

Viability Assessment
For London Commuter Belt (East)/M11 Sub
Region

FINAL REPORT

By Levvel

AUGUST 2010



Executive Summary

The Brief

Levvel has been appointed by the London Commuter Belt (East)/M11 Sub Region comprising Brentwood Borough Council, East Hertfordshire District Council, Epping Forest District Council, Harlow Council and Uttlesford District Council to undertake an Affordable Housing Viability Assessment.

The purpose of the study is to undertake a strategic assessment of development viability that will inform planning policy over the lifetime of each Local Planning Authority's Core Strategy.

Policy Background

National

The requirement to undertake viability assessments is derived from national policy guidance set out in PPS3 Housing¹ and the Government's housing policy statement 'Delivering Affordable Housing'².

Paragraph 29 of PPS3 sets out the requirements for the development of affordable housing policy. It requires that affordable housing targets should reflect an assessment of the likely economic viability of land within an area, taking account of risks to delivery and drawing upon informed assessments of the likely levels of finance available for affordable housing and the level of developer contributions that can reasonably be secured.

Regional and Sub Regional

This report was undertaken prior to the General Election May 6th 2010. On 6th July 2010 the Secretary of State for Communities Eric Pickles announced the revocation of Regional Spatial Strategies. We have however retained references within this report to Regional Strategies.

The East of England Plan, the revision to the Regional Spatial Strategy (RSS) for the East of England, was published on 12th May 2008. Policy H1 makes provision in the region for at least 508,000 dwellings from 2001 to 2021. Appendix 2 to the RSS outlines minimum dwelling provision in each of the five commissioning London Commuter Belt authorities. Policy H2 sets out the region's affordable housing policy. Within the requirements of Policy H1, Development Plan Documents should set appropriate targets taking into account RSS objectives, affordable housing need, Strategic Housing Market Assessments. In addition, evidence of affordability pressures, the Regional Housing Strategy and the need where appropriate to set specific, separate targets for social rented and intermediate housing. Policy H2 also states, 'at a regional level, delivery should be monitored against the target for some 35% of housing coming forward through planning permissions granted after publication of the RSS to be affordable'.

¹ Planning Policy Statement 3: Housing, DCLG, November 2006

² Delivering Affordable Housing, DCLG, November 2006



The London Commuter Belt (East)/M11 Sub Region Strategic Housing Market Assessment 2008 Study Report on Findings was completed in January 2010. The report provides a great deal of detailed information on unit size and mix requirements by Local Authority Area. Figure 152 in the report provides a summary of the overall housing requirement main findings by tenure and Local Authority Area.

Local

Brentwood

The Brentwood Replacement Local Plan was formally adopted by the Council in 2005. The Council's affordable housing policy H9 seeks to negotiate 35% affordable housing (30% social rented, 5% other affordable housing) on all suitable sites above the thresholds of 20 units and above or on suitable residential sites of 0.66 hectares or more within the Brentwood Urban Area, and on sites of 5 units and above or on suitable sites of 0.16 hectares or more within defined settlements elsewhere in the Borough.

Epping Forest

The Epping Forest Local Plan Alterations were adopted in 2006. Policy H5A states that 'On all suitable development sites the Council will seek an appropriate number and type of affordable dwellings'. Policy H6A sets the thresholds for affordable housing. For residential or mixed use development in settlements with a population of greater than 3,000, affordable housing is required where the site is above 0.5 hectares or where 15 or more dwellings will be provided. In settlements with a population of 3,000 or less, affordable housing will be required for two or more dwellings on a greenfield site, and where the site is 0.1ha or larger. Affordable housing will also be required on previously developed sites with three or more dwellings.

Policy H7A deals with levels of affordable housing and seeks at least 40% affordable housing on all suitable sites in settlements with a population of 3,000 or greater. Where the population is less than 3,000, 50% affordable housing will be sought on Greenfield sites. On previously developed sites 33% affordable housing is sought for applications for three units and 50% for applications of four or more new dwellings.

Harlow

The Harlow Replacement Local Plan was adopted in 2006. Policy H5 states that, "on residential development sites of 15 or more dwellings or 0.5 of a hectare or more irrespective of the number of dwellings, the Council will negotiate the provision of intermediate housing and/ or social rented housing, based on the prevailing housing needs assessment. The supporting text also notes that 30% is a baseline for negotiation by the Council.

The Affordable Housing Supplementary Planning Document was adopted in 2007. Although a negotiation baseline of 30% affordable housing was set through Policy H5 of the Local Plan, this figure predated the most up to date housing needs study (as of March 2007) and was based on a study from February 2000. A Housing Requirements Study was published in 2005 and a percentage of affordable housing was presented as a target for either a 5 or 10 year period. This varied between 42% for five years and 28% over ten years. The SPD then set the starting point at 33% affordable housing on eligible sites. A threshold of 15 or more dwellings or 0.5 a hectare or more applies.



East Hertfordshire

The East Hertfordshire Local Plan Second Review 2007 was adopted by the Council on the 18th April 2007. It states the Council will seek to negotiate a target of up to 40% affordable housing on all suitable sites. Affordable Housing Policy HSG3 includes the above target and definition of affordable housing and sets the following site size thresholds:

- proposing 15 or more dwellings, or over 0.5 hectares, in the six main settlements; and
- proposing 3 or more dwellings, or over 0.09 hectares, in the Category 1 and 2 villages.

The Affordable Housing & Lifetime Homes Supplementary Planning Document was adopted in 2008. Paragraph 6.29 notes that 'the Council will now seek 40% affordable housing as a starting point. This will occur on suitable sites along with other contributions as set out in the Council's Planning Obligations Supplementary Planning Document 2008.

Uttlesford

The Uttlesford Local Plan was adopted in January 2005. Local Plan Policy H9 sets a target of 40% affordable housing on appropriate allocated and windfall sites, having regard to the up to date Housing Needs Survey, market and site considerations. A site size threshold of 0.5 hectares or of 15 dwellings applies.

The Council formally consulted on the Core Strategy Preferred Options document from 30th November 2007 to 11th January 2008. Policy DC1 (Housing Need) outlines that the preferred option proposes that the current 40% target should be maintained applying to schemes of 15 units or more or sites of 0.5 ha or above. Any future policy will also take on board the outcomes of the Strategic Housing Market Assessment.

Methodology

In undertaking this affordable housing viability assessment, we have assessed the viability of a range of housing developments across each Local Authority using a residual valuation appraisal tool of the kind recommended in the Government's Delivering Affordable Housing statement. This is then used as the base for testing future cost and value scenarios using upside, middle and downside housing market growth scenarios during the Local Development Framework period. These future assessments take account of changes to property values, inflation, construction, rent and land values over the same timescale.

Our assessment is based on the viability of delivering affordable housing across a range of notional sites. These notional sites were selected in consultation with each Council and with reference to work undertaken by each Local Planning Authority to determine land availability and supply. Sites have been classified within this report as small sites (below 15 units), strategic sites (sites of 1,000 units and above) and general development sites (sites of 15 - 250 units). Details of each notional site selected can be found in section 3 of this report.

The study considered affordable housing thresholds of 15, 10 and 5 units.

An assessment of the nature and extent of Value Areas within each Local Authority area was undertaken. In order to reflect these ranges in values, Hometrack data for each type of dwelling (detached, semi detached, terraced and flats and maisonettes) at a Postcode Area level (e.g. CM6, IG10) was used. In addition, this information was assessed against



information regarding asking prices and achieved sales values on a number of property websites including Rightmove and Mouseprice and independently assessed by Thornes Chartered Surveyors and Valuers, a valuer who has been engaged by Levvel to provide independent advice regarding the property and land values used for the purposes of this study.

In line with the Brief, and, in accordance with the expectations outlined in the adopted East of England Plan Policy H1, 35% affordable housing was assessed as a baseline. In cases where this was found to produce a result that was not viable, affordable housing percentages below this (down to as low as 5-10%) were tested. In cases where 35% was found to be viable, affordable housing percentages above this were tested (up to 50%). The affordable housing tenure mixes assessed vary between local authorities and have been determined following consultation with each local authority and with reference to the LCB East Sub Regional Strategic Housing Market Assessment undertaken by Opinion Research Services. Section 3 of this report sets out the tenure mixes (including the form of intermediate affordable housing tenure) that have been assessed for each Local Authority.

Average build costs have been derived from the Build Cost Information Service. These base costs have then been adjusted according to each local authority's cost multiplier as identified by the Build Cost Information Service. Additional costs reflect external works, Code for Sustainable Homes requirements (to reflect the changes to this standard over time), additional sustainability requirements that may be sought in excess of these standards, Lifetime Homes Requirements and a contingency sum. These figures are set out in detail in Section 3 of this report.

Section 106 and infrastructure costs have been assessed separately for each Local Authority following consultation with Officers and with reference to extant and emerging local policy including County Council requirements where applicable. These costs also vary dependent upon the size of the notional site assessed. Section 3 summarises these cost assumptions whilst Appendix 6 to this report sets out in detail the specific assumptions made for each Local Authority. Sensitivity testing has also been undertaken on Section 106 and infrastructure cost assumptions to allow for potential variations over time.

Actual S106 and infrastructure costs will vary from site to site depending upon location, proximity to existing services and the capacity of existing provision. Without modelling specific schemes, our policy based approach can therefore only provide general guidance on the impact of lower or higher levels of S106/infrastructure costs.

Schemes have been assessed using nil Social Housing Grant (SHG) as the baseline. When sensitivity testing, in certain circumstances, we have assumed SHG is available at 'lower', 'normal' and 'higher' levels. The grant per unit that these assumptions relate to is set out in section 3 of the main report.

Land Value Assumptions

It is essential to establish a baseline to determine at which point land may come forward for development. In order for this to happen residual land values must exceed existing or alternative uses of the site.

All schemes have been tested against two key assessments of viability. The first is data regarding land values in the area, and takes into account an uplift in respect of 'hope' value.

In order to inform the land values used as our first assessment of viability Levvel has:



- had regard to Valuation Office Agency Data regarding land values;
- sought feedback from stakeholders through the stakeholder engagement process (as detailed in Section 4 of this report);
- engaged Thornes Chartered Surveyors and Estate Agents to provide information on land values and recent land transactions undertaken in each Local Authority Area.

Our second test of viability examines the relationship between residual land value (RLV) and gross development value (GDV). This assists in 'future proofing' this assessment and reflecting land owners differing expectations.

Using these two tests of viability simultaneously (benchmark land values and the RLV:GDV ratio), it is possible to inform a policy position that has flexibility and is relevant throughout the Core Strategy period to ensure deliverability.

In respect of strategic sites we have assessed viability using the second test of viability, (the RLV:GDV test). This allows us to consider the relative land value rather than an absolute one. Rather than assessing what particular land value may be acceptable to a landowner this assesses the value of the development and whether the land value generated may be reasonable for both landowner and developer.

Full details on land value assumptions can be found in section 3 of the main report.

Key Findings

Section 13 of the report sets out in detail the conclusions and recommendations drawn from the report and how these relate to each Local Authority. Comparisons between the different local authorities viability position within the sub region is also examined as is the impact of certain criteria upon development viability such as Code for Sustainable Homes Requirements and the level of developer profit.

Sites below 15 dwellings

All Areas

We considered the ability of schemes of 5-14 dwellings to deliver affordable housing either on site, or by commutation. It should be considered that on developments of this size, absolute values are as important as relative or proportionate values in bringing sites forward and the proportion of affordable housing that may be viably achieved will differ dependent upon location, market conditions, existing or alternative use of the site, development density and the gross development value of the scheme.

In all cases the exact level of affordable housing will have to be determined at the point of application having due regard to the gross development value and the potential alternative/existing uses of the site.

It should also be noted that if the market performs to downside conditions it will be more challenging, in these periods, for schemes of this size to deliver affordable housing.



Brentwood

In no cases would more than a 30% affordable housing requirement be deliverable and the impact of factors such as development density, location and the existing/alternative use of the site may reduce the maximum amount of affordable housing that may be achievable in some circumstances to 10%.

Epping Forest

In no cases would more than a 30% affordable housing requirement be deliverable and the impact of factors such as development density, location and the existing/alternative use of the site may reduce the maximum amount of affordable housing that may be achievable in some circumstances to 10%.

On developments of 70 dwellings per hectare and above with a previously developed residential land use, delivery of any percentage of affordable housing will be difficult to achieve.

Harlow

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East Hertfordshire

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Uttlesford

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On developments of 67 dwellings per hectare with a previously developed residential land use, delivery of any percentage of affordable housing will be difficult to achieve.



General Development Sites (15-250 dwellings)

All

The imposition of the forecast increase in construction costs associated with achieving higher levels of Code for Sustainable Homes requirements has an adverse impact upon development viability during the period 2012 to 2017 or thereabouts. These costs have been based upon current cost estimates and it may be that technological advances in building techniques and general acquaintance with the requirements may bring these costs down. At this point however, it may be that the allowance we have made for code level costs is a 'worst case' position.

