest component of total development costs. In addition to construction costs a particular scheme will also incur the costs shown in Figure 4.11 - this documents the full range of cost components within the model. A brief commentary on how these cost components are calculated on a nominal basis (before adjustment to reflect phasing through the cash flow) is also shown.

Figure 4.11: Analysis of Model Cost Components

COST COMPONENT	BASIS UPON WHICH MODEL CALCULATES (NOMINAL BASIS)
Demolition costs	Assumed to amount to £110,000 per hectare of site size. This figure is informed by recent applications that show high variability of demolition costs, but that £1 per sq ft across a whole site (there are 110,000 sq ft in a hectare) would appear reasonable. Demolition costs are assumed not to be incurred on greenfield sites.
Construction Costs	As outlined above. Costs generated by configuration of scheme archetype and relevant build cost type.
Section 106 costs (non-affordable housing)	Assumed to amount to £3,500 for every unit (market and affordable), which is based upon Rother's District Council's experience of non-affordable housing section 106 costs. This cost is varied to £6,500 per unit in the sensitivity test.
Sales costs	Calculated at 3% of the total private sales revenue (excludes sales revenue from affordable units).
Land value / land price	Can either be an input or an output of model (see below on treatment as output). As an input it can either be obtained from Valuation Office data or can be assumed as a % of Gross Development Value (the total revenue generated by the schemes).
Interest	A standard finance rate of 6.5% is assumed and applied to the scheme's interest baring balance (costs less revenues), which reflects historic development finance rates.
Car parking costs	Assumed to be covered by build costs (which have been uplifted to include external works). On some complex sites eg where underground car parks are required the scheme may incur additional costs which are not allowed for in the base case

Cash Flow and Phasing

4.30 In order to move from nominal costs and revenues to a time series cash flow the model phases these streams over the time period of delivery. To document this process and the assumptions employed a worked example9 is shown below. The move from nominal values to the **real values as they appear in the cash flow** is explained in the third column.

4.31 Figure 4.12 sets out the costs associated with this hypothetical scheme, and how costs in the model move from a nominal level to the real level as they appear in the final cash flow. Revenues for the scheme are shown in Figure 4.13. Revenues are split between those generated by the sale of private units and those generated by sale of affordable units. A detailed analysis of how the revenue streams for private and affordable housing units are calculated is presented earlier in this section.

[9] The figures for the worked example are adapted from an anonymous national scheme and used to illustrate the how the model works. The figures themselves are therefore purely illustrative.

Figure 4.12: Worked Example of Cash Flow Costs

Cost	Nominal	Real	Nominal to Real Explanation	With Contingency Added
Demolition	£322,917	£325,714	Assumed to be incurred over first 2 quarters of development period (Yr 1). 5.5% build cost inflation per annum assumed (compounded over 2 quarters) in model. Demolition costs are only incurred on new build schemes and are not applied to greenfield site archetypes	£325,714 (no contingency)
Non Affordable Housing Section 106	£1,620,000	£1,620,000	Fixed payment in first quarter of development period. No inflation factor assumed.[10]	£1,620,000 (no contingency)
Construction	£20,345,685	£21,803,405	Assumed over years 2 to 4 (3 year build period for this particular scheme). 5.5% build cost inflation per annum assumed in model.	**£25,073,916** Inflated by 10% for professional fees and 5% for contingency
Sales Costs	£1,040,041	£1,120,238	Assumed to be incurred over years 3 to 5 (disposal period for this particular scheme). Sales costs equal to 3% of private unit revenue.	£1,120,238 (no contingency)
Land Price	£11,395,744	£12,052,423	Uplifted by acquisition on land costs (land purchaser costs such as legals and stamp duty) of 5.75%. Cost incurred in Yr 1.	£12,052,423 (no contingency)
Interest	£3,902,232	£3,902,232	Nominal level calculated on interest bearing balance over duration of scheme, so remains the same.	£3,902,232 (no contingency)
Car Parking Costs	None	None	On schemes providing car parking these will be factored into the cash flow in year 1 at their nominal amount	£0
Total Cash Flow Costs				**£44,094,523**

[10] Some section 106 payments will be due on completion, though for the purposes of the modelling we have assumed these are required on commencement (as most are).

Figure 4.13: Worked Example of Cash Flow Revenues

Revenue	Nominal	Real	Nominal to Real Explanation
Private Units	£34,668,020	£37,295,913	For this worked example the nominal figure is inflated by a standard assumed uplift of 2.5% in house prices (and therefore revenue) over the course of the development. For the Rother modelling we will use the actual house price inflation experienced over the 2005 to 2008 period and apply this (working backwards) to the £ psft sales values.
Affordable	£10,914,956	£11,742,328	As affordable housing revenues are agreed at the outset of a build period they are not subject to house price inflation but are uplifted by build cost inflation, so that the real value of the revenue stream is not eroded.
Total		**£49,038,241**	

4.32 Adding together the costs and revenue streams in the cash flow generates the scheme surplus, which is expressed as a profit on cost. The model also calculates the scheme's internal rate of return (see above). For this particular worked example the scheme surplus of £4.94m equates to a profit on cost of 11.2% and an IRR of 13% (Figure 4.14), meaning that according to the viability target (15%) the scheme would not be viable.

Figure 4.14: Scheme Totals

Totals	£
Costs	£44,094,523
Revenue	£49,038,241
Surplus	£4,943,718
Profit On Cost	**11.2%**
IRR	**13%**

Residual Land Values

4.33 The worked example above takes land value as a (pre-determined) input into the scheme. However, for the purposes of the Rother Viability Assessment land values will be assessed as a residual output of a scheme, which will then be compared with existing use value to determine whether the scheme would be viable. The process of calculating the residual land value within the model can be documented by first showing the effect of assuming a zero land

value. This means that a scheme will generate a much inflated surplus due to the removal of a large component of total cost. This is illustrated in the worked example in Figure 4.15.

Figure 4.15: Model Outputs With and Without Land Value

	With Land Value Inputted			Without Land Value Inputted		
	Nominal	Real/Uplifted	With Contingency and Prof Fees	Nominal	Real/Uplifted	With Contingency and Prof Fees
Costs						
Demolition	£322,917	£325,714	£325,714	£322,917	£325,714	£325,714
Sec 106	£1,620,000	£1,620,000	£1,620,000	£1,620,000	£1,620,000	£1,620,000
Construction	£20,345,685	£21,803,405	*£25,073,916*	£20,345,685	£21,803,405	*£25,073,916*
Sales Costs	£1,040,041	£1,120,238	£1,120,238	£1,040,041	£1,120,283	£1,120,283
Land Value / Price	£11,395,744	£12,052,423	£12,052,423	£0	£0	£0
Interest	£3,902,232	£3,902,232	£3,902,232	£568,030	£568,030	£568,030
Total	£38,626,619	£40,824,012	**£44,094,523**	£28,707,897	£25,437,432	**£28,707,943**
Revenues						
Private Units	£34,668,020	£37,295,913	£37,295,913	£34,668,020	£37,295,913	£37,295,913
Affordable	£10,914,956	£11,742,238	£11,742,238	£10,914,956	£11,742,238	£11,742,238
Total	£45,582,976	**£49,038,241**	**£49,038,241**	£45,582,976	**£49,038,241**	**£49,038,241**
Surplus, Profit and IRR						
Surplus			£4,943,718			£20,330,298
Profit on Costs			11.2			71%
IRR			13%			84%

4.34 Figure 4.15 shows the modelling impact of removing the land value/cost. For the worked example the profit on costs and IRR rise dramatically, to 71% and 84% respectively. This is due both to the removal of land costs and lower interest payments, as the interest baring balance is significantly reduced in the early stages of the project because of the absence of land cost. In order to generate a residual land value the goal seek function[11] is then used to determine by what level the land value would have to rise to (from zero) in order to achieve the target internal rate of return (15%). For the worked example this would equate to a residual land value of £11.38m as set out in Figure 4.16.

[11] Goal seek is a function in excel that allows one to find a specific value for a cell by adjusting the value of another cell. In terms of viability, as land price/cost rises the rate of return on a particular scheme drops as profitability is reduced. So goal seek is used within the model to find out by how much land cost can rise by (from £0) on a particular scheme until the rate of return is lowered to the target level. The resulting land cost is the land's residual value.

Figure 4.16: Calculation of Residual Land Value as an Output

	Final Cash Flow Without Land Value	Final Cash Flow With Land Value Calculated As A Residual
COSTS		
Demolition	£325,714	£325,714
Sec 106	£1,620,000	£1,620,000
Construction	£25,073,916	£25,073,916
Sales Costs	£1,120,238	£1,120,238
Land Value / Price	£0	**£11,386,836**
Interest	£568,030	£3,500,601
Total	**£28,707,943**	**£43,027,305**
REVENUES		
Private Units	£37,295,913	£37,295,913
Affordable	£11,742,238	£11,742,238
Total	**£49,038,241**	**£49,038,241**
RETURNS		
Surplus	£20,330,298	£6,010,936
Profit on Costs	71%	14%
IRR	**84%**	**15%**

4.35 The residual land values generated using this approach will then be expressed as a £ value per hectare and compared to data on existing use values and residential land valuations in each District (from sources such as the Valuation Office) to determine viability. The process is then repeated in the modelling to examine the impact of different affordable housing levels.

Sales Rates

4.36 Variations in sales rates impact on scheme viability. The more difficult a market environment the less supply that can be absorbed and therefore the longer the disposal period. This impacts on scheme finances as a scheme's interest bearing balance takes longer to be offset by revenue streams from disposals (therefore interest payment costs rise and profitability is reduced). In the current market environment sales rates have slowed significantly. However, as this study aims to model 'normal' market conditions we assume build out and sales rates equate to around 1 unit sold per week / 50 per annum. This is based on discussions with a number of national developers and the HBF for the HCA Viability Study undertaken by DTZ in 2008.

Sales Values

4.37 The sales values employed in the modelling will reflect the average that developers would have achieved over the 2004 to 2008 period. These £ per sq m sales values for each of the

value areas are set out in the analysis in Section 2 and the rationale for doing this in Section 1.

Additional Assumptions

4.38 There are a number of smaller additional assumptions in the model, the main ones being:

1. All residential units take one year to construct
2. Revenue within the cashflow is net of residential marketing and agents fees
3. Model assumes contractors prelims and insurance are accounted for within the residential build cost
4. Model assumes revenues are received in parallel with construction expenditure
5. Marketing and sales fees are only applied to private residential schemes
6. Interest is calculated quarterly and in arrears. It is assumed that profit is taken from the sites when the cashflow is positive.

5. The Base Case Modelling and Findings

5.1 This section of the report sets out the base case results. A summary of the model workings and assumptions, described in Section 4, is shown in the diagram in Figure 5.1. It is important to reiterate the key assumptions and how they are dealt with in the modelling and the base case. These are shown in Figure 5.2.

5.2 As discussed in Sections 2-4, viability is assessed on the basis of a cash flow viability model. For every scheme archetype (9)[1] in each policy area (4) a cash flow is run using the cost and revenue assumptions relevant to the particular scheme.[2]

5.3 The approach to this viability assessment has been to first generate a set of results using the base case assumptions. These results are the focus of this section of the report. A series of scenarios (sensitivities) are then examined to show the impact on scheme viability of altering these assumptions.

5.4 The key **base case** assumptions are as follows:

1. That the target internal rate of return (IRR) is 15% (this is assumed to be the threshold that defines whether a site is viable in terms of profitability).

2. Average sales values and costs for the period 2004/05 to 2007/08 are used in each of the areas.

3. That grant payment is not made on schemes and that as a result social rented units are valued at 40% of open market value (OMV) and shared ownership units are valued at 60% of OMV.

4. That affordable housing is delivered as 65% social rented housing and 35% intermediate shared ownership housing.

5. That the schemes are new build (not conversions).

6. Density levels of 30 and 50 dwellings per hectare are tested.

5.5 The impact on viability of changing each of these assumptions is then examined by sensitivity analysis which is detailed in Section 6.

[1] The impact of additional costs on access constrained land is considered in Section 6

[2] The cost and revenue assumptions are determined by the scheme's sales values and costs, determined by the scheme's location and dwelling mix assumed in the archetype.