Our reporting has mainly been made on the basis of gross developer profit at 19% of Gross Development Value. This is because of the level of profit that has been accepted by custom both in many affordable housing viability studies of this type and in negotiations on sites (and supported at appeal). We are mindful that current pressures to increase the allowance for profit are in response to the specific market conditions that we are currently experiencing. This is in response to the perceived risk of development in an uncertain market and the difficulties developers currently face accessing finance at reasonable rates. Therefore basing assessments on higher levels of profit for a policy that must last the lifetime of a Core Strategy might not be appropriate. It should however be noted that the results of testing gross profit at 25% of Gross Development Value has a significant effect on the viability of schemes. Where site specific constraints and market conditions dictate, a Local Authority may consider the case for higher profit levels to be taken into account. It is our view that, where development viability is a particular issue, the applicant must make a reasonable case for taking into account a higher than normal profit level.

Brentwood

In comparison with other local authority areas in the sub region higher density development is relatively more viable in Brentwood with the optimum development density at 35% affordable housing is in the region of 50 to 70 dwellings per hectare. As development density increases to 100 dph and above, residual land values are adversely affected with lower value areas more adversely affected than higher value areas.

The baseline position assumes nil public subsidy, 19% gross profit and an 85:15 split of social rented to intermediate affordable housing. Section 106 contributions are in line with 100% of the baseline level as set out in Appendix 6 and section 3 of this main report.

The summary of results for general development sites in Brentwood assumes the following baseline position: nil public subsidy; 19% gross profit and an 85:15 split of social rented to intermediate affordable housing. Section 106 contributions are in line with 100% of the baseline level as set out in Appendix 6 and section 3 of this main report.

15 Units at 30 dph - In most areas against industrial/greenfield land value tests 35% affordable housing is achievable although the expectation may have to reduce to 20% in CM14 value areas. It is unlikely that any more than 35% could be achieved viably on this type of site without risking residential development coming forward. On Previously Developed Residential Land the ability to achieve any more than 20% is extremely challenging and 10% is probably more realistic. Care must be taken when seeking high levels of planning obligation as this has a negative effect on viability in general and the ability to achieve affordable housing more specifically.



15 Units at 50 dph - In most areas against industrial/greenfield land value tests 35% affordable housing is achievable although grant or a change in affordable housing mix could be needed. In RM4 however up to 40% affordable housing may be deliverable. On Previously Developed (residential) Land the ability to achieve any more than 20% affordable housing is challenging and 10% may be more realistic except in the case of RM4 where 35% may be achievable with grant. Care must be taken when seeking high levels of planning obligations as this has a negative effect on viability in general and the ability to achieve affordable housing more specifically.

15 Units at 70 dph - Although in certain circumstances and in certain areas it may be possible to achieve up to 35% affordable housing it may be necessary to consider the affordable housing tenure mix as well as a possible relaxation of section 106 planning obligations. Grant will also help to ease viability. In some areas and on higher land value sites, it may only be possible to achieve between 10% and 20% affordable housing. It should also be noted that in postcode area RM4 the viability position on a 70 unit scheme (predominantly flats) is different to lower density developments in that location.

50 Units at 30 dph - On land at Previously Developed (residential) values it may be necessary in most areas to consider reducing the affordable housing expectation to 10% to 20%. Even in high value areas such as RM4 it may be unlikely that more than 20% affordable housing could be achieved. However, on land at industrial/greenfield values, 35% affordable housing is generally achievable. In areas CM14 and 15 our modelling has shown that only 20% may be achievable and possibly as low as 10% dependent upon market conditions. In higher value areas, however, 35% should remain a viable position.

50 Units at 50 dph - In the long term the likely maximum percentage in value areas CM4 and RM4 may be as much as 40% and in some cases higher if grant is made available. This assumes land at industrial/greenfield values. In the other value areas, lower percentages may be more appropriate if no grant is available and if high proportions of social rented affordable housing is sought. On Previously Developed (residential) land it is possible to reach 35% affordable housing in value area RM4 while in other areas it is more likely that up to 20% could be achieved.

50 Units at 70 dph, 100 and 120 dph - It will be much more challenging to achieve viability if land values are in line with previously developed residential land values although it may be possible to achieve 35% in value area CM4. In all other areas less than this is more likely to be viable. Noting that viability decreases as density increases, in most areas in the longer term affordable housing can be achieved at 35% against industrial/greenfield land values but this becomes marginal at 100 dph and 120 dph in most areas.

150 Units at 30 dph - Achieving 35% affordable housing on schemes in CM13, CM14, and CM15 is challenging and affordable housing requirements down to 10%-20% may only be achievable in these areas if grant is not available. In other areas 35% affordable housing should be achievable. Indeed, in RM4 affordable housing may still be viable in the long term at 40%.

150 Units at 50 dph - Achieving 35% affordable housing in the long term is possible on previously developed residential land although in some circumstances it may only be possible to achieve 10% in lower value areas. However, when looking at industrial/greenfield land values 35% affordable housing would appear to be achievable and in some higher value areas up to 50% affordable may be viable assuming downside economic conditions do not prevail.



150 Units at 70 dph - In the longer term it is possible to achieve 35% affordable housing in all areas assuming land at industrial/greenfield values and in CM4 it may be possible to achieve higher than this (up to 50%) especially if grant is available. On previously developed land (residential) it is more likely that a lower percentage of affordable housing (10-25% dependent upon value area) may be viably achieved.

Epping Forest

15 units at 30 dph - In most value areas, affordable housing of up to circa 40-47% may be achievable should the market perform to at least middle scenario conditions. However in the area achieving the lowest values (CM17) 20% affordable housing (assuming middle market conditions) is more likely to achieve a viable position. On sites where the existing use is residential, achieving a viable outcome is more challenging thus affordable housing in the range of 7-20% is more likely to be able to achieve a viable outcome. In some cases, (dependent upon market conditions) grant may be required to achieve affordable housing at this level.

15 Units at 50 dph - In most areas, 40-47% affordable housing may be deliverable over most of the life of the Plan although grant may be required in some areas and at some points in order to achieve this. This assumes middle market conditions, however should an upside position be reached, achieving viability at these percentages without grant is far more likely. In the lower value area (CM17) circa 20-35% affordable housing is more likely to be achievable in middle market conditions. On sites coming forward where the existing land use is residential, 7-20% affordable housing is more likely to be achievable.

15 Units at 70 dph - It is comparatively more challenging to achieve a viable position on higher density (70dph) notional sites than on the lower density schemes (30 dph and 50 dph). Against industrial/greenfield land values, 35-40% is likely to be achievable in some areas however in value area CM17, 7-14% affordable housing, and in value area EN9/CM5, 20% affordable housing, is more likely to be deliverable. This is based on the market performing to the middle scenario. In respect of sites coming forward where the existing land use is residential, 7-14 % affordable housing, in some cases requiring grant, appears the more likely amount that may be achieved. Again, this is based on the market performing to the middle scenario.

50 Units at 30 dph - Viable delivery of affordable housing varies quite considerably dependent upon the value area assessed and the availability of public subsidy. Against industrial/greenfield land values, some value areas are likely to be able to achieve circa 35-40% (with grant in some circumstances) in middle market conditions throughout the period assessed. In other areas, 20-25% affordable housing is viable in the short term without grant, increasing to circa 35% later in the Plan period. Only in value area CM17, is it unlikely affordable housing at these levels would be achievable. Against previously developed residential land values, whilst some value areas may be able to deliver 10% affordable housing in middle market conditions, in other areas it may be challenging to achieve viable delivery of any amount of affordable housing.

50 Units at 50 dph - Against industrial/greenfield land values, up to 35-40% affordable housing (and in value area IG7 up to 50% affordable housing) may be achievable over the period assessed assuming at least middle market conditions. Grant may be required in some areas at certain points to achieve delivery of this percentage and/or flexibility of affordable housing tenure to achieve higher percentages of affordable housing. Against previously developed residential land values, it is likely that circa 10% affordable housing may be achievable, although in certain value areas delivery of even 10% affordable housing may be challenging in certain periods and/or market conditions.



50 Units at 70 dph - As was the case with the 15 unit notional sites, delivery of affordable housing is more challenging on higher density schemes. Whilst some areas may be able to viably deliver up to 35% affordable housing delivery of around 10% affordable housing is likely to be difficult in others. This is the position when assessing viability against industrial/greenfield land values. When assessing the position against previously developed residential land values, delivery of any affordable housing over the life of the Plan may not be achievable in some areas whilst in others circa 10% is more likely.

50 Units at 100 and 120 dph - Delivery of affordable housing is more likely to be challenging on 120 dph schemes than those coming forward at 100 dph. In some value areas and in some circumstances, up to 20% affordable housing may be achieved against industrial/greenfield land values, whilst in others 10% is more likely. Against previously developed residential land values, some areas are unlikely to be able to viably deliver any amount of affordable housing over the Core Strategy period whilst others may achieve up to 10%, dependent upon market conditions.

150 Units at 30 dph - Against industrial/greenfield land values, typically 25-35% or 35-40% (dependent on area) is likely to be achievable over the life of the Plan in middle market conditions. Only in value area CM17 is delivery at these types of levels unlikely to be achievable and circa 10% affordable housing is more likely to be deliverable. If these sites were to come forward where the existing land use was residential, viability is more challenging and circa 10% affordable housing may be achievable in some value areas only.

150 Units at 50 dph – Up to 35-45% affordable housing is likely to be achievable against industrial/greenfield land values in higher value areas. In other areas 15-20% affordable housing in middle market conditions in the earlier part of the period assessed is more likely to be achievable without grant however even in these cases viability eases over time and later in the period assessed delivery of higher percentages is more likely. In value area CM17 achieving a viable outcome is more challenging and delivery of 10% affordable housing may not be viable until the second half of the period assessed. Against previously developed residential land values circa 10% affordable housing is more likely to be achievable, although in some value areas delivery at this even level may be difficult.

150 Units at 70 dph - Again, the percentage of affordable housing that may be viably achieved varies considerably between value areas with some areas able to sustain up to 45% affordable housing (CM16) over the period assessed, whilst others may only be able to achieve circa 10% affordable housing (CM17). This assumes industrial/greenfield land values. Against previously developed residential land values achieving a viable position is more challenging and whilst 20% affordable housing may be achievable in some value areas, generally circa 10% affordable housing is more likely.

Harlow

15 units at 30 dph - At industrial/greenfield land values 35% affordable housing remains achievable in most areas although grant and/or a relaxation of section 106 planning obligations may be required in some periods. In the lower value area of CM18 it may be more challenging to achieve this percentage whilst in the higher value areas up to 45% affordable housing may be achievable. The position on previously developed residential land is much more challenging. Up to 20% affordable housing is more likely to be achievable in some areas reducing to around 10% in lower value areas.

15 units at 50 dph - At industrial/greenfield land values it is possible to achieve up to 35% affordable housing in most value areas. On previously developed residential land the ability to achieve much greater than 10% affordable housing may be challenging.



15 units at 70 dph - Only in value area CM17 is it likely affordable housing could be achieved on small flatted developments at 70 dph or more. There may be some one-off luxury flatted developments where values are high and these sites may be able, theoretically, to provide some affordable housing in economic terms.

50 units at 30 dph - In some cases at industrial/greenfield land values it may be possible to achieve up to 45% affordable housing although this may involve the need to provide additional grant or relax the planning obligations for the site. 35% affordable housing is more likely to be achievable if the market performs to the middle scenario or better. On previously developed land 35% affordable housing is more difficult to achieve apart from value area CM19. Affordable housing in other areas is more likely to range from below 10% to 25%.

50 units at 50 dph - Affordable housing on land at industrial/greenfield values can support from 25% in lower value areas up to 40% in higher value areas. Care will need to be taken when seeking higher levels of affordable housing in periods of challenging economic conditions and especially during the period when code level 6 requirements come into force. On previously developed residential land it is more likely that up to 25% affordable housing will be achievable and in most areas less than this level (down to 15%) is more likely.

50 units at 70, 100 and 120 dph - Generally, the ability to achieve affordable housing on higher density sites in all areas is extremely challenging. The exception may be CM17 where, at industrial/greenfield land values, up to 25% affordable housing may possible on sites at 70 dph. Schemes will only be viable against previously developed residential land if our upside economic assumptions are relevant and possible later in the Core Strategy period. In that case up to 10% affordable housing may be viable in CM17. In areas CM18, CM19 and CM20 it will be extremely difficult to achieve viability with any affordable housing. The exception may be where flatted developments attract higher executive apartments and consequently higher values than we have tested. For example, where flats are sold for up to, say, £300,000 then an element of affordable housing could be afforded.

150 units at 30 dph - On industrial/greenfield land it is generally possible to achieve 35% affordable housing but the tenure mix and planning contribution levels must be considered in some periods in order to ensure that this is achievable. On previously developed land it will be much more challenging to achieve this target and in some areas (CM17 and CM18) around 10% affordable housing is more likely to be viable even in middle economic conditions. In higher value areas 20% affordable housing is more likely to be achieved against previously developed residential land values.

150 units at 50 dph - At industrial/greenfield land values it is unlikely that schemes could be supported at this density that provided 100% social rent and 35% affordable housing without a considerable amount of grant. At other tenure mixes in all areas most schemes are either marginally viable or viable at 35% affordable housing although this may have to be compromised in certain conditions especially in CM19 where we found that 25% - 30% may be a more realistic requirement. On previously developed residential land it is unlikely that 35% affordable could be achieved and viability maintained if economic conditions remain in the middle and especially in the downside scenarios. Target percentages may have to be reduced to between 10% and 30% in order to maintain viability.

150 units at 70 dph - Overall our modelling has shown that it is extremely unlikely that schemes with 35% affordable housing will come forward on this site type in any area within Harlow both now or during the life of the Core Strategy. Indeed, currently, 25% affordable housing is challenging even on land traded at industrial/greenfield values and value area CM17 is the only area currently likely to achieve up to 25% affordable housing. In the future



period, 25% affordable housing could be achieved in CM17 with circa 10%-15% affordable housing being more realistic in other value areas. The situation will be eased during periods of economic upturn. Against previously developed residential land values whilst higher value areas may be able to deliver up to 10% affordable housing, it is unlikely that other value areas would be able to support any affordable housing requirement in any of the market conditions assessed.

East Hertfordshire

15 Units at 30 dph - Against industrial/greenfield land values 35-40% affordable housing appears broadly viable against middle market conditions, although value area CM23 is likely to require grant to achieve these levels in the early part of the Core Strategy.

Considerations of tenure mix (increasing the proportion of intermediate affordable housing and/or relaxing S106 requirements) is a further mechanism that could be employed to ease viability in this area. The viability of sites such as these coming forward on previously developed residential land is more challenging and a considerable amount of grant and/or change in tenure mix is likely to be necessary.

15 Units at 50 dph - 35% affordable housing is likely to be broadly viable against middle market conditions over the life of the Core Strategy although in some value areas grant funding and/or a flexible approach to affordable housing tenure is likely to be required to achieve this, specifically in the earlier half of the Core Strategy period. Later in the life of the Core Strategy and/or in upside market conditions 40% affordable housing may be deliverable in some value areas. Delivery of affordable housing on sites where the existing use is residential is challenging and even with levels of affordable housing at around 7-14% it is likely that in some areas provision of this amount would be difficult until later in the Core Strategy period should the market achieve only middle conditions.

15 units at 70 dph - With the exception of some of the higher value areas (where 35% affordable housing may be deliverable against industrial/greenfield values) delivery of in excess of 7% affordable housing is likely to be challenging against industrial/greenfield land values should middle market conditions only prevail. It is unlikely that schemes of this nature brought forward on land where the existing use is residential could sustain any affordable housing requirement in any market scenario assessed.

50 units at 30 dph - In higher value areas, up to 50% affordable housing may be viable over much of the life of the Core Strategy. This reduces to 35% affordable housing (in some cases only achievable with public subsidy at normal levels) in other areas. In both cases these assume middle market conditions and S106 requirements at 100% of the base level. Delivery of affordable housing on land with an existing residential use is much more challenging and some lower value areas may be unable to viably deliver any affordable housing.

50 units at 50 dph - In the higher value areas and assuming industrial/greenfield land values; up to 40% affordable housing may be achievable without grant should the market perform to the middle scenario. In other areas, 35% affordable housing is likely to be viable, albeit requiring grant at normal levels in some circumstances. Furthermore, some flexibility in the affordable housing tenure mix may also be required to achieve delivery of 35% affordable housing in these instances with intermediate tenures forming a minimum of circa 50% of the affordable housing mix. Against previously developed residential land values, up to 10% affordable housing is the likely maximum amount that could be delivered in any period assessed unless the market performs to upside conditions. In some areas, where the existing land use is residential, delivery of any affordable housing could be challenging.



50 units at 70 dph - Delivery of affordable housing on these higher density notional sites is comparatively more challenging than on the lower density (30 and 50dph) schemes. Although some value areas are able to achieve up to 35% affordable housing, for large parts of the period assessed (assuming middle market conditions) in the short term 10-20% affordable housing is more likely to be the maximum that can be achieved. On notional sites where the existing land use is residential, it is likely that up to 10% affordable housing could be delivered. In most cases this would require grant at normal levels, however if the market achieves upside conditions the schemes have the potential to achieve delivery of circa 10% affordable housing without recourse to public subsidy.

50 Units at 100 dph - 35% affordable housing is likely to be broadly viable against middle market conditions over the life of the Core Strategy although in some value areas grant funding and/or a flexible approach to affordable housing tenure may be required to achieve this in the short term. Later in the life of the Core Strategy and/or in upside market conditions 40% affordable housing is likely to be deliverable in some value areas. Delivery of affordable housing on sites where the existing use is residential is challenging and even with levels of affordable housing of 7-14% it is likely that in some areas provision of this amount would be difficult until later in the Core Strategy period should the market achieve only middle conditions.

150 units at 30 dph - In higher value areas, up to 50% affordable housing may be viable over much of the life of the Core Strategy. This reduces to up to 35% affordable housing in lower value areas. In both cases these assume middle market conditions and S106 requirements at 100% of the base level. Delivery of affordable housing on land with an existing residential use is much more challenging and some lower value areas may be unable to deliver any affordable housing at all in certain periods or market conditions.

150 units at 50 dph - Against industrial/greenfield land values some areas are likely to be able to deliver 35% affordable housing in middle market conditions without grant in the latter half of the Core Strategy period. Prior to this grant at normal levels may be required to achieve a marginally viable position, and should S106 costs increase above the levels assumed, delivery of 35% affordable housing may be challenging in this earlier period. In areas where relatively higher open market values can be achieved delivery of 35% - 40% affordable housing may be achievable throughout the period assessed, again assuming middle market conditions. Against previously developed residential land values, although 10-20% affordable housing may be achievable in some areas, in others, delivery of any affordable housing may not be viable.

150 units at 70 dph - In the early half of the period assessed grant funding is likely to be required to achieve 35% affordable housing and even then, a marginally viable outcome may only be achieved assuming middle market conditions. In the second half of the Core Strategy (and for the majority of it should upside conditions be achieved), 35% affordable housing may be viable without grant. Against previously developed residential land values, although 10-20% affordable housing with grant may be achievable in some areas, in others, delivery of any affordable housing may not be viable.

Uttlesford

15 Units at 30 dph - Against industrial/greenfield land values up to 40% affordable housing appears broadly viable against middle market conditions, although some areas may require grant to achieve these levels in the early years of the Core Strategy. Considerations of tenure mix (increasing the proportion of intermediate affordable housing and/or relaxing S106 requirements) is a further mechanism that could be employed to ease viability in this period. The viability of sites such as these coming forward on previously developed



residential land is more challenging and up to 14% may be deliverable in some value areas with grant towards the latter half of the duration of the Core Strategy should the market achieve the middle scenario. Should the market achieve upside conditions, provision at this level may be achievable earlier.

15 Units at 50 dph - 35% affordable housing is likely to be broadly viable against middle market conditions over the life of the Core Strategy although in some value areas grant funding and/or a flexible approach to affordable housing tenure may be required to achieve this in the early years. In the mid to later period of the Core Strategy and/or in upside market conditions 40% affordable housing may be deliverable in some value areas. Delivery of affordable housing on sites where the existing use is residential is more challenging and up to 14% it is more likely in the early part of the Core Strategy should the market achieve only middle conditions.

15 units at 67 dph – As density increases, viability decreases and with the exception of value area CB10 (where 35% affordable housing may be deliverable against industrial/greenfield values) delivery of in excess of 7% affordable housing is unlikely to be viable against industrial/greenfield land values should only middle market conditions prevail. On land where the existing use is residential it may be challenging to sustain any affordable housing requirement in any market scenario assessed.

50 units at 30 dph - In higher value areas, 40-45% affordable housing may be viable over much of the life of the Core Strategy. This reduces to up to 35% affordable housing in lower value areas. In both cases these assume middle market conditions and S106 requirements at 100% of the base level. Delivery of affordable housing on land with an existing residential use is very challenging.

50 units at 50 dph - In the higher value areas and assuming industrial/greenfield land values, 35-40% affordable housing may be achievable without grant should the market perform to the middle scenario. In other areas, up to 35% affordable housing is more likely to be viable although some flexibility in the affordable housing tenure mix may be required to achieve delivery of 35% affordable housing in these instances. Against Previously Developed residential land values, unless upside market conditions are achieved, 10% affordable housing may be the likely maximum amount that could be delivered.

50 units at 67 dph - Delivery of affordable housing on these higher density (67 dph) notional sites is comparatively more challenging than on the lower density (30 and 50dph) schemes. Although some value areas are able to achieve 35% affordable housing for large parts of the period assessed (assuming middle market conditions) in the short term 10-20% affordable housing is more likely to be the maximum that could be achieved. On notional sites where the existing land use is residential, it is more likely that up to 10% affordable housing could be achieved dependent upon market conditions.

250 units at 30 dph - Against industrial/greenfield land values, some value areas may be able to support 35-40% affordable housing without grant. In other value areas, in the shorter term, up to 25% affordable housing is more likely to be achievable assuming middle market conditions increasing to 35% affordable housing later in the Core Strategy. Against previously developed residential land values up to 10% affordable housing is more likely to be achievable.

250 units at 50 dph - Against industrial/greenfield land values delivery of up to 40% affordable housing may be achievable in the mid to later period of the Core Strategy. Against previously developed residential land values, up to 20% affordable housing may be achievable in higher value areas.



250 units at 67 dph – In the mid to later period of the Core Strategy (or earlier if the market performs to upside conditions) 35% affordable housing may be achievable however in the shorter term grant funding may be required to achieve this percentage. Against previously developed residential land values achieving a viable position at this percentage is more challenging and delivery of 10-20% affordable housing is more likely to be achievable.

Strategic Sites (over 1000 dwellings)

All Areas

There are many factors that will affect land coming forward for strategic sites. These may include land assembly issues, infrastructure requirements and existing/alternative land uses. It has not been possible to incorporate all of these variables in a study such as this where the purpose is to inform general policy. Our assessment of strategic sites must be therefore seen as a preliminary part of a process which establishes a general starting point for negotiation and establishes the likely potential of these sites to deliver affordable housing.

All strategic sites have been assessed against each of the value areas within each Local Authority which they have been assessed. In Harlow however, where there is recognition that development may occur outside the local authority boundary we have additionally assessed development viability against a 'generic value area' values for which have been informed by the current sales values of new build development in Harlow.

It should be considered however, that new 'value areas' may be created over the long term by the development of large strategic sites which may mean that they will create their own value area. This may affect viability differently in comparison to the value areas we have assessed here.

It should also be noted that if the market performs to downside conditions it will be more challenging, in these periods, to deliver affordable housing.

Epping Forest

35% affordable housing is likely to be achievable in mid to high value areas dependent upon timing of development, market conditions, affordable housing tenure mix and infrastructure costs. In lower value areas, achieving this percentage is likely to be more challenging and public subsidy or a reduction in the affordable housing or infrastructure burden may be required to achieve a viable position.

Harlow

30-35% affordable housing may be achievable in mid to high value areas dependent upon timing of development, development density, market conditions, affordable housing tenure mix and infrastructure costs. In lower value areas, achieving this percentage is likely to be more challenging and public subsidy or a reduction in the affordable housing or infrastructure burden may be required to achieve a viable position.

East Hertfordshire

35% affordable housing may be achievable in mid to high value areas dependent upon timing of development, market conditions, affordable housing tenure mix and infrastructure costs. In lower value areas, achieving this percentage is likely to be more challenging and public subsidy or a reduction in the affordable housing or infrastructure burden may be required to achieve a viable position.



Uttlesford

35% affordable housing may be achievable in mid to high value areas dependent upon timing of development, development density, market conditions, affordable housing tenure mix and infrastructure costs. In lower value areas, achieving this percentage is likely to be more challenging and public subsidy or a reduction in the affordable housing or infrastructure burden may be required to achieve a viable position.

Commuted sum Methodology

Any methodology for assessing commuted sum payments should be based on the equivalence principle supported by Circular 05/05, PPS3 and Delivering Affordable Housing. The commuted sum should be equivalent to the contribution that would have been provided if the affordable housing had been provided on site and the scale of the developer subsidy should equate to the difference in residual value between a scheme unencumbered by affordable housing and a scheme with affordable housing, having regard to the established existing or alternative use value. This is set out in detail in section 12 of this report.

Recommendations

It is essential that any District/Borough wide affordable housing policy is not unduly rigid and can be applied flexibly and pragmatically allowing development to come forward whilst meeting the needs of the community. It will be necessary to consider sites on an individual basis having due regard to the planning benefits of granting permission. The framework for enabling such decisions to be made including those of viability should be set out within a Supplementary Planning Document.

It is important that each Council (either individually or collectively) monitors market conditions experienced on an ongoing basis to establish if they represent best the downside, middle or upside market conditions used within this study. It is recommended that this monitoring is undertaken on an annual basis to enable each Council at any given time over the life of the Core Strategy to refine their expectations in respect of the nature and level of affordable housing that is likely to be achievable. The results of such monitoring should be made available on an annual basis through regularly published documents such as the Annual Monitoring Report.