Figure 5.1: Rother Viability Model Structure and Assumptions

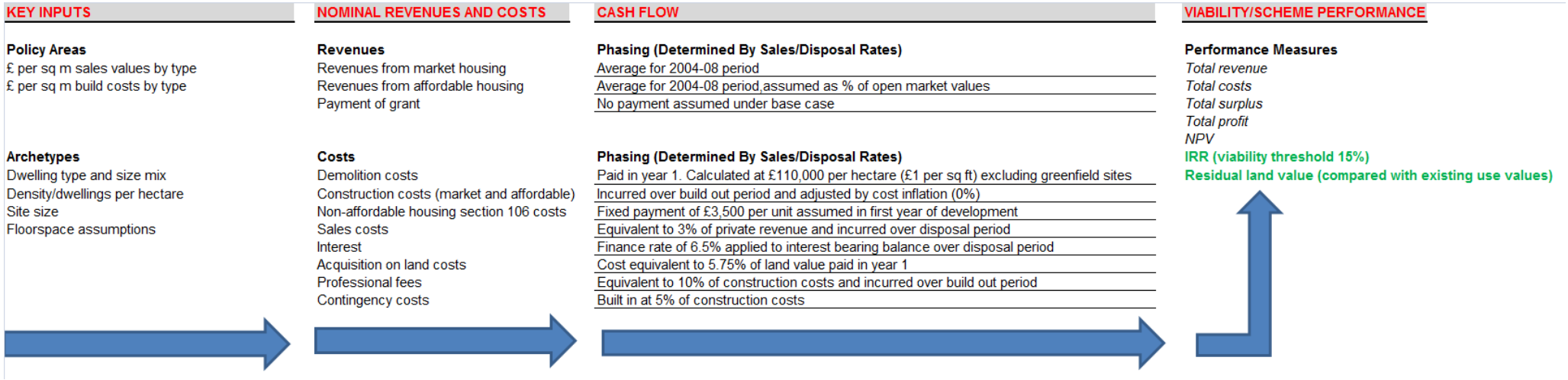


Figure 5.2: Summary of Key Base Case Model Assumptions

Market Revenues and Phasing

Market revenues are calculated based on the average £ per sq m values that apply to the particular area in question. This is derived by averaging sales value across all the Lower Super Output Areas (LSOAs) in each policy area. New build values are used. The values are combined with internal unit size assumptions and the scheme mix (determined by the archetype) to generate total market revenue streams. The total market revenue streams are then phased through the cash flow. The phasing through the cash flow is determined by the build out and disposal rate, which is assumed at around 50 units per site per annum (so a 150 unit site will experience a 3 year disposal period), with market revenues assumed to be realised in the financial year of construction. The effect of house price rises or falls is examined in Section 6 as part of the sensitivity testing.

Affordable Revenues and Grant Payment

It is assumed that the developer receives payments for the affordable housing from the RSL / RP linked to the market value of the dwelling. On the assumption that grant is not available, RSLs / RPs are assumed to pay the developer 40% of market value for a social rented unit and 60% of market value for a shared ownership unit. These values are based on DTZ's market experience prior to the market downturn, and it is acknowledged that in the current market conditions RSLs / RPs are unlikely to be willing or able to pay for affordable housing at this level because their ability and appetite for cross-subsidising affordable house purchase on s106 sites is much reduced. However new benchmarks have yet to be established of what RSLs / RPs will pay for affordable housing on s106 sites, and whether this will exceed the capitalised value of rents. The tenure split between market housing and affordable housing is altered within the sensitivity testing in Section to examine the impact this has on levels on viability. The affordable housing contribution is split 65% social rented and 35% shared ownership housing in the base case. This is also altered in the sensitivity testing in Section 6.

Phasing of Affordable Revenue

The revenue stream for affordable units is calculated by multiplying the number of affordable units by the relevant sales values (at an appropriate level of discount to market value). The model then phases this amount over the period of delivery. The affordable revenue is uplifted by construction cost inflation, which we have assumed over our modelling period to be 0%. This reflects the fact that a price is established at the outset for affordable units on a site and that this is not subsequently affected by the market conditions that prevail between the point of agreement and when the affordable revenue is realised (in parallel with construction). By applying construction cost inflation the real value of the revenue stream is kept constant and is not eroded by inflation.

Internal Rate Return (IRR) Target

The target IRR - the level above which a scheme is considered to be viable in terms of profitability - is set at 15% in the model. This level has been informed by DTZ's experience of past development projects and represents a **minimum** IRR required for development to proceed. The IRR approach has been employed due to the importance of cost and revenue timing and financing periods on viability, which other performance measures do not adequately capture. It is important to stress that the 15% threshold is only a proxy for viability. In practice the rate of return required on sites will vary and it is recognised that for

certain schemes this will need to be higher than the assumed level.

Demolition Costs
Demolition costs are assumed to amount to £110,000 per hectare of site size. This figure is based on DTZ's experience nationally which suggests that a reasonable assumption for average demolition costs is around £1 per sq ft across a whole site (there are 110,000 sq ft in a hectare). Demolition costs have not been applied to greenfield site archetypes. These average costs also do not take account of site specific factors which may involve higher demolition costs as a result of complex schemes.

Construction Costs
Construction costs are generated by the configuration (mix of types and sizes) in the scheme archetype and the relevant cost assumptions from the Build Cost Information Service. As discussed in Section 4, raw BCIS data for Rother is uplifted by 25% to take account of the additional cost of external works.

Section 106 Costs (Non affordable housing)
Assumed to amount to £3,500 per unit under base case assumptions, though in practice these costs can vary considerably from scheme to scheme.

Professional Fees and Contingency
Equivalent to 10% and 5% respectively of construction costs.

Land Values
Land value within the modelling base case is treated as an output and compared to existing use values for the relevant location and site type.

Sales Costs and Interest
Sales costs are calculated at 3% of the total private sales revenue (excluding sales revenue from affordable units). A standard finance rate of 6.5% is assumed and applied to the scheme's interest bearing balance (costs less revenues).

Infrastructure Costs
No abnormal infrastructure costs have been built into the modelling given the variability of these between different sites. However, a facility is built into the model to input site specific infrastructure costs where these are known and if the model is used to examine specific schemes.

Access Costs
The cost of access to development sites that are 'access constrained' is a common issue within the District. The assumption is made that the cost of access to access constrained equates to one third of the development profit. This is consistent with commonly used planning case law (Stokes vs Cambridge Corporation (1961)) relating to 'ransom strips'. Section 6 considers the impact of these costs on each archetype.

What Defines Viability

5.6 Before presenting the results of the base case modelling it is important to reiterate how this assessment defines viability. It is important to stress that there can be no definitive answer to the question of viability, since it is dependent on a number of variables and judgements. However, it is useful to set out what defines whether a development scheme is likely to be viable.

5.7 There are two important components that determine whether a housing development is likely to be viable or not:

- The overall scheme needs to be **profitable** for the developer. This means that when all the costs of delivering the scheme are taken into consideration, they are exceeded by the revenues generated by the scheme by a sufficient margin. The extent of the profit required for a developer to proceed will vary and is now increasingly dictated by the banks, where they are lending development finance, to ensure that the returns justify the risk.

- The overall scheme needs to generate a **positive land value** so that the land owner is incentivised. The value of land is calculated as a residual (ie what is left over) when the costs of the development are subtracted from the revenues.

5.8 Whether a particular scheme is viable is not black and white. Theoretically, a scheme can be defined as viable if the revenues generated exceed the costs of delivering the development and generate both a reasonable profit for the developer and a positive land value for the land owners. In practice, whether the scheme is brought forward will depend on how the land value compares to values generated by existing or alternative uses.

5.9 Where land has an existing use (eg agriculture, car park, commercial premises etc) it needs also to be valued under its current activities. Developers and land owners are only likely to bring forward a residential development on such sites if the value generated by the scheme exceeds the value generated by current activities on the site.

5.10 The same issue applies to alternative uses to which the land might be put. However, it may not be appropriate to consider alternative use values on many sites since such development is subject to current planning policies which may mean that alternative uses are unlikely to secure planning consent.

5.11 An important test for this viability assessment has involved establishing threshold values for existing uses for each of the archetypes in each of the policy areas (Bexhill, Battle, Rye and the Rural areas). For residential development to be deemed viable, land values need to exceed these thresholds – in this assessment by a minimum of 10%.

5.12 Landowners may also have expectations about what value they could achieve for their land under residential development. This is known as ‘hope value’ and can affect a landowner’s decision about whether to sell or develop their site. Such hope value can arise if the landowner believes that a higher value could be achieved under different circumstances eg a change of policy or Government, a better market in 5 years time etc.

Residual Land Value Analysis

5.13 In theory if the residual value of a scheme (at a given rate of return/profit margin) is above existing use value then it should be both viable and able to deliver that particular affordable housing contribution.[3] In practice the extent to which land value must exceed existing use value in order to incentivise development is the subject of much debate. However, for the purposes of the base case we assume that if a residual land value exceeds existing use value by 10% or more it should be viable.

Land Values (Existing Use Values) within Rother

5.14 Estimated existing use values were derived from Rother District Council research conducted with a combination of sources including the Valuation Office Agency's Eastbourne office (which covers Rother District), Locate East Sussex and local valuers and agents. These were used for the site archetypes used within the viability assessment. These existing use values are set out in Figure 5.3. Figure 5.3 provides the mid-point within a range of estimates which is then used to compare to the base case modelling results in the rest of this section.

5.15 The alternative to this approach would be to use published VOA data for different land uses within the South East which are available in broad categories such as agricultural, industrial land, B1 offices etc. This is the approach that DTZ has used in other strategic viability assessments to deal with the difficulty in obtaining local land values. However, in this assessment the nature of the archetypes used demanded a more localised approach to enable distinction to be made between the four proposed policy areas as well as the different types of sites.

5.16 The rest of this section presents the results of the base case modelling by comparing the residual land values generated by each scheme in each policy area with the likely existing use value for the site (Figures 5.4 - 5.11). A traffic light system is used to show how the residual values per hectare compare to existing use values per hectare as follows:

- **The Red Traffic Light** indicates that the scheme is clearly not viable because the residual land value per hectare generated by the scheme is 5% or more lower than the relevant benchmark of existing use value
- **The Amber Traffic Light** indicates that the scheme is of marginal viability because the residual land value per hectare generated by the scheme is between 5% lower than and 10% more than the relevant benchmark of existing use value
- **The Green Traffic Light** indicates that the scheme is viable because the residual land value per hectare generated by the scheme is more than 10% higher than the relevant benchmark of existing use value[4]

[3] However, if it is below existing use value the affordable housing contribution will need to fall, which, keeping margin constant, will have the effect of increasing the residual land value.

[4] DTZ's standard assumption is >5% higher than the existing use value but the threshold has been increased in this assessment to provide a harder test.

Figure 5.3: Estimated Existing Use Values in £/per hectare (Mid Point of Range) by Site Type and Location

£/hectare	**Agricultural – edge of Settlement**	**Peripheral land in equestrian use**	**Garden land (includes estimate of hope value)**	**Existing properties in large grounds with redevelopment potential (includes estimate of hope value)**	**Existing industrial sites**	**Existing B1 sites**	**Unused or underused land with legacy of commercial activity**	**Unused or underused areas for car parking (or otherwise underused)**
Bexhill	£12k	£25k	£675k	£675k	£550k	£930k	£300k	£300k
Rural Areas	£12k	£35k	£725k	£725k	£550k	£930k	£620k	£620k
Battle	£12k	£25k	£800k	£800k	£550k	£930k	£550k	£550k
Rye	£12k	£25k	£800k	£800k	£550k	£930k	£300k	£300k

Source: Rother District Council; Valuation Office Agency, Local Valuers

Base Case Results for Bexhill (40% affordable housing)

5.17 The base case modelling has tested 8 archetypal sites within Bexhill under two density scenarios (30 and 50 dwellings per hectare). The residual land value per hectare generated by each scheme is compared to the existing use value per hectare for the particular site type within Bexhill. The base case modelling suggests the following:

- A **40% affordable housing contribution is broadly achievable within Bexhill** (see Figures 5.5 and 5.6) with 6 out the 8 archetypes deemed to be viable when residual land values are compared to existing use values.
- One archetype – a scheme on an existing industrial site – appears unviable and this largely reflects the higher existing use value assumed on the existing site. When a development density of 50 dph is assumed (Figure 5.6) the performance of this site improves but it remains unviable.
- It is also worth noting that the 'school site' archetype is assessed to be marginal at 30 dwellings per hectare. Viability is improved by assuming higher density development (50 dph in Figure 5.6)
- At 50 dwellings per hectare one archetype 'redevelopment of existing properties in large grounds' becomes marginal. This is driven by the higher build costs associated with an increased proportion of flats.
- Given the marginal viability of some site archetypes, Section 6 tests the impact of reducing the affordable housing quota in Bexhill to 35%.

5.18 It is important to emphasise that abnormal infrastructure costs or abnormal costs associated with complex sites (eg decontamination of sites in previous use or access arrangements for Greenfield sites etc) have not been included in the modelling process and these have the ability to significantly affect scheme viability on specific sites. The impact of the cost of obtaining site access, where development opportunities are access constrained, is considered in Section 6.

Base Case Results for Battle and Rye (40% affordable housing)

5.19 The base case modelling has tested 9 archetypal sites within Battle and Rye under two density scenarios (30 and 50 dwellings per hectare). The results for the two towns are presented here together since they do not differ significantly. The residual land value per hectare generated by each scheme is compared to the existing use value per hectare for the particular site type within each settlement. The base case modelling indicates the following:

- A 40% affordable housing contribution is achievable within both Battle and Rye (see Figures 5.7 and 5.10) with all 9 archetypes deemed to be viable when residual land values are compared to existing use values.
- A greater margin between the existing use value and residual land value is achieved in both Battle and Rye compared to Bexhill, driven by the higher residential sales values that can be achieved in these towns.

5.20 As with the analysis for Bexhill, it is important to emphasise that abnormal infrastructure costs or abnormal costs associated with complex sites (eg decontamination of sites in previous use or access arrangements for Greenfield sites etc) have not been included in the modelling process and these may have the ability to significantly affect scheme viability on specific sites. The impact of the cost of obtaining site access, where development opportunities are access constrained, is considered in Section 6.