Sites below 15 dwellings

All Areas

A site size threshold below 15 units can produce developable, deliverable sites with affordable housing in many circumstances however the exact level will have to be determined at the point of application having due regard to location, market conditions, development density and the potential alternative/existing uses of the site. Our analysis has shown that these factors have a significant impact on the ability of sites of this size to deliver affordable housing. As small sites are particularly susceptible to even minor increases in costs or unforeseen development encumbrances, we would suggest that any policy on sites below 15 units is flexible enough to ensure that sites of this size continue to come forward for residential development.

Brentwood

Policy H9 of the Brentwood Replacement Local Plan 2005 allows for a differential threshold dependent upon a site's location within the Borough. Schemes coming forward outside of



the Brentwood urban area are more likely to be lower density and our testing has shown that sites at lower densities are more likely to be viable. The existing 5 unit threshold in these areas is thus recommended to be retained however our analysis has shown that a maximum 30% affordable housing is likely to be achievable on low density (30 dph) schemes, reducing to 20% affordable housing on schemes developed at 50-70 dph. We would suggest that if any policy on sites below 15 units is to be introduced in the Brentwood urban area, it is flexible enough to ensure that sites of this size continue to come forward for residential development. This is particularly relevant as sites of this size have not previously been expected to provide any affordable housing in this location.

Epping Forest

Policy H6A of the Epping Forest Local Plan 2006 sets out variable thresholds dependent upon location and existing land use of new development in the District. Our analysis has shown that a maximum of 30% affordable housing is likely to be achievable on low density (30 dph) schemes, reducing to 10-20% affordable housing at schemes developed at 50 dph and above. Given the results of our analysis, and in order to maintain consistency with other areas in the sub region we suggest the Council may wish to consider increasing the current threshold in settlements with a population of less than 3,000 to 5 units.

Harlow

We would recommend that the Council considers carefully introducing an affordable housing requirement on sites of 5 units and above. On these sites our analysis has shown that a maximum of 30% affordable housing is likely to be achievable on low density (30 dph) schemes, reducing to 20% affordable housing at schemes developed at 50 dph, and 10% affordable housing on schemes developed at 70 dph. We would suggest that if any policy on sites below 15 units is to be introduced in Harlow, it is flexible enough to ensure that sites of this size continue to come forward for residential development. This is particularly relevant as sites of this size have not previously been expected to provide any affordable housing in the District.

East Hertfordshire

Our analysis has shown that a maximum of 30% affordable housing is likely to be achievable. This reduces to 10% affordable housing on higher density schemes. Policy HSG3 of the East Hertfordshire Local Plan Second Review 2007 allows for a 3 unit threshold on sites coming forward in Category 1 and 2 villages. Given the results of our analysis it may be advisable to adopt a more straightforward 5 unit threshold in all areas of the District. It is important however that if any such policy is to be introduced, it is flexible enough to ensure that sites of this size continue to come forward for residential development. This is particularly relevant as sites of this size have not previously been expected to provide any affordable housing in all locations within the District.

Uttlesford

On schemes of less than 15 units our analysis has shown that a maximum of 30% affordable housing is likely to be achievable. This reduces to 10% affordable housing on higher density schemes. We would suggest that if any policy on sites below 15 units is to be introduced in Uttlesford it is flexible enough to ensure that sites of this size continue to come forward for residential development. This is particularly relevant as sites below 15 units have not previously been expected to provide any affordable housing.



General Development Sites (15-250 dwellings)

Brentwood

On general development sites we would recommend the adoption of a single Borough wide affordable housing target of up to 35% on the basis that this is applied flexibly and from a reasonable perspective taking into account market conditions, value areas and other planning and infrastructure requirements.

Epping Forest

On general development sites we would recommend the adoption of a single District wide affordable housing target of up to 40% on the basis that this is applied flexibly and from a reasonable perspective taking into account market conditions, value areas and other planning and infrastructure requirements. It is our view that retaining the current policy position (Policy H7A) where there is a range of targets dependent upon scheme location and existing land use, may be counter productive as we believe it may be necessary to have a more consistent and clear approach throughout the District.

Harlow

On general development sites we would recommend the adoption of a single District wide affordable housing target of up to 35% on the basis that this is applied flexibly and from a reasonable perspective taking into account market conditions, value areas and other planning and infrastructure requirements.

East Hertfordshire

On general development sites we would recommend the adoption of a single District wide affordable housing target of up to 40% on the basis that this is applied flexibly and from a reasonable perspective taking into account market conditions, value areas and other planning and infrastructure requirements.

Uttlesford

On general development sites we would recommend the adoption of a single District wide affordable housing target of up to 40% on the basis that this is applied flexibly and from a reasonable perspective taking into account market conditions, value areas and other planning and infrastructure requirements.

Strategic Sites (over 1000 dwellings)

All Areas

There are limitations in assessing the economic viability of strategic sites within the framework of a District/Borough wide study undertaken to inform policy. We would recommend that more detailed analysis of strategic development locations is undertaken to clarify each Council's requirements on sites of this nature and identify the approach to viability. This may be particularly pertinent where it is proposed that such sites could account for a large proportion of new development within a Local Authority area. Such work could be set out in a Supplementary Planning Document or Area Action Plan.



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1.0 Introduction

- 1.1 Levvel has been appointed by the London Commuter Belt (East)/M11 Sub Region comprising Brentwood Borough Council, East Hertfordshire District Council, Epping Forest District Council, Harlow Council and Uttlesford District Council to undertake an Affordable Housing Viability Assessment. The study brief is available as Appendix 1 to this report.
- 1.2 The purpose of the study is to undertake a strategic assessment of development viability that will inform planning policy over the lifetime of each Local Planning Authority's Core Strategy. The study has been undertaken in the context of Planning Policy Statement (PPS) 3: Housing (November 2006). PPS3 sets out the National Affordable Housing Policy and Paragraph 29 of PPS3 requires that overall affordable housing targets should 'reflect an assessment of the likely economic viability of land for housing within the area³'. This involves taking into account risks to delivery and the likely level of finance available including public funding and the level of developer contribution that can reasonably be secured.
- 1.3 This study was commissioned to supplement the LCB East Sub Regional Strategic Housing Market Assessment undertaken by Opinion Research Services⁴. This study will inform the evidence base for the affordable housing planning policy for each Authority's respective Local Development Framework. In this regard, Levvel has approached the project in accordance with the requirements in PPS12⁵. PPS12 states that in order to be effective Core Strategies must be deliverable. Core Strategies should show how the vision, objectives and strategy for the area will be delivered and by whom, and when. Policy must be based on sound infrastructure delivery planning and coherent with other core strategies prepared by neighbouring authorities where cross boundary issues are relevant.
- 1.4 Given the scope of the tender brief and the variations across the sub region in respect of land values and property values, it has been essential to develop a methodology that measures viability on a consistent basis, but that is flexible enough to allow for these variables. Furthermore, given that each Authority's Core Strategy when adopted will prevail until at least 2026, we have also ensured that our methodology includes an element of "future proofing" to give each Council the confidence that the policy can be applied now and in years to come.
- 1.5 The study has been carried out against a backdrop of a global recession and generally unfavourable and uncertain conditions in the housing market. In a rising land and property market where values are increasing and where costs do not rise to the same extent, it could be assumed that if a development scheme is appraised and a viable position achieved, then viability will be achieved in the future, (all other variables remaining the same). Recently, the property market has not behaved in this manner and therefore the future is uncertain. Given this uncertainty in the market, it has been necessary to provide a "future proofed"

³ Paragraph 29, PPS3, DCLG, November 2006

⁴ London Commuter Belt (East)/ M11 Sub-Region Strategic Housing Market Assessment, Opinion Research Services, January 2010

⁵ Planning Policy Statement 12: creating strong safe and prosperous communities through Local Spatial Planning, Communities and Local Government, 2008



methodology that makes a range of predictions about where the housing market may go in the future, ranging from pessimistic to optimistic scenarios, but based on past market trends. With this range set, the results of the development appraisals can be properly contextualised and each Council can set their policy accordingly.

- 1.6 For the purposes of this study the following PPS3 definition of affordable housing has been applied:

'Affordable housing includes social rented and intermediate housing, provided to specified eligible households whose needs are not met by the market. Affordable housing should:

Meet the needs of eligible households including availability at a cost low enough for them to afford, determined with regard to local incomes and local house prices.

Include provision for the home to remain at an affordable price for future eligible households or, if these restrictions are lifted, for the subsidy to be recycled for alternative affordable housing provision⁶.

- 1.7 This paper sets out the policy background of the study to place it in its proper context. A commentary on the past and present national, regional and local housing market experience and wider economic factors is given to inform the future proofing scenarios. Our methodology and assumptions are then explained, and a description of the nature and extent of local stakeholder engagement is undertaken. This includes detail on how the stakeholder engagement has shaped the assumptions used within this study. This is followed by an analysis of the results. A policy compliant commuted sum methodology and the principles behind it are then set out. Following this is commentary on how the results impact upon the Housing Market Areas as determined within the LCB (East)/ M11 Sub Regional Strategic Housing Market Assessment 2010. Finally, conclusions and recommendations for policy are outlined.

⁶ PPS3, DCLG, November 2006, page 25 (see Appendix 10)



2.0 Wider Context of the Study

- 2.1 A synopsis of relevant regional and local planning policy is included and this is necessary in order to frame the assessment of economic viability of affordable housing within the policy context. The policy context at a national, regional, sub regional and local level is explored in greater detail in Appendix 2 to this report with regard to the provision of affordable housing. Details of historic levels of housing delivery (both market and affordable) within each of the Local Authority areas in the study area are also outlined as is detail on the extant and emerging policy positions within each area as they relate to affordable housing.

REGIONAL POLICY AND HOUSING NEED

- 2.2 This report was undertaken prior to the General Election May 6th 2010. On 6th July 2010 the Secretary of State for Communities Eric Pickles announced the revocation of Regional Spatial Strategies. The letter includes guidance which reads: "In the longer term the legal basis for Regional Strategies will be abolished through the 'Localism Bill' that we are announcing in the current Parliamentary sessions". The guidance also states that the revocations of the Regional Strategies is "not a signal for local authorities to stop making plans for their area". It advises local authorities to continue to develop LDF Core Strategies and other DPDs, "reflecting local people's aspirations and decisions on important issues such as climate change, housing and economic development".
- 2.3 We have retained within this report references to the East of England Regional Spatial Strategy 2008.

East of England Plan

- 2.4 The East of England Plan, the revision to the Regional Spatial Strategy (RSS) for the East of England, was published on 12th May 2008. Policy H1 makes provision in the region for at least 508,000 dwellings from 2001 to 2021. However, taking completions of 105,550 into account between 2001 and 2006, the minimum regional target is 402,540 from 2006 to 2021. Appendix 2 outlines minimum dwelling provision in each of the five commissioning London Commuter Belt authorities.
- 2.5 Policy H2⁷ sets out the region's affordable housing policy. Within the requirements of Policy H1, DPD's should set appropriate targets taking into account RSS objectives, affordable housing needs assessments, strategic housing market assessments, evidence of affordability pressures, the Regional Housing Strategy and the need where appropriate to set specific, separate targets for social rented and intermediate housing. Policy H2 also states, 'at a regional level, delivery should be monitored against the target for some 35% of housing coming forward through planning permissions granted after publication of the RSS to be affordable'.

⁷ Ibid, page 34



London Commuter Belt (East)/M11 Sub Region Strategic Housing Market Assessment 2008

- 2.6 The Study Report on Findings was completed in January 2010 and is a comprehensive document that will inform future policy development. Section 7 of the report profiles affordability and concludes that virtually no owner occupied housing is available to those earning less than £30,000 and an individual earner would need to earn at least £55,000 to access the cheapest quarter of properties on the market. However, half of the private rented should be available to those with incomes of £50,000. 17% of the total stock would be affordable to someone earning £20,000 or less, while half the stock requires earnings over £65,000 or more and a third requires earning of £80,000 or more. The SHMA confirms that 1.8% of the population or 4,800⁸ existing households are in housing need.
- 2.7 The report provides a great deal of detailed information on unit size and mix requirements by Local Authority Area. Figure 152 in the report provides a useful summary of the overall housing requirement main findings by tenure and Local Authority Area as detailed below.

Local Authority	Affordable Housing			Market Housing
	Social Rent	Intermediate	Affordable Total	
Brentwood	29.6%	65.5%	95.1%	4.9%
East Herts	11.5%	33.7%	45.2%	54.7%
Epping Forest	43.9%	26.5%	70.4%	29.6%
Harlow	20.5%	0.0%	20.5%	79.5%
Uttlesford	16.1%	32.4%	48.5%	51.5%

Figures may not sum due to rounding

Source – Extract from Figure 152, ORS SHMA 2008 page 146

LOCAL POLICY

EAST HERTFORDSHIRE

Local Plan

- 2.8 The East Hertfordshire Local Plan Second Review 2007 was adopted by the Council on the 18th April 2007. In order to meet the high levels of need identified the Council will seek to negotiate a target of up to 40% affordable housing on all suitable sites. The target of up to 40% applied to allocated sites will be calculated on the actual number of dwellings the site is capable of producing when it comes forward, and not the estimated number of dwellings⁹.

⁸ ORS SHMA page 99. This figure of 4,800 includes Broxbourne at 850. Broxbourne is not covered by this report.

⁹ Ibid, paragraph 3.10.3



2.9 Affordable Housing Policy HSG3 includes the above target and definition of affordable housing and sets the following site size thresholds.

- proposing 15 or more dwellings, or over 0.5 hectares, in the six main settlements; and
- proposing 3 or more dwellings, or over 0.09 hectares, in the Category 1 and 2 villages.

The Affordable Housing & Lifetime Homes Supplementary Planning Document (SPD) - 2008

2.10 The SPD expands on Local Plan Policy HSG3 and states that affordable housing will be sought on sites of 15 or more dwellings, or over 0.5 hectares in the six main settlements and 3 or more dwellings/ over 0.09 hectares in the Category 1 and 2 villages¹⁰.

2.11 Paragraph 6.29 notes that 'the Council will now seek 40% affordable housing as a starting point. This will occur on suitable sites along with other contributions as set out in the Council's Planning Obligations SPD. However, the SPD also recognises that circumstances will vary from site to site. Where viability evidence is provided the Council will, 'negotiate the most appropriate balance of contributions in order to ensure that the development contributes to the creation of a sustainable community'¹¹.

Planning Obligations SPD - 2008

2.12 The Planning Obligations SPD was adopted in October 2008. In relation to affordable housing, the Planning Obligations SPD does not add additional guidance or Policy. The SPD confirms that the Council will seek 40% affordable housing in line with Local Plan requirements and that the basis for assessing need and contributions is the Housing Needs Survey Final Report 2004 including the 2005 update and the Strategic Housing Market Assessment which was not available at the time.

New Affordable Homes Commissioning Brief – September 2008

2.13 The commissioning brief reflects the current policy position and elaborates on the findings of the 2004 Housing Needs Study providing detailed information on the matters such as tenure structure, unit mix, unit space standards, social housing grant levels and design and quality standards.

2.14 Of the 40% affordable housing, the Council requires a tenure split of 75% (social) rented and 25% intermediate housing. Intermediate housing is defined as:

- Properties at flexible levels allowing for subsequent 100% ownership;
- Properties to be fixed equity, marketed at 60% open market value;

¹⁰ Affordable Housing and Lifetime Homes SPD – 2008 P.10

¹¹ Ibid, P.15, paragraph 6.29



- Properties for intermediate rent up to 20% below market rent level.

The Council requires the following proportions of each size of property:

- 1/3 1 bedroom two person
- 1/3 2 bedroom 3 and 4 person (ideally 2 bedroom houses)
- 1/3 3 bedroom 4 and 5 person (ideally houses or ground floor flats)

BRENTWOOD

Brentwood Replacement Local Plan – August 2005

- 2.15 The Brentwood Replacement Local Plan was formally adopted by the Council on 25 August 2005. The Council's affordable housing policy H9 seeks to negotiate 35% affordable housing (30% social rented, 5% other affordable housing) on all suitable sites above the thresholds of 20 units and above or on suitable residential sites of 0.66 hectares or more within the Brentwood Urban Area, and on sites of 5 units and above or on suitable sites of 0.16 hectares or more within defined settlements elsewhere in the Borough¹². Policy H10 allows for Affordable Rural housing within the Green Belt under very special circumstances. The Council is conscious of the fact that it may be difficult to deliver affordable housing outside of the defined settlements.

EPPING FOREST

Local Plan

- 2.16 The Epping Forest Local Plan Alterations were adopted in 2006. Policy H5A states that 'On all suitable development sites the Council will seek an appropriate number and type of affordable dwellings'. Suitability is based upon local housing needs, the size/ characteristics of the site, the type of affordable housing required and the type of dwelling proposed; the dispersal of affordable housing throughout the site; the nature of adjacent dwellings; and the proximity of the site to public transport and accessible facilities.
- 2.17 Policy H6A sets the thresholds for affordable housing. For residential or mixed use development in settlements with a population of greater than 3,000, affordable housing is required where the site is above 0.5 hectares or where 15 or more dwellings will be provided. In settlements with a population of 3,000 or less affordable housing will be required for two or more dwellings on a greenfield site, and where the site is 0.1ha or larger. Affordable housing will also be required on previously developed sites with three or more dwellings.
- 2.18 Policy H7A deals with levels of affordable housing and seeks at least 40% affordable housing on all suitable sites in settlements with a population of 3,000 or greater. Where the population is less than 3,000, 50% affordable housing will be sought on Greenfield sites. On previously developed sites 33% affordable housing is sought

¹² Brentwood Replacement Local Plan, 2005, Chapter 3



for applications for three units and 50% for applications of four or more new dwellings.

LCB Affordable Housing Directory August 2009 (LCBHSR)

- 2.19 The Council has no detailed affordability criteria. However, it will seek around 70% of the affordable homes as social rented and around 30% as New – Build HomeBuy (shared ownership). For New Build HomeBuy, the average initial equity sold to applicants across a development should be no more than 35%, with individual initial equities being between 25% and 50%. Rent levels should be no more than 2.5% of the unsold equity. The Council also expects the mix of the affordable housing to reflect the mix of the market housing in terms of ratios of property types (houses, flats, etc.) and bedroom numbers.

UTTLESFORD

Local Plan

- 2.20 The Uttlesford Local Plan was adopted in January 2005. Local Plan Policy H9 sets a target of 40% affordable housing on appropriate allocated and windfall sites, having regard to the up to date Housing Needs Survey, market and site considerations.
- 2.21 The supporting text also states that for affordable housing to be relevant it must result in weekly outgoings on housing costs such that 20% of Uttlesford households in need can afford, excluding housing benefits. This housing should be available, both initially and for subsequent occupancy, only to those with a demonstrable housing need¹³.
- 2.22 Guidance on thresholds is contained in the supporting text. Within Great Dunmow, Saffron Walden, Stansted Mountfitchet, on sites of 0.5 hectares or of 15 dwellings or more 40% affordable housing will be negotiated. Elsewhere in the District 40% affordable housing will also be sought on sites of 0.5 hectares or of 15 dwellings or more. It is also stated that 'the level of housing provision sought on a site should have regard to the Council's target for housing provision yet should not make development unviable¹⁴.

Core Strategy Preferred Option Document

- 2.23 The Council formally consulted on the Core Strategy Preferred Options document from 30th November 2007 to 11th January 2008. Policy DC1 (Housing Need) outlines that the preferred option proposes that the current 40% target should be maintained applying to schemes of 15 units or more or sites of 0.5 ha or above. Any future policy will also take on board the outcomes of the Strategic Housing Market Assessment.

¹³ Uttlesford Local Plan Adopted January 2005, and Policies Saved in 2007. Para. 6.28

¹⁴ Ibid Para. 6.29



HARLOW

Adopted Replacement Harlow Local Plan – July 2006

- 2.24 The Harlow Replacement Local Plan was adopted in July 2006 and Policy H5 states that, "on residential development sites of 15 or more dwellings or 0.5 of a hectare or more irrespective of the number of dwellings, the Council will negotiate the provision of intermediate housing and/ or social rented housing, based on the prevailing housing needs assessment. Negotiations will take into account the economics of provision and site suitability¹⁵". The supporting text also notes that, '30% is a baseline for negotiation by the Council. This policy does not preclude developers providing affordable housing on sites that do not meet the policy's criterion. The Council will therefore endeavour to achieve affordable housing on all sites through negotiation'¹⁶.
- 2.25 Table 1 of the Replacement Local Plan shows an indicative number of affordable dwellings on allocated sites based on the 30% baseline. In total, 9 sites will deliver 501 affordable homes.

The Affordable Housing Supplementary Planning Document - March 2007

- 2.26 A negotiation baseline of 30% affordable housing was set through Policy H5 of the Local Plan. However, this figure predated the most up to date housing needs study (as of March 2007) and was based on a study from February 2000. Opinion Research Services published a Housing Requirements Study in April 2005. For the purpose of the SPD (and based on the 2005 Housing Requirements Study) the percentage of affordable housing was presented as a target for either a 5 or 10 year period. This varies between 42% for five years and 28% over ten years. The SPD then sets the starting point at 33%, 3% above the baseline, on eligible sites¹⁷. In relation to thresholds affordable housing will be required on development sites of 15 or more dwellings or 0.5 a hectare or more¹⁸.

The Wider Economic Picture – Informing the Scenarios

- 2.27 For our analysis of viability to be dynamic it is important to understand past trends in order to assess how the housing market may perform in the future. While recent history shows specific characteristics which may be peculiar to the period in question, there are still fundamental principles that suggest medium and long term cyclical trends. This will not inform a single assessment of how the market will perform but will give us the main parameters within which we can test possible scenarios.
- 2.28 Included at Appendix 3 is a consideration of the housing market over the past 25 years, including the wider economic context. This Appendix also outlines the

¹⁵ Ibid, Chapter 6, paragraph 6.8.7

¹⁶ Ibid

¹⁷ Affordable Housing SPD, Paragraph 4.2

¹⁸ Ibid Paragraph 4.3



evidence which has informed our dynamic assessment of the three potential future market scenarios against which all viability assessments have been undertaken.

- 2.29 The analysis of past market trends gives us an indication of relative property market activity. We can therefore use this information to help set general scenarios over the following 25 years on the understanding that economic conditions have changed and past performance of the market is not necessarily an indicator of future activity. For this reason, we can use past performance as general guidance that will feed into possible housing market conditions. We have assumed three basic scenarios being, 1) the upside and, 2) the downside and, 3) the middle scenario). These scenarios are explained further in the following section.



3.0 Methodology and Assumptions

Levvel Development Viability Model

- 3.1 Delivering Affordable Housing¹⁹ supports the use of a viability tool such as that advocated by the Greater London Authority (GLA), or that used by the Homes and Communities Agency (HCA) for the assessment of whether schemes should be supported by Social Housing Grant. This tool is a residual land value assessment model which suggests that a site will only come forward with an affordable housing contribution where the resulting overall site value exceeds the existing or alternative use of that site. Residual land value assessment is a recognised practice within the development industry for evaluating costs and incomes associated with the development. In essence, such appraisals consider the income from a development in terms of sales or rental returns and compare this with the costs associated with developing that scheme. The amount left over, or residual, is what is left for land acquisition, i.e. the residual land value.
- 3.2 This residual value is then compared to a number of baseline values to gauge the likelihood that the imposition of affordable housing might prevent the scheme from coming forward on a given parcel of land.
- 3.3 Levvel has developed a dynamic model to determine the residual land value that has been used in negotiation with over 100 local authorities and used at appeal on numerous occasions. From this, a toolkit to assess viability on a district wide level has been developed, this is known as the Levvel Development Viability Model (DVM).
- 3.4 Robust assumptions are then required to be inputted into this model. Costs to development such as build costs, planning gain requirements, profit and development finance are arrived at through our experience and through consultation with the development industry and Council Officers. Sensitivity testing of variables such as affordable housing percentage, tenure requirements, increased/decreased levels of planning obligations and the availability of public subsidy will ensure the validity of the study outputs and demonstrate the impact upon viability across the range of study scenarios.
- 3.5 For a policy to be robust and reliable throughout the plan period, we believe it is necessary to assess with a methodology that is “future proofed” as far as possible. As viability is reliant on the interaction between changing costs and revenues of housing over time, it follows that this relationship must be accounted for by future proof testing. It is simply not good enough to assess current costs against a range of property values as this provides only a “snapshot” view. The relationship between values and costs over time is not taken into account.
- 3.6 Levvel has therefore addressed this issue by applying inflation rates for cost inputs throughout the study period. For values, it is difficult to predict where the housing market may be in even 1 year’s time, so long range predictions based on popular commentary are of little use. However, we have assessed value changes based on the historic performance of the housing market as described previously. This gives

¹⁹ “Delivering Affordable Housing” CLG Nov 2006



us a view of where values may be in the future if the past housing market cycle was typical. However, this does not give us the necessary comfort or margin for error should the cycle vary. We have therefore reasoned that by choosing scenarios, based on an upside, middle and downside view of the housing market, we will have covered the range of positions to which the housing market may go. A detailed analysis of these scenarios is included at Appendix 3, to this document however they are summarised briefly below. It is important to remember that the market will not necessarily behave in a predictable manner and at any one point we may find ourselves anywhere between the upside and downside positions regardless of prior market activity.