Base Case Results for Rural Areas (40% affordable housing)

5.21 The base case modelling has tested 6 archetypal sites within the rural areas of Rother under two density scenarios (30 and 50 dwellings per hectare). The residual land value generated by each scheme is compared to the existing use value for the particular site type within the rural area. The base case modelling suggests the following:

- A 40% affordable housing contribution is achievable within the rural areas (see Figures 5.11 and 5.12) with all 6 archetypes deemed to be viable when residual land values are compared to existing use values. Section 6 tests the viability of delivering 50% affordable housing in the rural areas.

- A greater margin between the existing use value and residual land value is achieved in the rural areas compared to Battle and Rye, driven by the higher residential sales values that can be achieved in the rural areas, despite the assumption on some sites that existing use values in rural areas are higher than in the market towns.

5.22 As with the analysis for Bexhill, Battle and Rye, it is important to emphasise that abnormal infrastructure costs or abnormal costs associated with complex sites (eg decontamination of sites in previous use or access arrangements for greenfield sites etc) have not been included in the modelling process and these may have the ability to significantly affect scheme viability on specific sites. This point was emphasised by stakeholders on the Hastings and Rother Housing Market Partnership. The impact of the cost of obtaining site access, where development opportunities are access constrained, is considered in Section 6.

Analysis of Small Sites and Commuted Payments

Small Sites Viability and Implications for Thresholds

5.23 PPS3 makes it clear that while authorities have discretion to reduce the threshold from the national indicative figure of 15 units, it is important to demonstrate that this is '*viable and practical.'*

5.24 Rother District Council proposes to seek affordable housing contributions on sites of 15 or more homes in Bexhill, 10 or more homes in Battle and Rye, and either lower the threshold to 3 or more homes in the Rural areas or to maintain the current threshold of 5 but require all developments of 3 or 4 dwellings to provide one affordable home.[5] DTZ has therefore tested a range of sites in each location delivering between 3 and 15 homes. The results of these tests are presented in Figures 5.13-5.15. The approach to the analysis of these smaller sites is slightly different, focusing on site size rather than site type.

[5] Proposals contained in Rother District Council's LDF Core Strategy – Consultation on Strategy Directions November 2008

5.25 There is no evidence that site costs or revenues vary systematically with scheme size, across different geographies; nor, if site costs and revenues vary systematically with scheme size, what the extent of any such variation might be. Even if there were grounds for thinking that revenues and costs might vary in a systematic way with scheme size, these effects are likely to be dwarfed by the impact that location has on revenues and the impact site specific factors have on costs. Therefore the broad approach taken by DTZ to appraise viability of larger sites is appropriately applied to small sites.

5.26 However, it is acknowledged that the generic cost and revenue assumptions applied in the model are likely to be more robust for larger schemes than smaller schemes, because the costs and revenues are applied across a greater number of units for larger schemes and extreme elements are balanced across the scheme as a whole. It is possible that small schemes may frequently display greater variability in cost and revenues than larger schemes; that is, individual characteristics of schemes may play a more dominant role in viability. In particular this may arise where small schemes bear significant fixed costs, since these cannot be spread across a large number of units.

5.27 Thus DTZ is aware of anecdotal evidence from other SHMAs and viability assessments that small sites sometimes incur higher build costs – again because of limited economies of scale – but there is no evidence to support this in the available data. But conversely, small sites may *benefit* in viability terms in other respects. Large sites are more likely to be affected by changes in the housing market (prices falls or rises) because of the longer sale period for the market units. Large sites are almost always owned by national and regional house builders who have larger overheads than small local developers. Although not modelled within this assessment, large sites may also be affected by significant costs associated with the provision of strategic infrastructure.

5.28 The considerations outlined above need to be taken into account in determining policy, since they cannot be fully reflected in the sort of viability modelling undertaken for this study. What the viability analysis does show, however, is that, as for larger sites, an affordable housing requirement of 40% is achievable on small sites comprising development of 3-15 units in Battle, Rye and the Rural areas. This reflects the fact that there is no intrinsic reason why development of smaller sites should be less viable than large sites. The analysis therefore means that Rother District Council's proposals to reduce site thresholds to 10 or more units in Battle and Rye is consistent with the scheme viability; as is the District Council's proposal to either lower the threshold in Rural areas to 3 units, or to require all units of 3 and 4 dwellings to provide one unit of affordable housing.

5.29 However, in setting affordable housing thresholds within policy it is important to consider a range of other factors in addition to viability:

- Whether reducing thresholds is likely to deliver a significant increase in affordable housing through the additional number of sites 'captured'
- Whether the cost of officer time in administering a lower threshold is worthwhile given the numbers of units involved.
- Whether small developers that typically focus on sites below thresholds (due to a variety of reasons, including access to capital) would be deterred from developing

- Whether local housing associations are willing and able to take on small numbers of affordable homes delivered by small sites

- Whether small sites are affected to a greater extent by site specific factors not accounted for in this viability assessment

5.30 Analysis of past completions within Rother District suggests that if the Council was to lower the affordable housing threshold to 10 homes or more in Battle and Rye this would have captured 278 dwellings over the last 4 years[6], with the potential to have delivered 111 affordable homes (around 28 affordable homes per annum). This is a significant volume of additional affordable housing, though it is acknowledged that some of these schemes might not have been able to deliver the full quota of affordable housing at the proposed quota. Analysis of past completions is also available to give an indication of what may have occurred if either of the two Core Strategy options for the rural affordable housing threshold had been in place. The two options in question were;

(a) Lower the rural threshold from 5 to 3, (Alternative to be discussed further)
(b) Maintain threshold of 5, but require all developments of 3 and 4 dwellings to provide one affordable dwelling (Alternative to be discussed further).

5.31 Regarding option (a), a number of local planning authorities around the country have set a similar rural threshold of 3, including South Holland in Bedford and Alnwick in Northumberland (both 3 dwellings or 0.1 ha). With regard to option (b), a similar scheme has been successfully applied at neighbouring Wealden.

5.32 With these two options, the likely impact can be deduced from some analysis of recent permissions. From October 2006 (the date of publication of the Affordable Housing SPD) to 31st March 2010 there have been five permissions for 4 dwellings and three permissions for 3 dwellings in rural areas. Therefore in that short time period of three and a half years there have been 29 dwellings granted permission as part of 3 or 4 unit schemes in rural areas. The impact of applying option (a) (lowering the threshold in rural areas from 5 to 3) would, theoretically speaking, have required 8 affordable dwellings at a 40% threshold, or 13 at a 50% threshold. Therefore, based on projecting these figures forward, the change proposed in option (a) would have resulted in about 46 (at 40%) or 74 (at 50%) extra affordable dwellings over a 20 year period. The application of option (b) would also have required an additional 8 affordable dwellings over the same period, also equivalent to about 46 extra affordable dwellings in Battle and Rye over a 20 year period.

5.33 Clearly if the threshold were 50% (as is the preferred option for rural areas) then option (a) would result in the delivery of more affordable housing than option (b). For example, if the threshold were 50%, under option (a) a four dwelling development would comprise two affordable dwellings; however under option (b) the same four dwelling development would only require one affordable unit.

5.34 An important caveat to the above analysis is that had the threshold actually been different, then the pattern of development may well have also been different (i.e. there may not have been so many applications for 3 or 4 units had an affordable housing contribution been required).

[6] Rother District Council completions data 2005/06 to 2008/09

5.35 In DTZ's view the contribution of these additional affordable homes per annum in the rural parts of the District would represent a significant contribution to addressing housing need over time, given the limited stock of affordable homes in rural areas. This is particularly so, given that the outcome of the Comprehensive Spending Review settlement in October 2010 of greatly reduced funding for the provision of affordable housing.

5.36 Rother District Council should consider the administrative cost of applying affordable housing policies to a greater number of schemes, but this is a matter for the authority to weigh for itself against the benefits. In this there is a need to take into account the likelihood that there will need to be negotiation about affordable housing provision on smaller sites (as with larger sites) where site specific constraints e.g. demolition costs or infrastructure requirements, impact viability.

5.37 There are two additional risks associated with requiring provision of affordable housing on developments of less than 5 units.

- The first might be that that the firms who build small schemes may in the past have deliberately confined their activities to building below thresholds to avoid having to deal with the complexity of affordable housing provision, and will be deterred from development. On balance DTZ believe that the competitive nature of the development sector mean that, even if some housebuilders are deterred from development, landowners will find a developer/builder to acquire sites and undertake the work if there is a decent return.

- Second, in some areas, it has been that housing associations have been reluctant to take on management of pepper potted single units of housing, spread across a number of villages, because of the management costs entailed. While it is very probably the case that there are associations that would not be willing to take on this business, DTZ believe there would be specialist associations who would be willing to do so, and this is understood to be the case in Rother. This might however have some impact on the price that can be secured for the affordable housing units, which would have a knock on effect on viability.

5.38 Given the risks outlined above and the potential for schemes of 1 and 2 units to provide a contribution towards affordable housing provision (as discussed below), DTZ recommend that the application of affordable housing provision be kept as simple as possible. Consequently, if Rother District Council wish to require schemes of 1 or 2 units to contribute to affordable housing (the viability of adopting this approach is discussed below), then this approach should be in line with that for schemes for 3 units and above. The most appropriate method for this would be to remove the existing threshold, requiring all units in Rural areas to contribute to affordable housing provision. The Council would need to decide if it is more appropriate for the affordable housing contribution to be provided on site or as a payment in lieu (or a combination where applicable) in relation to schemes of 3 units or less. This issue is discussed further below.

Payments in Lieu of Affordable Housing Provision

5.39 PPS3 encourages the on-site provision of affordable housing to create mixed communities. "In seeking developer contributions, the presumption is that affordable housing will be provided on the application site so that it contributes towards creating a mix of housing. However, where it can be robustly justified, off site provision or a financial contribution in lieu of on-site provision (of broadly equivalent value) may be accepted as long as the agreed approach contributes to the creation of mixed communities in the local authority area". (Paragraph 29)

5.40 Thus the expectation set out in PPS3 is that a payment in lieu of provision of affordable housing (sometimes referred to as a commuted sum) should only be used in exceptional circumstances. However such circumstances will arise from time to time, and there have been a few developments in recent years where Rother District Council has accepted commuted payments in lieu of on-site provision of affordable housing.

5.41 There are two key policy issues on which Rother District Council are seeking advice with respect to payments in lieu of affordable housing provision:

- First, what level of payment in lieu should be sought and how should this be calculated, given those circumstances where there is a requirement to provide affordable housing but it is accepted that it is not appropriate to provide this on site on through off site provision

- Second, should there be a requirement for development of new homes below the threshold at which there is a requirement to provide affordable housing on-site to make a payment in lieu to support the provision of affordable housing in the District?

5.42 These two issues have become more pertinent as the District Council plans to extends the affordable housing policies to smaller developments by reducing the threshold:

- As percentage quotas are applied to small schemes, this generates a requirement for notional 'fractional units'. Thus a 40% affordable housing requirement applied to a scheme of 6 units generates a requirement for 2.4 affordable units.

- While the development can include development of 2 units, should a financial contribution equivalent to the 0.4 units be sought? It makes sense to seek such a contribution to ensure all schemes regardless of size make the same contribution in accordance with policy.

- If policy is extended to seek provision of affordable housing in connection with either schemes of 3 units and upwards in the Rural areas, or a requirement is placed on developments of 3 and 4 units to provide a unit of affordable housing, this prompts the question of whether developments of 1 or 2 units should make a financial contribution to affordable housing provision. This question is addressed in paragraphs 5.50 to 5.55.

5.43 This section deals with the two key issues in turn, examining first the question of what level of financial contribution should be required where there is a requirement to provide affordable

housing but where this cannot be provide on site in full or in part; and then considering the issue of extending affordable housing policy to cover developments of one and two homes.

Level of Payment in Lieu

5.44 Where commuted sums are sought as an alternative to direct on or off-site provision, PPS3 sets out that they should be of "broadly equivalent value". DTZ's approach to this is that the commuted sum should be equivalent to the 'developer / landowner contribution' if the affordable housing was provided on site i.e. so that the developer is no better or worse off by paying a commuted sum rather than providing the affordable provision on site. This can be calculated by analysing the difference between the residual value of the scheme (or archetypes) at 100% market housing and the residual value of the scheme with affordable housing provided according to policy.

5.45 DTZ considers this approach to be robust and defendable, since it is directly based on an assessment of viability and consistent with the overall approach taken in this study to defining viability. However, there are other approaches to calculating payments in lieu that the District council may wish to consider. These include the Bristol Matrix promoted by the June 2010 South East England Partnership Board paper 'AH & LDF Frameworks – developing an evidence base', and the Total Cost Indicator (TCI) method as discussed in the adopted Rother District Council Affordable Housing SPD.

5.46 Adopting the 'value neutrality' approach, DTZ has calculated residual land values on each of the development archetypes in each of the policy areas both with and without affordable housing provision of 40% (65% social rented, 35% shared ownership). We assume that affordable housing grant is not available. For the rural areas, values have also been calculated in relation to the policy option of 50% affordable housing. This option is discussed further as part of the Sensitivity Testing in Section 6.

5.47 Figure 5.4 is the result of comparing the difference between the residual land value when a scheme is developed at 100% market housing and when a scheme is developed with 40% affordable housing (and 50% for the Rural areas). This difference in land value is then divided by the number of affordable units the scheme delivers at 40% affordable housing provision (and 50% for the Rural areas) to provide a contribution per affordable unit. This effectively represents the gap between what the developer could achieve if each affordable home was developed for market sale instead of affordable housing. An illustration is provided below:

- The residual land value of a small edge of settlement Greenfield site in Bexhill (first archetype in Figure 5.4) is calculated at £881,400 when 40% affordable housing is provided without grant.
- The same site delivers a residual land value of £1,795,100 if the scheme is delivered as 100% market housing.
- The difference in residual land values between these two scenarios is £913,700. This represents the increased financial benefit to the developer of the scheme if affordable housing is not delivered on site.
- At 40% affordable housing the site would deliver 12 affordable units. Therefore the value to be placed on each affordable unit is £76,100, calculated by dividing the

increased value of land of the scheme without affordable housing, by the number of affordable housing units to be provided (£913,700 / 12 = £76,100 per unit). Therefore, for this scheme, this figure represents a reasonable commuted sum figure per affordable unit.

5.48 This analysis has been repeated for all site archetypes across all four broad locations – taking the residual land value difference between scenarios of 40% (or 50% in rural areas) affordable housing without grant (i.e. as seen in Figures 5.5-5.12) and 100% market housing, and dividing this figure by the number of affordable units that would be delivered onsite at 40% (or 50% in rural areas).

5.49 The results of this analysis across all archetypes in each location are set out below in Figure 5.4. These ranges represent the differing gaps across the archetypes between what the developer could achieve if each affordable home was developed for market sale instead of affordable housing. Consequently, the lower end of the range for each location represents a commuted sum that all schemes / archetypes could support. These figures are set out in the third column of the figure below.

Figure 5.4: Indicative Payment Levels for Commuted Sums in Rother District (40% without grant unless otherwise stated)

Policy Area	Value Difference per Affordable Unit - Range Across All Archetypes	Commuted Sum Level All Schemes Could Support
Bexhill	£58,700 - £76,200	£58,700
Battle	£70,500 - £92,000	£70,500
Rye	£70,500 - £92,000	£70,500
Rural Areas	£76,700 - £99,600	£76,700
Rural Areas (50% affordable)	£91,200 – £119,000	£91,200

5.50 This analysis suggests that Rother District Council could consider seeking the following contribution sums on schemes that are viable at 40% affordable housing without grant, if agreed by the Council and fully and financially demonstrated:

- £58,700 per affordable unit on schemes within Bexhill
- £70,500 per affordable unit on schemes within Battle and Rye
- £76,700 per affordable unit on schemes within the Rural areas (assuming the base case of 40% affordable)
- £91,200 per affordable unit on schemes within the Rural areas (assuming a policy of 50% affordable is applied)

5.51 It is important to note that the assumptions made in relation to the site archetypes directly affect the figures produced by the analysis in Figure 5.4 and in practice the developer contribution will vary on a site by site basis. If grant is payable on schemes this will have a significant effect on the amount that should be paid (increasing the amount of the commuted payment); but DTZ assume that grant would not be paid where a commuted sum is agreed.

5.52 The second major issue on which Rother District Council is seeking guidance is whether to extend affordable housing policies to developments of one and two units. There is some policy logic in pursuing this idea, particularly in rural areas. In the Rural areas, Rother District Council are proposing either to place a requirement on developments of 3 or 4 dwellings to provide an affordable housing unit; or to reduce the threshold at which affordable housing policies to developments of 3 or more units.

5.53 Adoption of either policy may well have the perverse effect that more schemes of one or two units come forward for development. As noted in the discussion of the economics of small schemes, there is no systematic evidence to suggest that small developments are intrinsically less viable than larger developments, though the impact on site servicing or one off costs, if needed, may bear more heavily on small schemes and hence there may be more inherent variability in how viable small developments are.

5.54 DTZ therefore believe that a policy of seeking an affordable housing contribution from all new housing developments in Rural areas could be sustainable. The lack of affordable housing in rural areas and high cost of rural housing would provide policy justification, provided contributions were used for investment in rural housing provision. There could however, be costs associated with administration of this policy to consider.

5.55 Such a policy could involve requiring 50% affordable housing contribution for all developments of less than 5 units, effectively removing the existing affordable requirement threshold (as discussed above). All developments of less than 5 units would thereby contribute the same proportional amount of affordable housing in line with the suggested policy for larger schemes in Rural areas.

5.56 For schemes of 4 units, a requirement could be included that, wherever feasible, this contribution should be provided through the provision of affordable housing on-site. For schemes of 3 units or less, a judgement could be made by the council as to whether on-site provision or a payment in lieu was more appropriate Any remainder could be paid through a payment in lieu (e.g. for 3 units – see example below). Schemes of 1 unit would be required to contribute a payment in lieu in line with the figures below.

5.57 Below existing thresholds, development of a single property for market sale could make a payment in lieu contribution in line with a 50% affordable policy (as shown to be viable for the Rural areas in Section 6) i.e. 0.5 of an affordable home. This would result in a payment in lieu of around £45,600 for every private unit in the Rural areas.

5.58 As an example, an illustration of the development of *three* private dwellings in a rural village is provided below:

- In line with the 50% affordable housing policy, each private unit would be required to contribute a sum equivalent to 0.5 of the affordable home payment in lieu figure for

the area. Therefore for a development of three private units, a contribution of 1.5 affordable homes (i.e. 3 x 0.5) would be required.

- The council decides it requires 1 affordable unit to be delivered on-site (assumed to be feasible for this example)
- The remainder to be contributed through a payment in lieu is the equivalent of 0.5 affordable homes i.e. (1.5 – 1).
- The modelling undertaken to determine payment in lieu figures has generated a suggested payment in lieu of £91,200 per affordable housing unit in Rural areas (at 50% affordable).
- The required payment in lieu (in addition to the affordable unit provided on site) is £45,600 (i.e. 0.5 x £91,200).

5.59 It may also be advisable to apply the above method and collect a fractional payment in lieu in all circumstances where the proportion of affordable housing sought does not calculate to a whole unit.

5.60 The application of thresholds in rural areas can be summed up as follows;

Rural Areas Threshold	Contribution
4 units and above	50% on-site
3 units	Either; o on site provision of one affordable home plus payment in lieu equivalent of 0.5 affordable homes, or; o payment in lieu or equivalent of 1.5 affordable homes
2 units	Either; o on site provision of one dwelling plus or; o payment in lieu or equivalent to 1 affordable homes
1 unit	Payment in lieu

5.61 The above paragraph applies to rural areas only. DTZ would not recommend seeking to apply this policy to Bexhill, Rye and Battle, where the policy justification is less strong. If Rother District Council decides to pursue this policy proposal, it would in DTZ's view, make sense to trial it in the Rural areas where the need for additional affordable housing is greatest and values most robust. If the policy were to be successful in the District's Rural areas consideration could be given to extending it to the Battle and Rye and possibly Bexhill in due course.

Policy Implications from the Base Case Modelling

5.62 The analysis presented in this Section, established that it would be reasonable for Rother District Council to set an affordable housing requirement of 40% across the District. This level of affordable housing provision can be achieved in most locations across the District without affordable housing grant. The key points to note about how viability varies across the District at this level of affordable housing provision are:

- Sites elsewhere in the District, particularly the rural areas, appear to be able to deliver this level of affordable housing with ease.
- Some sites within Bexhill may be unable to deliver affordable housing at this level (though the addition of grant improves viability and this is considered in Section 6).
- It is therefore valuable to test a somewhat lower affordable housing quota in Bexhill and higher quota in the rural areas. This variation is considered in Section 6.

5.63 Although the base case modelling suggests that 40% affordable housing could be achieved across the District it is also important to note that there are likely to be exceptions to this general pattern which cannot be captured through strategic viability modelling:

- It is important to bear in mind that no abnormal costs e.g. for infrastructure or access have been built into the modelling given the variability of these between different sites and that these have the potential to significantly affect viability.
- Existing use values on particular sites may be higher than assumed in this assessment, requiring schemes deliver a sufficient residual land value in order to ensure that there is an incentive for the developer to deliver the scheme.

5.64 If Rother District Council choose to adopt a target of 40% affordable housing across the District, DTZ recommend that sufficient flexibility is retained within policy to take into account site specific considerations e.g. high existing or alternative use values or large demolition and infrastructure costs. There will be circumstances where 40% affordable housing cannot be delivered without grant. To reflect this, the District Council needs to adopt a process for resolving what the contribution should be in the event that it is not possible for a site to deliver the target affordable housing contribution. The Council may wish to set out in policy some of the factors that are likely to affect the ability to deliver the target affordable housing contribution as a way of demonstrating to developers its intention to take into consideration site specific circumstances (some suggestions are made in Section 6).

5.65 With respect to the thresholds at which affordable housing policies are applied, the modelling indicates that proposals to reduce the size of development to which affordable housing policies apply to 10 or more new homes in Battle and Rye can be pursued without adversely affecting viability. Similarly in DTZ's view schemes of 1 or more units in the Rural areas are able to make a contribution to affordable housing provision, particularly with flexibility retained to deal with site specific considerations. The most appropriate method for this would be to remove the existing threshold, requiring all units in Rural areas to contribute to affordable housing provision – with the Council deciding if it is more appropriate for the affordable housing contribution to be provided on site, as a payment in lieu, or as a combination (where applicable) in relation to schemes of 3 units or less.

5.66 Before committing the policy of extending affordable housing policies to developments of less than 3 units in the Rural areas, the Council needs to consider the administrative costs that this will incur. Applications for residential development on small sites will need to be determined with 8 weeks rather than 13 weeks. However, although these schemes will only deliver a small number of affordable homes each year, in the context of reduced funding for affordable housing, they could make a useful contribution to meeting rural housing need over time.

5.67 Rother District Council should consider seeking the following sums on schemes that are viable at 40% affordable housing without grant but where a commuted sum is agreed by the Housing Service where on-site delivery is not practicable:

- £58,700 per affordable unit on schemes within Bexhill
- £70,500 per affordable unit on schemes within Battle and Rye
- £76,700 per affordable unit on schemes within the Rural areas (assuming the base case of 40% affordable)
- £91,200 per affordable unit on schemes within the Rural areas (assuming a policy of 50% affordable is applied)

5.68 These levels represent the average developer subsidy in relation to affordable homes across the schemes in each location.

5.69 In principle DTZ does believe it would be possible to extend affordable housing policies to development of one or two units in the Rural areas. On the basis of the modelling undertaken, an indicative contribution of around £45,600 per private market unit would be consistent with the policy option of seeking 50% affordable housing provision in connection with development in Rural areas. If this proposal is pursued, DTZ would recommend it is initially applied to the Rural areas, and any decision to extend it to Battle & Rye (and possibly Bexhill) is deferred until it is clear as to whether it works in the Rural areas.

5.70 Section 6 considers the impact of varying different scenarios for the viability of the site archetypes in Bexhill, Battle, Rye and the Rural areas. Further policy implications are presented following this analysis.

Figure 5.5: Bexhill Base Case: 40% affordable housing provision without grant, development at 30 dwellings per hectare

Archetype	Site Size	Mix	Site Specific Assumptions	Model Code[7]	Residual Land Value (per ha)[8]	Existing Use Value (per ha)	Viability
Small Edge of Settlement Greenfield Site	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses	No demolition costs	H	£881,400	£12,000	✓
Large Edge of Settlement Greenfield Site	5 ha (150 units)	50 x 2 bed houses 50 x 3 bed houses 50 x 4 bed houses	No demolition costs	F	£760,400	£12,000	✓
Garden Land (Single or Several Plots)	0.5 ha (15 units)	5 x 2 bed houses 5 x 3 bed houses 5 x 4 bed houses	No demolition costs	I	£881,370	£675,000	✓
School Site	3 ha (90 units)	30 x 2 bed houses 30 x 3 bed houses 30 x 4 bed houses		G	£725,000	£675,000	~
Existing Industrial Site	3 ha (90 units)	30 x 2 bed houses 30 x 3 bed houses 30 x 4 bed houses		G	£725,000	£930,000	X
Unused or Underused Land with Legacy of Commercial Activity	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses		H	£781,800	£300,000	✓
Unused or Underused Areas for Car Parking	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses		H	£781,800	£300,000	✓
Redevelopment of Existing Properties in Large Grounds	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses		H	£781,800	£675,000	✓

[7] The 'Model Code' is a reference letter used to distinguish the scenarios run within the model.
[8] Figures 5.5-5.15 display residual land values with IRR fixed at 15% (as discussed above).