Upside Scenario

- 3.7 The “upside” position is where values show an increase in the very short term. We have assumed an increase in values so that 2007 average values are achieved again fairly rapidly and the profile of increases follows the same pattern as in the previous period (1992 to 2003) from this high value base (30% above average).
- 3.8 This is an optimistic view of property prices with house prices assumed to be well above the long term average from the previous period. In this scenario, affordability is likely to be a significant and continuing issue. Year on year house price inflation and indices will be as follows (Q1 1997 = 100):

Upside Scenario		
Date	Index	Y-o-Y Inflation
2010	294.37	
2011	382.68	30%
2012	394.76	3%
2013	407.22	3%
2014	410.18	1%
2015	413.37	1%
2016	442.36	7%
2017	479.89	8%
2018	511.05	6%
2019	546.82	7%
2020	592.39	8%
2021	645.71	9%
2022	710.28	10%
2023	798.37	12%
2024	853.54	7%
2025	880.79	3%
2026	917.09	4%



Middle Scenario

- 3.9 The “middle” scenario assumes property values follow the trend seen between 1992 and 2003. In the short term there is a continuing decrease in values with a slow recovery with affordability ratios remaining fairly benign until the later part of the period.
- 3.10 This profile assumes a steady but undramatic fall in values over the short term with a recovery to 2007 values by about 2017. House prices in this scenario will not be affordable for average incomes (assuming incomes maintain their historic rate of increase and affordability is 3.5 times income) until 2020. The index will be as follows:

Middle Historic Scenario		
Date	Index	Y-o-Y Inflation
2010	294.37	
2011	303.20	3%
2012	312.77	3%
2013	322.64	3%
2014	324.99	1%
2015	327.51	1%
2016	350.49	7%
2017	380.22	8%
2018	404.91	6%
2019	433.25	7%
2020	469.36	8%
2021	511.60	9%
2022	562.76	10%
2023	632.56	12%
2024	676.27	7%
2025	697.85	3%
2026	726.62	4%



Downside Scenario

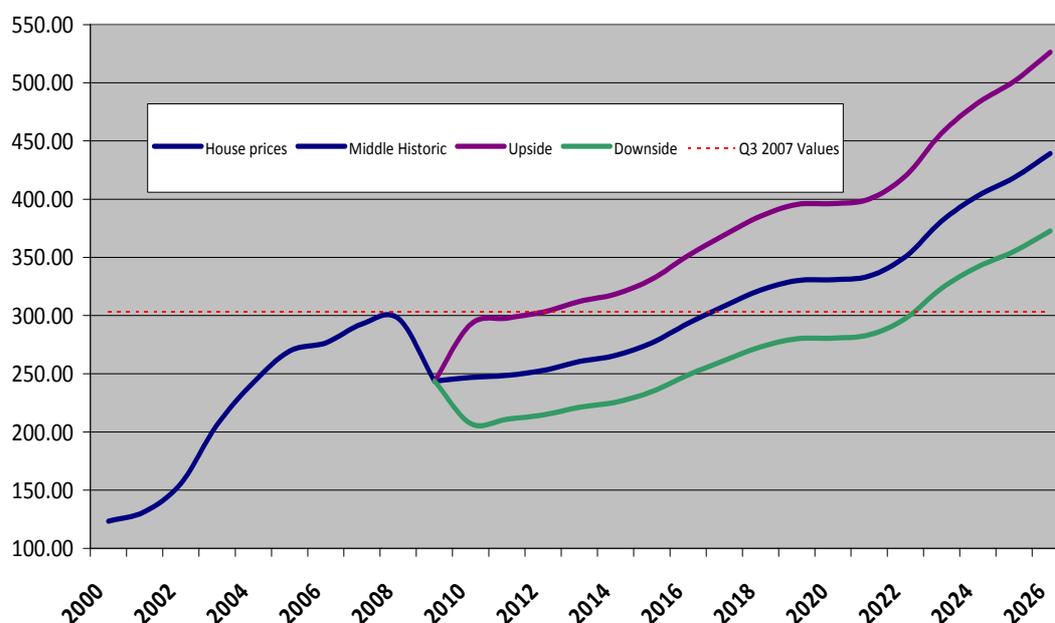
- 3.11 The “downside” scenario assumes a long term trend 20% below the historic (1992 to 2003) position. Affordability ratios are well below the 3.5 times threshold for much of the period to 2020.
- 3.12 This is a pessimistic view of property values and possibly a “worst-case” position. In this scenario it is assumed that initial values will continue to fall and that the market will continue to be at approximately 30% below the long term trend. The breakdown of the index for this scenario is as follows:

Downside Scenario		
Date	Index	Y-o-Y Inflation
2010	294.37	
2011	235.50	-20%
2012	242.93	3%
2013	250.59	3%
2014	252.42	1%
2015	254.38	1%
2016	272.22	7%
2017	295.32	8%
2018	314.49	6%
2019	336.51	7%
2020	364.55	8%
2021	397.36	9%
2022	437.09	10%
2023	491.31	12%
2024	525.25	7%
2025	542.02	3%
2026	564.37	4%



3.13 All three scenarios can be seen in the following diagram:

MARKET SCENARIO TESTING (2010 TO 2020) - FUTURE SCENARIOS BASED ON HISTORIC MARKET DATA (1983 TO 2009)



3.14 By then reporting on the viability of schemes were they delivered at different points within this range, we have come to a view of how this will affect the deliverability and effectiveness of proposed policy. For instance, should the housing market perform below past trends for the next five years before picking up again, we can assess whether the proposed policy might adversely affect the viability of schemes and therefore their delivery. Similar principles apply to a more optimistic view of where values may end up.

3.15 Levvel's methodology enables the effect of a range of delivery timescales, thus all development scenarios selected are tested assuming development start dates of the date of modelling, date of modelling plus 1 year, plus 2 years, plus 3 years, and so on until 2026.

3.16 The use of the Levvel methodology allows for variations in land value over time to be accounted for, again ensuring 'future proofing' of the viability study. Any affordable housing policy seeks to capture an element of the land value for the community benefit. We know that there is a minimum land value which schemes need to achieve in order to be brought forward, otherwise it becomes more economic for the site to continue in its existing (or alternative) use.

3.17 Our assessment assumes the inflation rate for RPI, construction costs and values increases at various rates dependent upon the economic assumption. In order to assess the future position it will be necessary to be aware of the index for these respective elements (Retail Price Index (RPI), general inflation, construction inflation, land values, property values). Levvel can provide these updates, if



required, which would enable the local authorities to assess the economic position as it relates to our three scenarios.

- 3.18 The Annual Monitoring Reports for each local authority provide information regarding the proportion of previous new build development that has been completed upon the range of land uses which include brownfield, employment land and greenfield sites. This information along with each authority's information regarding land availability has been used to inform the range of site types that are likely to come forward over the life of each authority's Plan. In addition, however, it must be considered that if growth is as previously planned in the sub region, it is likely to require a significant increase in the use of greenfield sites (although the requirement for this will vary across each authority).
- 3.19 Given the previous and future profile of the existing land use of sites within the district it is not sufficient to assess the existing or alternative use of a site against one indicator.
- 3.20 The Valuation Office Agency (VOA) provides data on agricultural land and property values. It is clear that agricultural values are unlikely to be acceptable if land is made available for residential use. Owners of 'greenfield' sites are unlikely to accept anywhere near agricultural values and the acceptable level may be up to 10 x this amount. Stakeholder engagement (see Appendix 9) has confirmed this view. We have found that for the purposes of our studies it is not possible to establish the level of existing use of greenfield sites by reference to the agricultural value. Therefore, we use the industrial land value, inflated as outlined below, as a proxy for greenfield land values. In reality different land owners will have different expectations but for the purposes of a general policy setting analysis a reasonable proxy is necessary.
- 3.21 Thus in respect of development occurring on Greenfield or industrial sites, VOA data on industrial land values in the district will be used as one of our tests of viability. Land values are dynamic and will change over time therefore establishing the level of alternative use is an inexact science. To allow for any potential increase in the value that a land owner may perceive that they may gain in the future we have allowed for a 20% uplift in the reported values to allow for this imprecision and the following values take this into account.
- 3.22 The values per hectare used for each Local Authority area are as follows:
- Brentwood – £2,520,000
 - East Herts – £2,280,000
 - Epping Forest – £2,920,800
 - Harlow – £930,000
 - Uttlesford - £1,440,000
- 3.23 The results section identifies tests against these land values (and also test against Residual Land Value (RLV) to Gross Development Value (GDV) as outlined below) as 'Lower EUV' (Existing Use Value).



- 3.24 In respect of development occurring on previously developed residential land, (VOA) and other data on residential land prices in each local authority, altered to reflect stakeholder views and other independent advice received and inflated by 20% will be used as one of tests of viability. The values per hectare used for each Local Authority area are as follows:
- Brentwood – £4,266,000
 - East Herts – £4,440,000
 - Epping Forest – £5,400,000
 - Harlow – £2,280,000
 - Uttlesford - £4,338,000
- 3.25 The results section identifies tests against these land values (and also test against Residual Land Value (RLV) to Gross Development Value (GDV) as outlined below) as 'Higher EUV'.
- 3.26 All of these values will be linked to the future growth assessments as outlined in Appendix 3 to this report to reflect the relationship between land and property values and ensure effective 'future proofing' of the assessment.
- 3.27 Whilst we will use VOA data as outlined above as one test of viability, we recognise that VOA data can be as much as six months out of date and not available at a sufficiently local level to enable local variations in land values to be assessed. Furthermore, the imposition of affordable housing planning policy will necessarily reduce land values in certain schemes. Therefore it is not enough to assess the viability of a particular scheme purely against VOA data. We have therefore developed a methodology that assesses how much landowners have been willing to accept for their land in the past, and expressed it in terms of the ratio between Gross Development Value²⁰ and Residual Land Value (GDV:RLV). That is to say how much of the revenue from a scheme can be used to pay for the land. This allows for variations due to locality to be accounted for. It is our belief that this more readily accounts for local variations in land values and represents a more robust and credible evidence base.
- 3.28 The ratio between RLV and GDV has thus been assessed over the period 2001 to 2009 across the sub region. The effect can be seen that in a rising and somewhat overheated market, landowner expectations rise and the price that developers are willing to pay also increases (often based on future expectations of property values). However, in a falling and "normal" market landowner expectations fall to more "reasonable" levels. Thus the relationship between GDV and RLV as a check provides a further degree of future proofing as if housing market values increase, the land value will also increase. Conversely, if values fall, then land value can also be expected to fall.

²⁰ Gross Development Value – Known as GDV, the value of a scheme based upon prices of individual units giving the gross income from sales. For our purposes GDV may include the income received from affordable housing providers to give the total gross value of a scheme.



- 3.29 Levvel have also sought advice from Thornes Chartered Surveyors and Estate Agents (included as Appendix 8) in respect of the relationship between RLV and GDV.
- 3.30 Based on our own assessments and their advice, we have taken a figure of 25% of Gross Development Value for higher density (67 dph and above) flatted units as a test for the level at which the Residual Land Value may need to reach in order to incentivise the landowner sufficiently to bring forward this parcel of land.
- 3.31 In respect of sites of medium density (50 dph), a figure of 28% of Gross Development Value has been used as a test for the level at which the Residual Land Value may need to reach in order to incentivise the landowner sufficiently to bring forward his parcel of land.
- 3.32 In respect of low density sites (30-40 dph) we have taken a figure of 30% of Gross Development Value as a test for the level at which the Residual Land Value may need to reach in order to incentivise the landowner sufficiently to bring forward his parcel of land.
- 3.33 In respect of sites of 10 units and less a figure of 35% of Gross Development Value (GDV) as the level at which the Residual Land Value may need to reach has been used as an additional test for sites of 30 dph, 30% of GDV for sites at 50 dph and finally 28% of GDV for sites of 67 dph and above.
- 3.34 This information is summarised in the table below.

Development type	RLV: GDV test used
Sites >10 units, low density (30-40 dph)	30%
Sites >10 units, medium density (50 dph)	28%
Sites >10 units, high density (67 dph and above)	25%
Sites 10 units and less, low density (30 – 40 dph)	35%
Sites 10 units and less, medium density (50 dph)	30%
Sites 10 units and less, high density (67dph and above)	28%

- 3.35 Gross Development Value (GDV) as the level at which the Residual Land Value may need to reach has been used as an additional test.
- 3.36 Using these two tests of viability simultaneously, it is possible to inform a policy position that has flexibility and is relevant to the life of the plan to ensure deliverability.

Site Identification Methodology

- 3.37 Each of the Councils in the Consortium has identified their forthcoming land supply. This is identified in the following documents:



- Brentwood – 5 Year Housing Supply Assessment 2010 -2015 and the Annual Monitoring Report 2008/9 which includes the Council's 15 year housing trajectory;
- East Herts – Annual Monitoring Report 2008/9 which includes the Council's 15 year housing trajectory and 5 year housing land supply calculation;
- Epping Forest – 5 Year Assessment of Land Supply 2010 – 2015;
- Harlow – Annual Monitoring Report 2008/9 which includes the Council's 15 year housing trajectory and 5 year housing land supply calculation;
- Uttlesford – Strategic Housing Land Availability Assessment (SHLAA) 2008 Draft Report.