Figure 5.6: Bexhill Base Case: 40% affordable housing provision without grant, development at 50 dwellings per hectare

Archetype	Site Size	Mix		Site Specific Assumptions	Model Code	Residual Land Value (per ha)	Existing Use Value (per ha)	Viability
		Flats	Houses					
Small Edge of Settlement Greenfield Site	1 ha (50 units)	5 x 1 bed flats 20 x 2 bed flats	20 x 2 bed houses 5 x 3 bed houses	No demolition costs	B	£837,500	£12,000	✓
Large Edge of Settlement Greenfield Site	3 ha (150 units)	20 x 1 bed flats 30 x 2 bed flats	30 x 2 bed houses 50 x 3 bed houses 20 x 4 bed houses	No demolition costs	A	£937,000	£12,000	✓
Garden Land (Single or Several Plots)	0.5 ha (25 units)	5 x 1 bed flats 5 x 2 bed flats	10 x 2 bed houses 5 x 3 bed houses	No demolition costs	C	£933,500	£675,000	✓
School Site	3 ha (150 units)	20 x 1 bed flats 30 x 2 bed flats	30 x 2 bed houses 50 x 3 bed houses 20 x 4 bed houses		A	£838,100	£675,000	✓
Existing Industrial Site	3 ha (150 units)	20 x 1 bed flats 30 x 2 bed flats	30 x 2 bed houses 50 x 3 bed houses 20 x 4 bed houses		A	£838,100	£930,000	X
Unused or Underused Land with Legacy of Commercial Activity	1 ha (50 units)	5 x 1 bed flats 20 x 2 bed flats	20 x 2 bed houses 5 x 3 bed houses		B	£737,300	£300,000	✓
Unused or Underused Areas for Car Parking	1 ha (50 units)	5 x 1 bed flats 20 x 2 bed flats	20 x 2 bed houses 5 x 3 bed houses		B	£737,300	£300,000	✓
Redevelopment of Existing Properties in Large Grounds	1 ha (50 units)	5 x 1 bed flats 20 x 2 bed flats	20 x 2 bed houses 5 x 3 bed houses		B	£737,300	£675,000	~

Figure 5.7: Battle Base Case: 40% affordable housing provision without grant, development at 30 dwellings per hectare

Archetype	Site Size	Mix	Site Specific Assumptions	Model Code	Residual Land Value (per ha)	Existing Use Value (per ha)	Viability
Small Edge of Settlement Greenfield Site	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses	No demolition costs	H	£1,615,900	£12,000	✓
Large Edge of Settlement Greenfield Site	5 ha (150 units)	50 x 2 bed houses 50 x 3 bed houses 50 x 4 bed houses	No demolition costs	F	£1,400,100	£12,000	✓
Garden Land (Single or Several Plots)	0.5 ha (15 units)	5 x 2 bed houses 5 x 3 bed houses 5 x 4 bed houses	No demolition costs	I	£1,615,800	£800,000	✓
Peripheral Land in Equestrian Use	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses	No demolition costs	H	£1,615,800	£25,000	✓
School Site	3 ha (90 units)	30 x 2 bed houses 30 x 3 bed houses 30 x 4 bed houses		G	£1,415,100	£800,000	✓
Existing Industrial Site	3 ha (90 units)	30 x 2 bed houses 30 x 3 bed houses 30 x 4 bed houses		G	£1,415,100	£930,000	✓
Unused or Underused Land with Legacy of Commercial Activity	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses		H	£1,515,00	£550,000	✓
Unused or Underused Areas for Car Parking	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses		H	£1,515,00	£550,000	✓
Redevelopment of Existing Properties in Large Grounds	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses		H	£1,515,00	£800,000	✓

Figure 5.8: Battle Base Case: 40% affordable housing provision without grant, development at 50 dwellings per hectare

Archetype	Site Size	Mix		Site Specific Assumptions	Model Code	Residual Land Value (per ha)	Existing Use Value (per ha)	Viability
		Flats	Houses					
Small Edge of Settlement Greenfield Site	1 ha (50 units)	5 x 1 bed flats 20 x 2 bed flats	20 x 2 bed houses 5 x 3 bed houses	No demolition costs	B	£1,795,000	£12,000	✓
Large Edge of Settlement Greenfield Site	3 ha (150 units)	20 x 1 bed flats 30 x 2 bed flats	30 x 2 bed houses 50 x 3 bed houses 20 x 4 bed houses	No demolition costs	A	£1,861,400	£12,000	✓
Garden Land (Single or Several Plots)	0.5 ha (25 units)	5 x 1 bed flats 5 x 2 bed flats	10 x 2 bed houses 5 x 3 bed houses	No demolition costs	C	£1,907,600	£800,000	✓
Peripheral Land in Equestrian Use	1 ha (50 units)	5 x 1 bed flats 20 x 2 bed flats	20 x 2 bed houses 5 x 3 bed houses	No demolition costs	B	£1,795,000	£25,000	✓
School Site	3 ha (150 units)	20 x 1 bed flats 30 x 2 bed flats	30 x 2 bed houses 50 x 3 bed houses 20 x 4 bed houses		A	£1,758,400	£800,000	✓
Existing Industrial Site	3 ha (150 units)	20 x 1 bed flats 30 x 2 bed flats	30 x 2 bed houses 50 x 3 bed houses 20 x 4 bed houses		A	£1,758,400	£930,000	✓
Unused or Underused Land with Legacy of Commercial Activity	1 ha (50 units)	5 x 1 bed flats 20 x 2 bed flats	20 x 2 bed houses 5 x 3 bed houses		B	£1,693,600	£550,000	✓
Unused or Underused Areas for Car Parking	1 ha (50 units)	5 x 1 bed flats 20 x 2 bed flats	20 x 2 bed houses 5 x 3 bed houses		B	£1,693,600	£550,000	✓
Redevelopment of Existing Properties in Large Grounds	1 ha (50 units)	5 x 1 bed flats 20 x 2 bed flats	20 x 2 bed houses 5 x 3 bed houses		B	£1,693,600	£800,000	✓

Figure 5.9: Rye Base Case: 40% affordable housing provision without grant, development at 30 dwellings per hectare

Archetype	Site Size	Mix	Site Specific Assumptions	Model Code	Residual Land Value (per ha)	Existing Use Value (per ha)	Viability
Small Edge of Settlement Greenfield Site	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses	No demolition costs	H	£1,615,900	£12,000	✓
Large Edge of Settlement Greenfield Site	5 ha (150 units)	50 x 2 bed houses 50 x 3 bed houses 50 x 4 bed houses	No demolition costs	F	£1,400,100	£12,000	✓
Garden Land (Single or Several Plots)	0.5 ha (15 units)	5 x 2 bed houses 5 x 3 bed houses 5 x 4 bed houses	No demolition costs	I	£1,615,800	£800,000	✓
Peripheral Land in Equestrian Use	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses	No demolition costs	H	£1,615,800	£25,000	✓
School Site	3 ha (90 units)	30 x 2 bed houses 30 x 3 bed houses 30 x 4 bed houses		G	£1,415,100	£800,000	✓
Existing Industrial Site	3 ha (90 units)	30 x 2 bed houses 30 x 3 bed houses 30 x 4 bed houses		G	£1,415,100	£930,000	✓
Unused or Underused Land with Legacy of Commercial Activity	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses		H	£1,515,00	£300,000	✓
Unused or Underused Areas for Car Parking	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses		H	£1,515,00	£300,000	✓
Redevelopment of Existing Properties in Large Grounds	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses		H	£1,515,00	£800,000	✓

Figure 5.10: Rye Base Case: 40% affordable housing provision without grant, development at 50 dwellings per hectare

Archetype	Site Size	Mix		Site Specific Assumptions	Model Code	Residual Land Value (per ha)	Existing Use Value (per ha)	Viability
		Flats	Houses					
Small Edge of Settlement Greenfield Site	1 ha (50 units)	5 x 1 bed flats 20 x 2 bed flats	20 x 2 bed houses 5 x 3 bed houses	No demolition costs	B	£1,795,000	£12,000	✓
Large Edge of Settlement Greenfield Site	3 hectares (150 units)	20 x 1 bed flats 30 x 2 bed flats	30 x 2 bed houses 50 x 3 bed houses 20 x 4 bed houses	No demolition costs	A	£1,861,400	£12,000	✓
Garden Land (Single or Several Plots)	0.5 ha (25 units)	5 x 1 bed flats 5 x 2 bed flats	10 x 2 bed houses 5 x 3 bed houses	No demolition costs	C	£1,907,600	£800,000	✓
Peripheral Land in Equestrian Use	1 ha (50 units)	5 x 1 bed flats 20 x 2 bed flats	20 x 2 bed houses 5 x 3 bed houses	No demolition costs	B	£1,795,000	£25,000	✓
School Site	3 ha (150 units)	20 x 1 bed flats 30 x 2 bed flats	30 x 2 bed houses 50 x 3 bed houses 20 x 4 bed houses		A	£1,758,400	£800,000	✓
Existing Industrial Site	3 ha (150 units)	20 x 1 bed flats 30 x 2 bed flats	30 x 2 bed houses 50 x 3 bed houses 20 x 4 bed houses		A	£1,758,400	£930,000	✓
Unused or Underused Land with Legacy of Commercial Activity	1 ha (50 units)	5 x 1 bed flats 20 x 2 bed flats	20 x 2 bed houses 5 x 3 bed houses		B	£1,693,600	£300,000	✓
Unused or Underused Areas for Car Parking	1 ha (50 units)	5 x 1 bed flats 20 x 2 bed flats	20 x 2 bed houses 5 x 3 bed houses		B	£1,693,600	£300,000	✓
Redevelopment of Existing Properties in Large Grounds	1 hectare (50 units)	5 x 1 bed flats 20 x 2 bed flats	20 x 2 bed houses 5 x 3 bed houses		B	£1,693,600	£800,000	✓

Figure 5.11: Rural Base Case: 40% affordable housing provision without grant, development at 30 dwellings per hectare

Archetype	Site Size	Mix	Site Specific Assumptions	Model Code	Residual Land Value (per ha)	Existing Use Value (per ha)	Viability
Small Edge of Settlement Greenfield Site	0.5 ha (15 units)	5 x 2 bed houses 5 x 3 bed houses 5 x 4 bed houses	No demolition costs	I	£1,982,600	£12,000	✓
Garden Land (Single or Several Plots)	0.2 ha (6 units)	2 x 3 bed houses 2 x 4 bed houses 2 x 5 bed houses	No demolition costs	J	£1,982,600	£12,000	✓
Peripheral Land in Equestrian Use	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses	No demolition costs	H	£1,979,700	£35,000	✓
Existing Industrial Site	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses		H	£1,879,700	£930,000	✓
Unused or Underused Areas for Car Parking	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses		H	£1,879,700	£620,000	✓
Redevelopment of Existing Properties in Large Grounds	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses		H	£1,879,700	£725,000	✓

Figure 5.12: Rural Base Case: 40% affordable housing provision without grant, development at 50 dwellings per hectare

Archetype	Site Size	Mix	Site Specific Assumptions	Model Code	Residual Land Value (per ha)	Existing Use Value (per ha)	Viability
Small Edge of Settlement Greenfield Site	0.5 ha (25 units)	5 x 1 bed flats 5 x 2 bed flats 10 x 2 bed houses 5 x 3 bed houses	No demolition costs	C	£2,393,800	£12,000	✓
Garden Land (Single or Several Plots)	0.2 ha (10 units)	5 x 2 bed houses 5 x 3 bed houses	No demolition costs	D	£2,393,800	£12,000	✓
Peripheral Land in Equestrian Use	1 ha (50 units)	5 x 1 bed flats 20 x 2 bed flats 20 x 2 bed houses 5 x 3 bed houses	No demolition costs	B	£2,272,100	£35,000	✓
Existing Industrial Site	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses		H	£1,897,700	£930,000	✓
Unused or Underused Areas for Car Parking	1 ha (50 units)	5 x 1 bed flats 20 x 2 bed flats 20 x 2 bed houses 5 x 3 bed houses		B	£2,172,100	£620,000	✓
Redevelopment of Existing Properties in Large Grounds	1 ha (50 units)	5 x 1 bed flats 20 x 2 bed flats 20 x 2 bed houses 5 x 3 bed houses		B	£2,172,100	£725,000	✓

Figure 5.13: Battle Small Sites (Threshold Analysis)

Site Size	Density (dph)	Number of Homes (All Tenures)	Number of Affordable Homes	Model Code	Base Case (40%) Residual Land Value per hectare	Existing Use Value Range per hectare	Viability
0.5 hectares	30	15	6	I	£1,515,000	£12,000 - £930,000	✓
0.2 hectares	50	10	4	D	£2,354,300	£12,000 - £930,000	✓
0.2 hectares	30	6	2*	J	£1,515,200	£12,000 - £930,000	✓
0.1 hectares	50	5	2	E	£2,322,300	£12,000 - £930,000	✓
0.1 hectares	30	3	1*	K	£1,515,200	£12,000 - £930,000	✓

*These sites deliver fractions of affordable housing and are therefore rounded down in the modelling process

Figure 5.14: Rye Small Sites (Threshold Analysis)

Site Size	Density (dph)	Number of Homes (All Tenures)	Number of Affordable Homes	Model Code	Base Case (40%) Residual Land Value per hectare	Existing Use Value Range per hectare	Viability
0.5 hectares	30	15	6	I	£1,515,000	£12,000 - £930,000	✓
0.2 hectares	50	10	4	D	£2,354,300	£12,000 - £930,000	✓
0.2 hectares	30	6	2*	J	£1,515,200	£12,000 - £930,000	✓
0.1 hectares	50	5	2	E	£2,322,300	£12,000 - £930,000	✓
0.1 hectares	30	3	1*	K	£1,515,200	£12,000 - £930,000	✓

*These sites deliver fractions of affordable housing and are therefore rounded down in the modelling process
Note: the results for Battle and Rye are identical under this analysis because the range of existing use values (Figure 5.3) is the same, assumed residential sales values for the two towns are the same and the site archetypes are held constant.

Figure 5.15: Rural areas Small Sites (Threshold Analysis)

Site Size	Density (dph)	Number of Homes (All Tenures)	Number of Affordable Homes	Model Code	Base Case (40%) Residual Land Value per hectare	Existing Use Value Range per hectare	Viability
0.5 hectares	30	15	6	I	£1,879,700	£12,000 - £930,000	✓
0.2 hectares	50	10	4	D	£2,912,700	£12,000 - £930,000	✓
0.2 hectares	30	6	2*	J	£1,881,300	£12,000 - £930,000	✓
0.1 hectares	50	5	2	E	£2,877,500	£12,000 - £930,000	✓
0.1 hectares	30	3	1*	K	£1,881,300	£12,000 - £930,000	✓

*These sites deliver fractions of affordable housing and are therefore rounded down in the modelling process

6. Sensitivity Testing

6.1 This section presents results of the sensitivity testing which examines the impact of different factors on viability within Rother District. The purpose of this exercise is to examine how far changing circumstances affect the ability to achieve affordable housing policies. In all of the sensitivity tests, variables are held at those assumed under the base case unless they are being specifically tested (see Figure 6.1).

Figure 6.1: Sensitivity Tests and Key Assumptions

Sensitivity Test	Other Key Assumptions
Level of Affordable Housing Quota: - 35% in Bexhill - 50% in Rural areas	- Affordable housing tenure split: 65% social rented and 35% shared ownership - Prices are assumed to remain flat over the period of the development - No affordable housing grant is assumed to be provided - The target rate of return is held at 15% IRR - S106 Non Affordable Housing Contributions assumed to be £3,500 per unit
Impact of Affordable Housing Grant	- 40% affordable housing is provided - Affordable housing tenure split is 65% social rented and 35% shared ownership - Prices are assumed to remain flat over the period of the development - Affordable housing grant is assumed to be provided - The target rate of return is held at 15% IRR - S106 Non Affordable Housing Contributions assumed to be £3,500 per unit
Tenure Split: - 50% social rented: 50% intermediate - 75% social rented: 25% intermediate	- 40% affordable housing is provided - Prices are assumed to remain flat over the period of the development - No affordable housing grant is assumed to be provided - The target rate of return is held at 15% IRR - S106 Non Affordable Housing Contributions assumed to be £3,500 per unit
Impact of Future House Price Scenarios - +5% per annum - -5% per annum (and 50% reduction in sales rates)	- 40% affordable housing is provided - Affordable housing tenure split is 65% social rented and 35% shared ownership - No affordable housing grant is assumed to be provided - The target rate of return is held at 15% IRR - S106 Non Affordable Housing Contributions assumed to be £3,500 per unit

Sensitivity Test	Other Key Assumptions
Impact of Higher S106 (non-affordable housing) contributions	- 40% affordable housing is provided - Affordable housing tenure split is 65% social rented and 35% shared ownership - Prices are assumed to remain flat over the period of the development - No affordable housing grant is assumed to be provided - The target rate of return is held at 15% IRR - S106 Non Affordable Housing Contributions assumed to be £6,500 per unit
Impact of Code for Sustainable Homes Level 4	- 40% affordable housing is provided - Affordable housing tenure split is 65% social rented and 35% shared ownership - Prices are assumed to remain flat over the period of the development - No affordable housing grant is assumed to be provided - The target rate of return is held at 15% IRR - S106 Non Affordable Housing Contributions assumed to be £3,500 per unit
Impact of 100% affordable housing on Rural Exception Sites and 80% & 100% affordable housing on Sites Wholly or Substantially for Affordable Housing	- Affordable housing tenure split is 65% social rented and 35% shared ownership - Prices are assumed to remain flat over the period of the development - The target rate of return is held at 15% IRR - S106 Non Affordable Housing Contributions assumed to be £3,500 per unit - Affordable housing grant is assumed to be available (though the sensitivity test also covers the implications without grant)

6.2 This section also comments on the implications for viability of obtaining **access** to each of the archetypes. The often high costs of obtaining access to development sites within the District (sometimes referred to as ransom strips) is recognised within the Rother District SHLAA and was also an issue raised by the Hastings and Rother Housing Market Partnership.

6.3 Whilst the circumstances of each site will be different and will need to be considered on their merits, there is a rule of thumb which is often used to calculate the value of land which provides access to a potential development site, based on planning case law 'Stokes vs Cambridge Corporation' (1961).[1] This case concluded that the value of access land could equate to up to 50% of the development value of the site (which should be interpreted as the 'uplift' on the existing use value). The 'Stokes vs Cambridge' case settled on 33% as the value of the access land and this has been widely used as a principle to inform similar valuations and disputes since. The cost of obtaining access to each of the archetypes within Rother has

[1] http://www.wilberforce.co.uk/publications/stokes-v.-cambridge--what-does-it-say--how-does-it-help-.asp

been estimated by applying this principle. The implications for viability are considered further on in this section.

The Impact of Introducing Affordable Housing Grant

6.4 The base case modelling assumes that no affordable housing grant is paid. The future availability and scale of grant is uncertain so it is prudent to make this assumption in the base case.[2] The introduction of grant increases residual land values across all the archetypes tested and has the effect of bringing those unviable or marginal schemes in Bexhill into viability when compared against existing use values (see Figure 6.3).

6.5 It is important to keep in mind that the treatment of grant within the modelling process for this viability assessment is to increase the value of the affordable homes over and above what housing associations are able to pay the developer. This is assumed at 40% open market value for social rented homes and 60% open market value for shared ownership homes without grant and 60% and 80% respectively with grant. This means that the implied grant levels increase as the value of the open market homes increases ie the Rural schemes receive higher grant levels than those in Bexhill. In practice this may not always be the case. Similarly, the level of grant available from the HCA for affordable housing is likely to change over time. In 2008/09 the average grant for affordable housing in Rother was around £40,000 per unit. This is broadly consistent with the average for local authorities in the South East as a whole. In Rother, this level of average grant equated to around 17% of the mean average value of open market homes and 20% of the median value of open market homes within the District in Q4 2009[3].

6.6 This assessment suggests that any future reduction in the level of grant available for affordable housing is likely to affect schemes in Bexhill to a greater extent than Battle, Rye and the Rural areas, since the modelling suggests 40% affordable housing could be achieved without difficulty outside of Bexhill (unless significant infrastructure, access or other unforeseen costs arise which affect the viability of schemes in these locations).

[2] Reductions to HCA programmes were announced on 24th May 2010 including a reduction of £100m to the National Affordable Housing Programme for 2010/11.

[3] CLG live tables on house prices (tables 581 and 582) based on Land Registry

The Impact of Affordable Housing Tenure

6.7 The sensitivity tests have included variations in the proportion of social rented and intermediate shared ownership housing provided as part of the affordable housing component.

6.8 The results of the sensitivity tests on affordable housing tenure split suggest the following:

- Increasing the proportion of social rented affordable housing within the affordable housing quota on schemes within Bexhill (to 75%) has the effect of moving one previously viable scheme (the school site) into unviable territory (see Figure 6.3). Though it is important to note that the addition of affordable housing grant would likely move this site into viability again.

- There are two further archetypes (garden land and the redevelopment of existing properties in large grounds) which remain viable under increased levels of social rented affordable housing but the margin over existing use values is just 15%. This may mean that any unforeseen costs associated with more complex schemes would tip these sites into unviable or marginal territory. Again, the addition of affordable housing grant would improve the position of these sites, as would reducing the tenure split to 50% social rented and 50% shared ownership.

- The results for Battle, Rye and the Rural areas suggest that schemes in these locations could support higher levels of social rented housing within the affordable housing component. All archetypes remain viable at 40% affordable housing when a split of 75% social rented and 25% intermediate shared ownership is assumed.

- Collectively, these results suggest that the policy proposed by Rother District Council is likely to be viable in each of the policy areas. However, it will be important to keep in mind the cumulative impact of other policies eg higher S106 contributions when applying policy on affordable housing tenure.

The Impact of a 50% Affordable Housing Contribution in Rural Areas

6.9 Figure 6.6 presents the sensitivity tests for the Rural area archetypes within Rother. This analysis shows that 50% affordable housing could be viably achieved in the Rural areas. Although the increase in affordable housing contributions from 40% to 50% appears to reduce residual land values across the archetypes by around 15% there remains a sufficient margin above existing use values.

6.10 It is important to keep in mind the caveats to this analysis:

- There may be unforeseen costs associated with more complex schemes which could tip these sites into unviable or marginal territory, though the addition of affordable housing grant could be used to improve the position of these sites under such a scenario.

- It is important to keep in mind the cumulative impact of other policies eg higher S106 contributions, a greater proportion of social rented accommodation, access costs if applying higher affordable housing quotas in the Rural areas.

The Impact of Future House Price Scenarios

6.11 Rising prices have a positive impact on viability because of effect on revenues and serve to increase residual land values on all schemes across the District. The scale of the impact of a +5% increase in prices per annum is to improve the viability of the single archetype within Bexhill which was unviable in the base case (existing industrial site) so that it now appears marginal against existing use values.

6.12 Falling prices (of -5% per annum) have a negative impact on viability because of the effect on both revenues and sales rates (the timing of revenue payments and therefore the knock on effects of interest payments on finance etc). A -5% decline in house prices year on year with lower than average sales rates reduces residual land values across all schemes. This scale of house price falls has the effect of making some schemes in Bexhill unviable or marginal when they were viable under the base case (see Figure 6.3). These schemes are the school site, redevelopment of existing properties in large grounds and garden land (in additional to the existing industrial site).

6.13 In Battle, Rye and the Rural areas, house price falls of this scale do not appear to change the viability of schemes in these locations, even though residual land values are reduced by around 25% when compared to the base case. There are two reasons for this:

- The margin between existing use values and residual land values in Battle, Rye and the Rural areas is sufficiently large to cushion the impact of house price falls in the short term.

- The schemes are generally small – the largest being 150 units which means that they do not generally experience prolonged sales periods (when compared to large strategic developments in other authority areas) and are therefore less exposed to a scenario of a prolonged housing market downturn.

The Impact of Increased S106 (non affordable housing) Contributions

6.14 The assessment has tested the impact of increasing Section 106 'non affordable housing' contributions from £3,500 per unit to £6,500 per unit. Such an increase in contributions could be associated with the introduction of the proposed Community Infrastructure Levy or a tariff system which is being considered by the new Government. It is worth noting that the Housing Market Partnership commented that even the higher level S106 contribution was low when compared to other authority areas in the South East and questioned whether this was a realistic contribution. Although this assessment has not tested significantly higher levels of contributions the evidence suggests that these could be achieved without difficulty in Battle, Rye and the Rural areas, given the margin between residual land values and existing use values. More significant increases in Bexhill would be likely to affect the viability of the sites tested.

6.15 Unsurprisingly, this increase in contributions reduces residual land values across all schemes (see Figures 6.3 – 6.6). The scale of the reduction in residual land values equates to around 10% across the schemes in Bexhill and 5% across the schemes in Battle and Rye and the Rural areas.

6.16 In the schemes within Battle, Rye and the Rural areas, the increase in contributions does not make viable sites unviable (in relation to our existing use value thresholds). But it is important to keep in mind the potential for cumulative burdens on schemes (eg if the affordable housing tenure split is being altered or the overall affordable housing quota increased to 50% in the rural areas). This was a concern raised by the members of the Hastings and Rother Housing Market Partnership.

6.17 In Bexhill, the increase in S106 contributions has the effect of moving three schemes that were viable under the base case into the margins of viability. These are the school site, garden land and redevelopment of existing properties in large ground, in addition to the existing industrial site which was already unviable in the base case. It is likely that the addition of affordable housing grant could move these sites back into viability, assuming there are no abnormal or unforeseen costs associated with infrastructure, decontamination or access etc.

The Impact of Code for Sustainable Homes Level 4

6.18 There are likely to be additional costs associated with adopting the Code for Sustainable Homes Levels 4, 5 and 6 as they are introduced over time. Whilst there is likely to be potential for cost reduction as each code level becomes the norm, research by CLG undertaken by Cyril Sweett on the additional costs associated with Code for Sustainable Homes suggests that build costs are likely to be substantially higher.

6.19 Figure 6.2 summarises the additional cost of meeting Code Levels 4 and 5 under the medium scenario in the CLG research i.e. neither best or worst case cost implications[4].

Figure 6.2: Additional Build Costs Associated with the Application of Code for Sustainable Homes Levels 4 and 5

CLG Typology	Applied to Rother	Level 4 additional cost per sq m	Level 5 additional cost per sq m	Level 6 additional cost per sq m
Detached	4 + 5 bed houses	£101	£191	£335
End terrace	2 + 3 bed houses	£94	£186	£314
Flat	All flats	£103	£208	£360

Source: CLG Research on Additional Costs of Code for Sustainable Homes (2008) undertaken by Cyril Sweet Consultants

6.20 Code Level 4 is likely to become mandatory under Building Regulations in 2013. There is as yet no Government commitment on the date for implementation of Level 5. This assessment has not tested Code Levels 5 or 6 because there is greater uncertainty about the costs of meeting these requirements and the timing of their introduction makes it difficult to make

[4] CLG (2008) Cost Analysis of the Code for Sustainable Homes: Final Report

robust assumptions about the sales prices, and therefore revenues, associated with residential development. Nevertheless, the estimated cost implications of complying with Code Level 6 is likely to significantly affect viability within the District under current CLG Build Cost assumptions.