- 3.38 In addition Brentwood Borough Council and Epping Forest District Council have issued a 'call for sites' to inform their respective SHLAA's and the initial responses from these were also assessed to inform the notional site selection process.
- 3.39 Using all of the data sources outlined above as a basis, and in conjunction with each Council, a range of notional development sites likely to represent development to 2026 (in respect of site size, unit numbers, density and location) were identified. The period of assessment is in line with the LCB East Sub Regional Strategic Housing Market Assessment. Site typologies (greenfield or previously developed land) were also assessed in respect of each notional site.
- 3.40 Stakeholder consultation was also undertaken through the stakeholder questionnaire on the initial range of site typologies and densities and the feedback from stakeholders informed the selection of the notional sites.
- 3.41 Outlined below are the final notional sites and site typologies assessed for each Local Authority Area, a detailed breakdown of unit size and unit composition for each notional development site can be found in Appendix 4.

Brentwood

- 10 units at 30 dph, 50 dph and 70 dph;
- 15 units at 30 dph 50 dph and 70 dph;
- 50 units at 30 dph, 50 dph, 70 dph, 100 dph and 120 dph;
- 150 units at 30 dph, 50 dph and 70dph.

East Hertfordshire

- 10 units at 30 dph, 50 dph and 70 dph;
- 15 units at 30 dph, 50 dph, 70 dph;
- 50 units at 30 dph, 50 dph, 70 dph and 100 dph;
- 150 units at 30 dph, 50 dph and 70 dph;



- 1500 units at 40 dph;
- 3000 units at 40 dph.

Epping Forest

- 10 units at 30 dph, 50 dph and 70 dph;
- 15 units at 30 dph, 50 dph and 70 dph;
- 50 units at 30 dph; 50 dph; 70 dph; 100 dph and 120 dph;
- 150 units at 30 dph; 50 dph and 70 dph;
- 1500 units at 40 dph.

Harlow

- 10 units at 30 dph, 50 dph and 70 dph;
- 15 units at 30 dph 50 dph and 70 dph;
- 50 units at 30 dph, 50 dph, 70 dph, 100 dph and 120 dph;
- 150 units at 30 dph, 50 dph and 70 dph;
- 1500 units at 40 dph;
- 3000 units at 40 dph;
- 5000 units at 30 dph and 50 dph.

Uttlesford

- 10 units at 30 dph, 50 and 67 dph;
- 15 units at 30 dph, 50 dph and 67 dph;
- 50 units at 30 dph, 50 dph and 67 dph;
- 250 units at 30 dph, 50 dph and 67 dph;
- 3000 units at 30 dph and 50 dph;
- 5000 units at 30 dph and 50 dph.

Value Areas

3.42 Within each Local Authority it is reasonable to assume there will be a range of 'value areas', in locations where house prices are likely to be lower or higher than the average for each District as a whole. In order to reflect these ranges in values Hometrack data on property values for each type of dwelling (detached, semi detached, terraced and flats and maisonettes) at a Postcode Area level (e.g. CM6, IG10) was assessed. The data used was Hometrack data as at November 2009



based on Land Registry information regarding achieved sales in the previous 6 months along with property value information based on Hometrack's Automated Valuation Model. A map of each Postcode Area is shown in Appendix 15.

3.43 Average values per unit type at a Postcode Area level were then:

- Assessed against information regarding asking prices and achieved sales values on a number of property websites including Rightmove and Mouseprice;
- Independently assessed by Thornes Chartered Surveyors and Valuers, a valuer who has been engaged by Levvel to provide independent advice regarding the property and land values used for the purposes of this study.

3.44 The advice received from Thornes indicated that the average sales values for detached property values were disproportionately high due to the data being influenced (particularly in certain locations) by for example, very large detached properties sited on a large amount of land. To reflect this therefore, detached sales values used for the purposes of this study were reduced to account for this.

3.45 Appendix 5 to this report provides detail on the value per square metre for each unit type in each Postcode Area, in each local authority area that have been used for the purposes of this study.

3.46 It should be considered that across each local authority there may be small areas located in a Postcode Area that have not been assessed within this study. We are confident that the range of sales values used for the purposes of assessment in each local authority, cover the broad range of likely sales values that could be achieved from new build development over the life of each authority's Core Strategy. There may however be certain high profile, luxury developments where sales values may be in excess of those tested within the study and therefore any approach to considerations of viability in respect of schemes such as this should be carefully considered.

3.47 We also recognise that even within the same Postcode Area, there will be pockets where sales values may be higher or lower than the average values assessed for the purposes of this study. Each local authority may find it beneficial to look more closely at the range of sales values used rather than focus specifically upon the Postcode Area they represent.

3.48 All notional sites have been assessed in each of the Postcode Area detailed in Appendix 5 to this report unless explicitly stated within the results section.

Study Variables

3.49 In accordance with the expectations outlined in the adopted East of England Plan Policy H1²¹, 35% affordable housing was assessed initially. In cases where this was found to produce a result that was not viable affordable housing percentages below this (down to circa 5-10%) were tested. In cases where 35% was found to be

²¹ East of England Plan, May 2008, p.28



viable, affordable housing percentages above this were tested (up to 50%). The results section and the conclusion sections of this report clearly identify which affordable policy percentages have been tested against each notional site type and in which local authority value area.

3.50 Each local authority requested we test a different range of affordable housing tenure mixes. Regard was had to the findings of the SHMA²² specifically Figure 136 and the extant policy position regarding affordable housing tenure requirements in each local authority. The affordable tenure mixes that have been assessed for each local authority are outlined below:

- Brentwood – 85:15 social rented:intermediate (in accordance with the current policy position), 30:70 social rented:intermediate and 50:50 social rented intermediate. Intermediate accommodation has been assessed as shared ownership;
- East Herts – 75:25 social rented:intermediate (in accordance with the current policy position), 25:75 social rented:intermediate and 50:50 social rented intermediate. Intermediate accommodation has been assessed as half being shared ownership and half being intermediate rent;
- Epping Forest – 70:30 social rented:intermediate (in accordance with the current policy position), 60:40 social rented:intermediate and 50:50 social rented intermediate. Intermediate accommodation has been assessed as shared ownership. In some instances sensitivity testing has been undertaken assuming rent to homebuy as the intermediate tenure;
- Harlow – 70:30 social rented:intermediate (in accordance with the current policy position), 50:50 social rented:intermediate and 100% social rented. Intermediate accommodation has been assessed as shared ownership;
- Uttlesford – 70:30 social rented:intermediate (in accordance with the current policy position), 30:70 social rented:intermediate and 50:50 social rented intermediate. Intermediate accommodation has been assessed as shared ownership.

Section 106 / Infrastructure Contributions /CIL

3.51 Through discussion with each Council, a well reasoned contribution in respect of Section 106 and infrastructure costs has been assumed. These differ dependent upon Local Authority and the type of notional development site. The per unit contributions that have been assumed for the purposes of this study are outlined below.

Sites in excess of 250 units

3.52 It has been assumed that sites in excess of 250 units in all Local Authority areas within the sub region will be required to deliver significant amounts of infrastructure and other planning requirements. To reflect this we have assessed viability against

²² London Commuter Belt (East)/ M11 Sub-Region Strategic Housing Market Assessment, Figure 136 page 137, Opinion Research Services, January 2010



a range of infrastructure costs. The sums that have been assessed on a per unit basis are:

- £20,000;
- £25,000;
- £30,000;
- £35,000.

3.53 We have also assumed that all units on schemes of this size will be required to achieve Lifetime Homes Standards.

Sites of 250 units or less

3.54 The Section 106 requirements tested have ranged between local authorities and between sites. For example, when assessing a potential level of education contributions, the sums will vary dependent upon the unit size of the new dwelling.

3.55 In respect of Brentwood, Section 106 requirements assumed Essex County Council requirements as outlined in Appendix 6, plus an additional £1500 per unit local authority financial contribution in respect of Open Space requirements. Additional assessments were undertaken on sites of less than 20 units assuming nil Essex County Council contributions and a contribution of £1,500 per unit for Open Space alone. In addition, on sites of 50 units and over, it has been assumed that 15% of the net site area should be set aside for open space and thus the gross to net site area has been adjusted accordingly.

3.56 In respect of East Herts, Section 106 requirements assumed Hertfordshire County Council requirements as outlined in Appendix 6, plus East Herts District Council requirements, set out again in Appendix 6. Further testing has also been undertaken in some instances assuming a fee of £23,000 per unit instead of the sums calculated above. This figure has been used with reference to the Hertfordshire Infrastructure and Investment Strategy October 2009 undertaken by Atkins Ltd in association with Roger Tym and Partners.

3.57 In respect of Epping Forest, Section 106 requirements assumed Essex County Council requirements as outlined in Appendix 6. In addition, on sites over 1 hectare it has been assumed that 10% of the net site area should be set aside for open space and thus the gross to net site area has been adjusted accordingly.

3.58 In respect of Harlow, Section 106 requirements assumed Essex County Council requirements as outlined in Appendix 6. In addition to this, Harlow Council open space requirements have been assumed as shown in Appendix 6.

3.59 In respect of Uttlesford, Section 106 requirements assumed Essex County Council requirements as outlined in Appendix 6. In addition to this, open space requirements have been assumed as shown in Appendix 6.

3.60 In a number of cases Section 106 requirements have been assessed below and above the baseline levels outlined above. The results section clearly shows if Section 106 assumptions have been assumed at 100%, 50% or 200% of the levels outlined above and detailed in Appendix 6.



3.61 In all cases it is assumed that the Section 106/infrastructure requirements are payable at the start of construction.

Lifetime Homes Requirements

3.62 Each of the Councils has varying current policy requirements and future aspirations in respect of Lifetime Homes.

3.63 A dedicated website providing information on Lifetime Homes standards and costs has been created by Habinteg Housing Association (lifetimehomes.org.uk), which reports that the costs of meeting Lifetime Homes standards is currently estimated to be up to £545 per dwelling, subject to the size, layout and specification of the property. For the purposes of our study we have assumed that Lifetime Homes costs will be at approximately this level and we have included a figure of £600 per unit in our modelling. It should be noted that a cost significantly in excess of £600 per unit will impact on the overall viability of a scheme and its ability to deliver affordable housing.

3.64 Each Council requested that we assume the following in respect of Lifetime Homes Requirements although it is recognised that these requirements may change over time as the Local Development Framework process continues:

- Brentwood –10% of all new dwellings to meet Lifetime Homes requirements;
- East Herts –15% of all new dwellings to meet Lifetime Homes requirements;
- Epping Forest – 10% of all new dwellings to meet Lifetime Homes requirements on all sites over 10 units;
- Harlow – 10% of all market dwellings and 50% of all affordable dwellings to meet Lifetime Homes requirements;
- Uttlesford – all new dwellings to meet Lifetime Homes requirements.

Specific Costs of Development – Model Inputs

3.65 Base build costs have been assessed with reference to the Build Cost Information Service at the levels set out below. These costs are per metre square costs for gross internal floor area.

Build Cost Information Service	
	Generally (£) per m2
Estate Housing	849
Estate Housing Detached	900
Estate Housing Semi-detached	796
Estate Housing Terraced	871
Flats (apartments)	1093
Housing Mixed Developments	908
Sheltered Housing	1030
One off housing	1585



3.66 In respect of flats a gross to net ratio of 85% to account for communal and circulatory space has been applied.

3.67 These base costs have then been multiplied dependent upon each local authority's cost multiplier as identified by the Build Cost Information Service.

3.68 The multipliers used are as follows:

AREA UPLIFT	
Brentwood	1.03
East Herts	1.08
Epping Forest	1.09
Harlow	1.09
Uttlesford	1.04

3.69 To these figures a further uplift was applied to account for the relevant Code for Sustainable Homes Standards in the relevant year of implementation²³. The following table outlines the cost adjustments (pounds per m²) for levels 3 to 6 of the Code for Sustainable Homes:

	Flats (£) per m ²	Houses (£) per m ²
Code 3:	50	43
Code 4:	103	101
Code 5:	208	191
Code 6:	360	335

3.70 Base build costs have then been further increased by 15% in order to account for external works.

3.71 Finally build cost contingency of 5% of total build costs has been applied.

3.72 In respect of Uttlesford District Council we have added a further £750 per unit costs in respect of all notional developments assessed. This is to reflect the Council's potential future desire to achieve sustainability requirements in excess of the various Code for Sustainable Homes requirements, specifically to achieve some delivery of on site renewable energy. Whilst we recognise the cost per unit of achieving such requirement is likely to differ on a site by site basis we feel it prudent to allow some additional development cost in respect of this.

²³ Figures based upon findings of 'Cost Analysis of the Code for Sustainable Homes: Final Report' July 2008 Communities and Local Government



Other costs of development

- Charged Interest Rate - 6.5%. This is the long term cost of development finance. Whilst the Bank of England Base Rate is currently at 0.5%, developers are not able to access finance at this level. Therefore a 6.5% figure has been used.
- Earned Interest Rate – 0.5%
- Professional Fees – 10% of Build Costs

Covering architects, consultants engineers fees etc. This is assessed as being 10% of the total build costs. This has been used for all development scenarios with the exception of notional developments of less than 15 units where professional fees have been assumed at 12% of build costs to reflect the baseline fee level which professional consultants attract.