6.21 DTZ has tested viability within Rother District under these higher build costs. Figures 6.3-6.6 summarise the results when Code Level 4 requirements are added to standard build costs (for both private and affordable):

- Compared to the base case (build costs averaged at 2004-08 levels with CSH level 3 for both private and affordable), applying CSH level 4 has a noticeable impact upon the viability of affordable housing (at 40% without grant).

- Four site archetypes within Bexhill appear unviable or marginal under the Level 4 of the Code.

- The additional costs significantly reduce residual land values in Battle, Rye and the Rural areas of the District but not enough to move sites into unviable territory against our existing use value thresholds.

6.22 It is important to note that we have assumed no house price growth in this sensitivity test (consistent with the base case) and we have also assumed that CSH costs will remain high rather than falling as is often the case as new regulations are adopted and the building industry adapts.

The Impact of Additional Costs Associated with Access Constrained Land

6.23 Figure 6.6 provides an estimate of the additional costs associated with obtaining access to development sites which have access constraints and often involve a 'ransom strip'. Figure 6.6 shows the implied cost of access by applying the 'Stokes vs Cambridge' principle to each of the 8 relevant archetypes.[5] Battle and Rye are grouped together in this table since the results are the same (with the exception of 'Unused or Underused Land' where different existing use values are likely to apply).

6.24 The cost of access land is assumed to be one third of the uplift in land value over the existing use value. The implications of this additional cost for viability, under base case assumptions, are as follows:

- The greatest impact is on sites which are already unviable or marginal under the base case (2 archetypes in Bexhill). If access costs of this level were to be met then other costs on development would need to be reduced to bring the sites into viability.

- The costs of access reduce the margin (or uplift) over existing use values significantly across all site archetypes in the four policy areas. However, outside of Bexhill, the margin over existing use values remains substantial and, under our viability thresholds, these sites remain viable.

[5] The 'School Site' archetype has been excluded from this analysis since it is assumed that access constraints of this kind would be unlikely to apply

- However, if additional access costs of this scale are combined with a range of other costs on development eg strategic infrastructure, increased S106 contributions, higher Code for Sustainable Homes level etc, some of the sites in Battle, Rye and the Rural areas could begin to become affected. Those affected are likely to be archetypes with higher existing use values.

Rural Exception Schemes and Allocations Wholly or Substantially for Affordable Housing

6.25 Rother District Council are considering allocating sites for 100% affordable housing in the Rural areas under the PPS3 provisions for allocation of rural exception sites. These are sites in rural areas that have not been allocated for development in the Local Plan or Local Development Framework but which could be suitable for small schemes of affordable housing to address the housing needs of the local community. Rother District council are also considering 'allocations wholly or substantially for affordable housing' in Battle, Rye and the Rural areas. These are sites within development boundaries that could deliver up to 100% affordable homes. Affordable levels of 80% and 100% have been tested for these.

6.26 DTZ has undertaken modelling to establish whether such developments would deliver an uplift in land value over existing use values on small sites, and hence potentially provide sufficient incentive for landowners to bring these sites forward for developments with a high percentage of affordable housing. DTZ has assessed the land value uplift on small schemes in Battle and Rye and in the Rural areas based on the following options and assumptions:

- 100% affordable housing or 80% affordable/ 20% market housing, with the assumption that in terms of the affordable component 65% of the homes are for social rent and 35% for intermediate sale.

- Both with and without grant options. In general it can be expected that schemes allocated wholly or substantially for affordable homes can be expected to secure grant, since there is less value available to cross subsidise the provision of affordable housing.

- Given the likely small nature of Rural Exception Sites, rather than focusing on site type (i.e. the archetypes) this sensitivity analysis focuses on site size. This is in line with the small site threshold analysis in Section 5. Consequently, a range of small sites have been tested that deliver between 3 and 15 homes. The residual land values of these have then been compared with the existing use values of relevant archetypes.

- Relevant Rural Exception Sites are likely to apply to the following archetypes and existing uses values in Rural areas (as set out in Figure 5.3):

  - Small Edge of Settlement Greenfield Site (existing value of £12,000 per ha)

  - Peripheral Land in Equestrian Use (existing value of £35,000 per ha)

- Relevant Allocations Wholly or Substantially for Affordable Housing are likely to apply to the following archetypes and existing use values in Battle & Rye and the Rural areas:

- Small Edge of Settlement Greenfield Site (existing value of £12,000 per ha)
- Peripheral Land in Equestrian Use (existing value of £25,000 per ha in Battle & Rye and £35,000 in Rural areas)
- Garden Land – Single or Several Plots (existing value of £800,000 in Battle & Rye, and £725,000 in Rural areas)
- Unused or underused areas for car parking, or otherwise underused (existing value of £550,000 in Battle, £300,000 in Rye and £620,000 in Rural areas)
- Redevelopment of existing properties in large grounds (existing value of £800,000 in Battle & Rye, and £725,000 in Rural areas)

6.27 The results for Rural Exception Sites, as displayed in Figure 6.8, indicate that all schemes tested in the Rural areas are viable and provide uplifts in values compared to the relevant existing use values.

6.28 In terms of Allocations Wholly or Substantially for Affordable Housing, Figure 6.9 sets out the residual land values assuming 80% affordable housing for schemes in Battle, Rye and the Rural areas. This shows that, with affordable housing grant, all small schemes tested in Battle, Rye and the Rural areas are viable, all with residual land values greater than £800,000 per ha (the highest relevant existing use value). Without grant and at 80% affordable, all small schemes in Battle and Rye have a residual land value per ha between the middle and highest existing use values – indicating they are potentially viable and may provide uplifts in land values depending on current use. In the Rural areas, two of the five archetypes are viable at 80% without grant, with the remaining three potentially viable depending on the existing use value of each site.

6.29 Residual land values for 100% affordable on Allocations Wholly or Substantially for Affordable Housing show that with grant all schemes in Battle & Rye and the Rural areas are viable. However, without grant, no schemes are viable in Battle & Rye i.e. none produce residual land values per ha higher than the lowest existing use value. In the Rural areas the viability of schemes at 100% affordable without grant is dependent on existing use values, as set out above.

6.30 Overall therefore:

- All rural exception site schemes are viable at 100% affordable, and provide uplifts in land values.
- All Allocations Wholly or Substantially for Affordable Housing in Battle, Rye and the Rural areas are viable at 80% affordable with grant. Without grant, a number of schemes provide significant uplift in values (more so in Rural areas than Battle & Rye), but their ability to do so is dependent on existing use values.
- At 100% affordable, all Allocations Wholly or Substantially for Affordable Housing in Battle & Rye and the Rural areas are viable. Without grant, no schemes are viable at 100% affordable in Battle and Rye, and viability in the Rural areas is dependent on existing use values.

Policy Implications

6.31 The sensitivity tests presented in this section imply the following for affordable housing policies within Rother District:

- Affordable housing grant significantly improves the residual land values of all schemes in the four policy areas in Rother District. However, the analysis in this assessment suggests that affordable housing at 40% could be delivered across Battle, Rye and the Rural areas without grant, providing there are no abnormal or unforeseen development costs which are significant enough to tip these schemes into unviable territory.

- An affordable housing contribution of 50% affordable housing could be achieved in the Rural areas. The same caveats to apply – providing there are no abnormal or unforeseen development costs. The Hastings and Rother HMA (2006) and SHMA Update 2010 considers that a higher level of affordable housing could be justified in the rural areas of the District given the limited affordable housing stock available to meet need. Increasing the provision of affordable housing in these areas could serve a useful purpose in diversifying the housing stock. However, Rother District Council will need to consider the appropriateness of securing 50% affordable housing in terms of how the scheme fits into and relates to the existing neighbourhood (eg in terms of existing tenure patterns and the nature of the existing housing stock).

- With the exception of schemes within Bexhill, the social rented component of affordable housing provision could be increased without affecting viability. In Bexhill, some site archetypes will become unviable if the proportion of social rented accommodation is increased above 50% of the affordable housing quota. However, it is important to keep in mind that this could be addressed through the addition of grant.

- Increased S106 contributions reduce residual land values across all of the schemes in all of the policy areas in Rother. However, this only presents a problem for schemes in Bexhill where sites were previously on the margins of viability under the base case.

- The introduction of the Code for Sustainable Homes Level 4 (planned for 2013) will impact on the viability of all sites across the four policy areas. It appears that only sites within Bexhill would be affected to the extent that they may become unviable or marginal.

- The additional cost of obtaining access to sites that are access constrained is considerable and would reduce the margin above existing use values across all site archetypes in all policy areas. The modelling suggests this would not be enough to make sites outside of Bexhill unviable, unless these sites are also affected by the cumulative impact of other costs.

- The analysis suggests that Rural Exception sites (100% affordable housing) could be delivered in the Rural areas. For Allocations Wholly or Substantially for Affordable Housing, the availability of grant greatly affects the viability of schemes. Schemes in Bexhill, Rye and the Rural areas are likely to be viable at 80% and 100% affordable, provided grant is available. Without grant and at 80% affordable, viability will be heavily dependent on the current existing use value of each site. In Battle & Rye, 100%

affordable without grant is unlikely to be viable for any site, compared to existing use values. In the Rural areas, viability at 100% affordable without grant is dependent on existing use values.

6.32 In all of the sensitivity tests, certain site archetypes in Bexhill become unviable or marginal when additional costs on development are added. Rother District Council may wish to consider whether a lower affordable housing quota (eg 35%) would be appropriate to help to address this issue. However, the Greenfield sites (edge of settlement archetypes) appear to perform well under the 40% affordable housing quota so there is question as to whether it would be appropriate to universally reduce the affordable housing quota in Bexhill.

6.33 One option would be to apply a lower quota to brownfield sites only. However, some brownfield archetypes appear to be able to deliver 40% affordable housing viably under base case assumptions (eg 'Unused or Underused Land' archetypes).

6.34 A second option would be to retain a 40% affordable housing quota for Bexhill but to apply flexibility in response to site specific circumstances.

6.35 Given that it will not always be possible to secure 40% affordable housing on all development sites within Bexhill, Battle and Rye or 50% in the Rural areas, Rother District Council need to adopt a process within the LDF for resolving what the contribution should be in the event that it is not possible for a site to deliver the affordable housing quota.

6.36 In practice, such a process already exists since the District Council have negotiated site specific contributions over the last 5 years, including commuted payments where on site affordable housing provision was unsuitable. However, it would make sense to acknowledge in the Council's policy documents that there is flexibility over the contribution that individual schemes will make, where it can be demonstrated that a particular affordable housing contribution would make development unviable. The Council may wish to set out in policy some of the factors that are likely to affect the ability to deliver 40% in Bexhill, Battle and Rye or 50% in the Rural areas as a way of demonstrating to developers its intention to take into consideration site specific circumstances. These could include:

- A deteriorating market environment eg falling prices of new build homes (this is particularly applicable to Bexhill)
- Abnormal build costs eg associated with topography, contamination or complexity of the site
- Abnormal or unforeseen costs associated with access arrangements
- Lack of available affordable housing grant or housing associations unable to fund intermediate type products at a particular point in time (this is particularly applicable to Bexhill since the assessment suggests some schemes will be unviable without grant)
- Significant costs or contributions which are necessary for the development to proceed, in particular:
  - Strategic infrastructure requirements

- Archaeological and heritage considerations/ requirements (this is particularly applicable in Battle and Rye where the central areas are defined Conservation Areas)

- Ecological/ nature or wildlife considerations

6.37 The council may also wish to make clear in policy a requirement for the developer to fully and financially demonstrate the need for such flexibility on individual schemes.

Figure 6.3: Bexhill Sensitivity Tests: Development at 30 dph (see Figure 6.1 for other Key Assumptions)

					Assumption Altered and New Residual Land Value (per ha)							
Archetype	**Site Size**	**Mix**	**Model Code**	***Existing Use Value***	**35% AH**	**Addition of Grant**	**Tenure 50:50**	**Tenure 75:25**	**Prices +5% pa**	**Prices -5% pa**	**S106 £6.5k per unit**	**CSH Level 4**
Small Edge of Settlement Greenfield Site	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses	H	*£12,000*	£931,100	£1,222,100	£921,500	£755,070	£971,700	£671,400	£739,300	£521,200
Large Edge of Settlement Greenfield Site	5 ha (150 units)	50 x 2 bed houses 50 x 3 bed houses 50 x 4 bed houses	F	*£12,000*	£790,600	£1,044,400	£795,200	£636,000	£745,600	£646,700	£612,600	£431,000
Garden Land (Single or Several Plots)	0.5 ha (15 units)	5 x 2 bed houses 5 x 3 bed houses 5 x 4 bed houses	I	*£675,000*	£931,100	£1,222,100	£921,500	£755,100	£971,700	£671,400	£739,300	£521,200
School Site	3 ha (90 units)	30 x 2 bed houses 30 x 3 bed houses 30 x 4 bed houses	G	*£675,000*	£865,300	£1,239,800	£762,800	£699,800	£848,700	£682,500	£680,800	£479,600
Existing Industrial Site	3 ha (90 units)	30 x 2 bed houses 30 x 3 bed houses 30 x 4 bed houses	G	*£930,000*	£931,100	£1,239,800	£762,800	£699,800	£848,700	£682,500	£680,800	£479,600
Unused or Underused Land with Legacy of Commercial Activity	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses	H	*£300,000*	£931,100	£1,222,100	£822,000	£755,070	£971,700	£671,400	£739,300	£521,200
Unused or Underused Areas for Car Parking	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses	H	*£300,000*	£931,100	£1,222,100	£822,000	£755,070	£971,700	£671,400	£739,300	£521,200
Redevelopment of Existing Properties in Large Grounds	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses	H	*£675,000*	£931,100	£1,222,100	£822,000	£755,070	£971,700	£671,400	£739,300	£521,200

Figure 6.4: Battle Sensitivity Tests: 40% affordable housing provision, development at 30 dph (see Figure 6.1 for other Key Assumptions)

					Assumption Altered and New Residual Land Value (per ha)						
Archetype	**Site Size**	**Mix**	**Model Code**	**Existing Use Value**	**Addition of Grant**	**Tenure 65:35**	**Tenure 75:25**	**Prices +5% pa**	**Prices -5% pa**	**S106 £6.5k per unit**	**CSH Level 4**
Small Edge of Settlement Greenfield Site	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses	H	*£12,000*	£2,043,100	£1,667,400	£1,480,600	£1,744,300	£1,388,200	£1,484,600	£1,266,100
Large Edge of Settlement Greenfield Site	5 ha (150 units)	50 x 2 bed houses 50 x 3 bed houses 50 x 4 bed houses	F	*£12,000*	£1,762,500	£1,446,500	£1,271,600	£1,409,000	£1,289,800	£1,263,00	£1,082,700
Garden Land (Single or Several Plots)	0.5 ha (15 units)	5 x 2 bed houses 5 x 3 bed houses 5 x 4 bed houses	I	*£800,000*	£2,043,100	£1,667,400	£1,480,600	£1,744,300	£1,388,200	£1,484,600	£1,266,100
Peripheral Land in Equestrian Use	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses	H	*£25,000*	£2,043,100	£1,667,400	£1,480,600	£1,744,300	£1,388,200	£1,484,600	£1,266,100
School Site	3 ha (90 units)	30 x 2 bed houses 30 x 3 bed houses 30 x 4 bed houses	G	*£800,000*	£1,913,100	£1,463,500	£1,382,900	£1,565,100	£1,368,300	£1,382,100	£1,181,200
Existing Industrial Site	3 ha (90 units)	30 x 2 bed houses 30 x 3 bed houses 30 x 4 bed houses	G	*£930,000*	£1,913,100	£1,463,500	£1,382,900	£1,565,100	£1,368,300	£1,382,100	£1,181,200
Unused or Underused Land with Legacy of Commercial Activity	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses	H	*£550,000*	£2,043,100	£1,566,500	£1,480,600	£1,744,300	£1,388,200	£1,484,600	£1,266,100
Unused or Underused Areas for Car Parking	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses	H	*£550,000*	£2,043,100	£1,566,500	£1,480,600	£1,744,300	£1,388,200	£1,484,600	£1,266,100
Redevelopment of Existing Properties in Large Grounds	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses	H	*£800,000*	£2,043,100	£1,566,500	£1,480,600	£1,744,300	£1,388,200	£1,484,600	£1,266,100

Figure 6.5: Rye Sensitivity Tests: 40% affordable housing provision, development at 30 dph (see Figure 6.1 for other Key Assumptions)

					Assumption Altered and New Residual Land Value (per ha)						
Archetype	**Site Size**	**Mix**	**Model Code**	**Existing Use Value**	**Addition of Grant**	**Tenure 65:35**	**Tenure 75:25**	**Prices +5% pa**	**Prices -5% pa**	**S106 £6.5k per unit**	**CSH Level 4**
Small Edge of Settlement Greenfield Site	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses	H	*£12,000*	£2,043,100	£1,667,400	£1,480,600	£1,744,300	£1,388,200	£1,484,600	£1,266,100
Large Edge of Settlement Greenfield Site	5 ha (150 units)	50 x 2 bed houses 50 x 3 bed houses 50 x 4 bed houses	F	*£12,000*	£1,762,500	£1,446,500	£1,271,600	£1,409,000	£1,289,800	£1,263,00	£1,082,700
Garden Land (Single or Several Plots)	0.5 ha (15 units)	5 x 2 bed houses 5 x 3 bed houses 5 x 4 bed houses	I	*£800,000*	£2,043,100	£1,667,400	£1,480,600	£1,744,300	£1,388,200	£1,484,600	£1,266,100
Peripheral Land in Equestrian Use	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses	H	*£25,000*	£2,043,100	£1,667,400	£1,480,600	£1,744,300	£1,388,200	£1,484,600	£1,266,100
School Site	3 ha (90 units)	30 x 2 bed houses 30 x 3 bed houses 30 x 4 bed houses	G	*£800,000*	£1,913,100	£1,463,500	£1,382,900	£1,565,100	£1,368,300	£1,382,100	£1,181,200
Existing Industrial Site	3 ha (90 units)	30 x 2 bed houses 30 x 3 bed houses 30 x 4 bed houses	G	*£930,000*	£1,913,100	£1,463,500	£1,382,900	£1,565,100	£1,368,300	£1,382,100	£1,181,200
Unused or Underused Land with Legacy of Commercial Activity	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses	H	*£300,000*	£2,043,100	£1,566,500	£1,480,600	£1,744,300	£1,388,200	£1,484,600	£1,266,100
Unused or Underused Areas for Car Parking	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses	H	*£300,000*	£2,043,100	£1,566,500	£1,480,600	£1,744,300	£1,388,200	£1,484,600	£1,266,100
Redevelopment of Existing Properties in Large Grounds	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses	H	*£800,000*	£2,043,100	£1,566,500	£1,480,600	£1,744,300	£1,388,200	£1,484,600	£1,266,100

Figure 6.6: Rural areas Sensitivity Tests: Development at 30 dwellings per hectare (see Figure 6.1 for other Key Assumptions)

					Assumption Altered and New Residual Land Value (per ha)							
Archetype	**Site Size**	**Mix**	**Model Code**	**Existing Use Value**	**50% AH**	**Addition of Grant**	**Tenure 50:50**	**Tenure 75:25**	**Prices +5% pa**	**Prices -5% pa**	**S106 £6.5k per unit**	**CSH Level 4**
Small Edge of Settlement Greenfield Site	0.5 ha (15 units)	5 x 2 bed houses 5 x 3 bed houses 5 x 4 bed houses	I	*£12,000*	£1,652,900	£2,453,200	£2,039,400	£1,841,900	£2,132,100	£1,745,200	£1,856,000	£1,637,900
Garden Land (Single or Several Plots)	0.2 ha (6 units)	2 x 3 bed houses 2 x 4 bed houses 2 x 5 bed houses	J	*£12,000*	£1,653,500	£2,453,600	£2,029,800	£1,843,200	£2,130,100	£1,746,100	£1,856,900	£1,638,400
Peripheral Land in Equestrian Use	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses	H	*£25,000*	£1,652,900	£2,453,200	£2,039,400	£1,841,900	£2,132,100	£1,745,200	£1,856,000	£1,637,900
Existing Industrial Site	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses	H	*£930,000*	£1,652,900	£2,453,200	£1,939,300	£1,841,900	£2,132,100	£1,745,200	£1,856,000	£1,637,900
Unused or Underused Areas for Car Parking	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses	H	*£620,000*	£1,652,900	£2,453,200	£1,939,300	£1,841,900	£2,132,100	£1,745,200	£1,856,000	£1,637,900
Redevelopment of Existing Properties in Large Grounds	1 ha (30 units)	10 x 2 bed houses 10 x 3 bed houses 10 x 4 bed houses	H	*£725,000*	£1,652,900	£2,453,200	£1,939,300	£1,841,900	£2,132,100	£1,745,200	£1,856,000	£1,637,900

Figure 6.7: Access Constrained Land Sensitivity Test: Development at 30 dwellings per hectare, 40% Affordable Housing (65:35 tenure split)

	Bexhill			Battle & Rye			Rural areas		
Archetype	Residual Land Value per ha	Existing Use Value per ha	Access Cost (33% of uplift) per ha	Residual Land Value per ha	Existing Use Value per ha	Access Cost (33% of uplift) per ha	Residual Land Value per ha	Existing Use Value per ha	Access Cost (33% of uplift) per ha
Small Edge of Settlement Greenfield Site	£881,400	£12,000	£286,902	£1,615,900	£12,000	£529,287	£1,982,600	£12,000	£650,298
Large Edge of Settlement Greenfield Site	£760,400	£12,000	£246,972	£1,400,100	£12,000	£458,073	N/A	N/A	N/A
Garden Land (Single or Several Plots)	£881,370	£675,000	£68,102	£1,615,800	£800,000	£269,214	£1,982,600	£12,000	£650,298
Peripheral Land in Equestrian Use	N/A	N/A	N/A	£1,615,800	£25,000	£524,964	£1,979,700	£35,000	£641,751
Existing Industrial Site	£725,000	£930,000	-£67,650	£1,415,100	£930,000	£160,083	£1,879,700	£930,000	£313,401
Unused or Underused Land with Legacy of Commercial Activity	£781,800	£300,000	£158,994	£1,515,00	£300,000-£550,000	£334,950 - £400,950	N/A	N/A	N/A
Unused or Underused Areas for Car Parking	£781,800	£300,000	£158,994	£1,515,00	£300,000-£550,000	£334,950 - £400,950	£1,879,700	£620,000	£415,701
Redevelopment of Existing Properties in Large Grounds	£781,800	£675,000	£35,244	£1,515,00	£800,000	£235,950	£1,879,700	£725,000	£381,051

Figure 6.8: Rural Exception Site Sensitivity Test: Dwellings at 100% affordable housing (65:35 tenure split)

Site Size	Density (dph)	Number of Homes (All Tenures)	Number of Affordable Homes	Model Code	Existing Use Value Range per hectare	Rural areas
						Residual Land Value per ha -
0.5 hectares	30	15	15	I	£12,000 - £35,000	£82,043
0.2 hectares	50	10	10	D	£12,000 - £35,000	£127,768
0.2 hectares	30	6	6	J	£12,000 - £35,000	£81,856
0.1 hectares	50	5	5	E	£12,000 - £35,000	£80,378
0.1 hectares	30	3	3	K	£12,000 - £35,000	£81,856

N.B. Colour coding on Figures 6.8 to 6.10 – Green indicates a residual land value greater than the highest existing use value in the range, orange shows a value within the range of existing use values, and red indicates a value below the lowest existing use value.

Figure 6.9: Allocations Wholly or Substantially for Affordable Housing Sensitivity Test: Dwellings at 80% affordable housing (65:35 tenure split)

Site Size	Density (dph)	Number of Homes (All Tenures)	Number of Affordable Homes	Model Code	Existing Use Value Range per hectare	Battle & Rye		Rural areas	
						Residual Land Value per ha - ***With Grant***	Residual Land Value per ha - ***Without Grant***	Residual Land Value per ha - ***With Grant***	Residual Land Value per ha - ***Without Grant***
0.5 hectares	30	15	12	I	£12,000 - £800,000	£1,362,991	£410,272	£1,709,724	£681,336
0.2 hectares	50	10	8	D	£12,000 - £800,000	£2,088,071	£644,592	£2,616,140	£1,056,204
0.2 hectares	30	6	4*	J	£12,000 - £800,000	£1,363,087	£410,500	£1,710,465	£681,855
0.1 hectares	50	5	4	E	£12,000 - £800,000	£2,039,307	£603,477	£2,564,361	£1,012,869
0.1 hectares	30	3	2*	K	£12,000 - £800,000	£1,363,087	£410,500	£1,710,465	£681,855

*These sites deliver fractions of affordable housing and are therefore rounded down in the modelling process

Figure 6.10: Allocations Wholly or Substantially for Affordable Housing Sensitivity Test: Dwellings at 100% affordable housing (65:35 tenure split)

Site Size	Density (dph)	Number of Homes (All Tenures)	Number of Affordable Homes	Model Code	Existing Use Value Range per hectare	Battle & Rye		Rural areas	
						Residual Land Value per ha - ***With Grant***	Residual Land Value per ha - ***Without Grant***	Residual Land Value per ha - ***With Grant***	Residual Land Value per ha - ***Without Grant***
0.5 hectares	30	15	15	I	£12,000 - £800,000	£1,048,183	Unviable*	£1,367,843	£82,043
0.2 hectares	50	10	10	D	£12,000 - £800,000	£1,593,914	Unviable*	£2,076,917	£127,768
0.2 hectares	30	6	6	J	£12,000 - £800,000	£1,048,666	Unviable*	£1,367,943	£81,856
0.1 hectares	50	5	5	E	£12,000 - £800,000	£1,538,594	Unviable*	£2,019,173	£80,378
0.1 hectares	30	3	3	K	£12,000 - £800,000	£1,048,666	Unviable*	£1,367,943	£81,856

*For these schemes the model returns a negative land value of at least -£335,000.

N.B. When comparing the values for the small schemes in Figures 6.9 and 6.10, it should be noted that the residual land values are displayed on a per hectare basis. The actual value difference between providing 80% and 100% affordable housing for a 0.2ha site, for example, will therefore be much less (and can be calculated using the per hectare figure and the site size).