- Site Investigation - £10,000 per hectare
- Agents Acquisition Fees – 1.0% of Residual Land Value
- Marketing and Sales Fees – 4.0% of Gross Development Value
- Legal Fees on sales - £350 per unit
- Finance Arrangement Fee – 1.0% of build cost
- Planning Fees – as Communities and Local Government defined rates as set out at www.communities.gov.uk
- Gross Profit – 19% of Gross Development Value

In line with other appraisals of this nature we have taken a long term assumption as to the necessary profit to encourage development. We have however also assessed gross profit at 25% of Gross Development Value as it is recognised there may be certain occasions where risk is greater and therefore it may be justifiable to seek a higher profit level. The results section clearly shows the level of profit that has been assumed for each assessment. For affordable housing, developer profit is 6% to reflect the contractor's return.

- Stamp Duty Land Tax – ranges between 0% and 4.0% depending on residual land value



Affordable housing assumptions

3.73 Social rents have been assessed to be at the levels shown in the table below and are based on target rent information gathered from Dataspring (2009) a research unit within the Cambridge Centre for Housing and Planning Research.

Social rent per week	Brentwood	East Herts	Epping Forest	Harlow	Uttlesford
1 bed	£75.66	£73.72	£72.84	£68.55	£69.45
2 bed	£91.25	£85.86	£90.28	£82.06	£81.60
3 bed	£109.88	£98.96	£106.47	£93.98	£92.93
4 bed	£120.30	£106.80	£117.78	£107.76	£106.76
5 bed	£132.00	£112.50	£123.00	£110.91	£112.50

3.74 A yield of 6.5% is assumed on social rents. A management cost of £500 per annum, a maintenance cost of £600 per annum, a void allowance of 2.5% and a major repairs allowance of 0.8% is also assumed.

3.75 Shared ownership and intermediate rent assumptions are as follows:

- Brentwood – Shared ownership assumes an initial equity purchase of 25% of the property with rent charged at 2.5% per annum on unsold equity. Sensitivity testing assuming an initial equity purchase of 50% of the property with rent charged at 2.5% per annum on unsold equity has also been undertaken.
- East Herts – Shared ownership assumes an initial equity purchase of 35% of the property with rent charged at 2.5% per annum on unsold equity. Intermediate rental charges of £106– 1 bedroom dwelling, £138– 2 bedroom dwelling, £165 – 3 bedroom dwelling, £200 – 4 bedroom dwelling and £225 – 5 bedroom dwelling per week were used. These were obtained from Hometrack data and represent 80% of the median private rental charges for each unit size (1 bed to 5 bed) in the District in January 2010.
- Epping Forest – Shared ownership assumes an initial equity purchase of 35% of the property with rent charged at 2.5% per annum on unsold equity²⁴.
- Harlow – Shared ownership assumes an initial equity purchase of 50% of the property with rent charged at 2.5% per annum on unsold equity.

²⁴ We have been asked to consider rent to Homebuy as an option for intermediate housing in Epping Forest. The problems with assessing this option are that the capital receipt is not constant and could change according to when take up occurs. Therefore we have assumed that the capital receipt is similar to that for shared ownership.



- Uttlesford - Shared ownership assumes an initial equity purchase of 35% of the property with rent charged at 2.5% per annum on unsold equity.

3.76 A management cost of £100 per annum was also assumed in respect of shared ownership. In respect of intermediate rent, a yield of 6% is assumed along with management costs at £300 per annum, maintenance costs at £300 per annum and a void percentage of 4%.

Grant/public subsidy assumptions

3.77 Baseline assessments assumed nil public subsidy however in a number of circumstances sensitivity testing assuming grant availability was undertaken. With reference to the East of England Investment Statements available from the Homes and Communities Agency, detailed discussion with the London Commuter Belt (East)/ M11 Sub Regional Co-ordinator, discussions with relevant Council Officers and feedback from the stakeholder engagement process three sensitivities in respect of grant availability have been assumed. These are as follows:

- Grant at £40,000 per unit for social rented units, £20,000 per unit in respect of intermediate rented units and £15,000 grant per unit in respect of shared ownership units. Public subsidy at this level is referred to as 'Lower Grant' within this report;
- Grant at £58,200 per unit for social rented units, £40,000 per unit in respect of intermediate rented units and grant at £28,500 per unit for shared ownership units. Public subsidy at this level is referred to as 'Normal Grant' within this report and reflects the most recent levels of public subsidy within the sub region;
- Grant at £75,000 per unit for social rented units, £60,000 per unit in respect of intermediate rented units and grant at £40,000 per unit for shared ownership units. Public subsidy at this level is referred to as 'Higher Grant' within this report.

Development timetable assumptions

3.78 Due to the scale and range of developments the timetable of development is different for each notional development type. Our development experience enables us to allow relevant and realistic timescales within the development period in respect of:

- enabling phases (for large scale developments);
- planning application;
- site acquisition;
- construction period;
- sales period.

3.79 In all instances the receipt from the affordable housing is timetabled to occur at the end of the construction period.



3.80 Appendix 7 contains more detailed information regarding development timetable assumptions.



4.0 Stakeholder Engagement

- 4.1 A stakeholder questionnaire (see Appendix 9) was forwarded to a circulation list of 314 key stakeholders forwarded to Levvel by each Local Authority in December 2009. This also included an invitation (see Appendix 9) to two stakeholder events, held in the morning and afternoon of 14th January 2010.
- 4.2 There were approximately 25 attendees at the stakeholder events. Following requests from some attendees for more information, a précis of stakeholders feedback and more information on the study methodology was forwarded by email to all stakeholders who had responded to the questionnaire, attended a stakeholder event or who had expressed an interest in the study but were unable to attend the event. Again this can be found in Appendix 9.
- 4.3 As would be expected a range of responses were received from stakeholders. All of these responses have been considered and our report has attempted to test variables taking the views of respondents into account.



5.0 Overall Results Analysis

5.1 This section sets out the results from each notional development scheme assessed for each Local Authority in line with the assumptions outlined within this report. Full details of the unit composition for each notional development type can be found in Appendix 4. For clarity, the results section is set out taking the results of each Local Authority area in turn.

RLV AS PROPORTION OF GDV				RLV AS PROPORTION OF AUV		
Small Sites @ 30 dph	30 DPH	50 DPH	> 70 DPH	< 90%	90% to 110%	> 110%
< 28%	< 24%	< 22%	< 20%	Not Viable	Not Viable	Marginally Viable
28% to 42%	24% to 36%	22% to 34%	20% to 30%	Not Viable	Marginally Viable	Viable
> 42%	> 36%	> 34%	> 30%	Not Viable	Marginally Viable	Viable
KEY:				Not Viable	Marginally Viable	Viable



6.0 Results Analysis - Brentwood

Introduction

6.1 The general parameters and assumptions set out in Section 3 of this report have been applied to our assessment of notional sites in Brentwood. We have used these basic assumptions and then made them specific to the Brentwood situation by looking at a range of housing developments across the Borough using a residual valuation appraisal tool of the kind recommended in the Government's Delivering Affordable Housing statement. This is then used as the base for testing future cost and value scenarios using upside, middle and downside housing market growth scenarios during the Local Development Framework period. These future assessments take account of changes to property values, inflation, construction, rent and land values over the same timescale. Our assessment is based on the viability of delivering affordable housing across a range of notional sites. These notional sites were selected in consultation with the Council.

Brentwood Summary

6.2 In Brentwood, the post code areas used for modelling purposes were as follows:

- CM4
- CM13
- CM14
- CM15
- RM4

6.3 In some cases, postcode areas cross local authority boundaries.

6.4 In all of these areas, the notional sites confirmed as appropriate in consultation with the Council were tested. These notional sites were as follows:

- 15 unit site (at 30 dph, 50 dph, 70 dph);
- 50 unit site (at 30 dph, 50 dph, 70 dph, 100 dph, 120 dph);
- 150 unit site (at 30 dph, 50 dph, 70 dph)

6.5 In addition sites below the 15 unit level were also tested.

6.6 In consultation with Council officers, it was agreed it was not appropriate to test any large strategic sites in Brentwood.

6.7 In Brentwood it is essential to establish a baseline to determine at which point land will come forward for development. In order for this to happen residual land values must exceed existing or alternative uses of the site. We have utilised the services of an independent qualified valuer to help us assess values in the sub region partly because of the lack of transparent information on land values. In particular, the level of transactions in the Borough, indeed in the sub-region as a whole, has been



very low. Therefore it is very difficult to make any firm assessments about the absolute value at which land will come forward. A letter from the valuer²⁵ confirms this situation and confirms the relationship of land value to Gross development Value which has been used to influence our viability testing. We are also aware of the differences between developing on previously developed land and Greenfield or other land where competing uses may be commercial or industrial. Other viability studies undertake their assessments using only the industrial land value as a test against which sites may come forward. In our view this type of assessment may be limited and therefore we have tested against three key areas.

- 6.8 The first is Valuation Office Agency (VOA) data regarding industrial land values in the areas as at July 2009, and takes into account an uplift of 20%. Secondly, we have used residential values from VOA (July 2009) in order to test what we have termed previously developed residential land. Finally, we are aware that VOA data does have a number of limitations. Therefore, in order to 'future proof' this assessment, and to reflect land owners differing expectations we have instead looked at the relationship between residual land values and gross development value.
- 6.9 In line with the rest of this study and as explained in detail in section 3 Levvel's methodology enables the effect of a range of delivery timescales, thus all development scenarios selected are tested assuming development start dates of the date of modelling, date of modelling plus 1 year, plus 2 years, plus 3 years, and so on until 2026.
- 6.10 The use of the Levvel methodology allows for variations in land value over time to be accounted for, again ensuring 'future proofing' of the viability study. We know that there is a minimum land value which schemes need to achieve in order to be brought forward, otherwise it becomes more economic for the site to continue in its existing (or alternative) use.
- 6.11 The Valuation Office Agency (VOA) provided data on agricultural land and property values. It is unrealistic however to assume that Greenfield development land would be traded for residential use at these rates. For example the average value of unequipped arable land with vacant possession in the East of England as at July 2009 was £14,924 while in the South East it was £19,671. It is likely that landowners on agricultural land will be looking for a considerable uplift on these values. Stakeholder engagement (see Appendix 9) has confirmed this view.
- 6.12 Thus in respect of development occurring on Greenfield or industrial sites, VOA data on industrial land values in the Borough²⁶ will be used as a check. In Brentwood, this level has been assessed at £2,100,000 per hectare plus 20% uplift (totalling £2,520,000 per hectare).
- 6.13 In respect of development occurring on previously developed residential land, (VOA) data on residential land prices have been used as the check and inflated by 20% in the same manner as for industrial land £3,555,000 per hectare plus 20% uplift (totalling £4,266,000 per hectare).

²⁵ See letter date 9th February 2010 from Thornes (Appendix 8)

²⁶ See Paragraph 3.21



- 6.14 Both of these values will be linked to the future growth assessments as outlined in Appendix 3 to this report to reflect the relationship between land and property values and ensure effective 'future proofing' of the assessment.
- 6.15 Whilst we will use VOA data as outlined above as one test of viability, we recognise that VOA data can be as much as six months out of date and not available at a sufficiently local level to enable local variations in land values to be assessed. Furthermore, the imposition of affordable housing planning policy will necessarily reduce land values in certain schemes. Therefore it is not enough to assess the viability of a particular scheme purely against a fixed value. We have therefore developed a methodology that assesses how much landowners have been willing to accept for their land in the past, and expressed it in terms of the ratio between Gross Development Value and Residual Land Value (GDV:RLV). That is to say how much of the revenue from a scheme can be used to pay for the land. This allows for variations due to locality to be accounted for. It is our belief that this more readily accounts for local variations in land values and represents a more robust and credible evidence base.
- 6.16 The ratio between RLV and GDV has thus been assessed over the period 2001 to 2009 using VOA data. The effect can be seen that in a rising and somewhat overheated market, landowner expectations rise and the price that developers are willing to pay also increases (often based on future expectations of property values). However, in a falling and "normal" market landowner expectations fall to more "reasonable" levels. Thus the relationship between GDV and RLV as a check provides a further degree of future proofing as if housing market values increase, the land value will also increase. Conversely, if values fall, then land value can also be expected to fall.
- 6.17 We have also taken the advice of a valuer who has confirmed that our approach is a reasonable one. The levels of RLV to GDV have been set in accordance with the valuers assessment²⁷. In respect of sites of 10 units and less, a figure of 28% to 35% of Gross Development Value depending on density (see paragraphs 3.33 - 3.34) has been used as a test for the level at which the Residual Land Value may need to reach in order to incentivise the landowner sufficiently to bring forward his parcel of land. This reflects our assessment of the relative value of small sites. For lower density sites in general, a level of 30% RLV to GDV has been used, for mid density schemes 28% has been used and for high density developments the 25% level of RLV to GDV has been used. In respect of large scale strategic sites (1500 units and above) a figure of 20% of Gross Development Value (GDV) as the level at which the Residual Land Value may need to reach has been used as a test.
- 6.18 Our assessment for viability involves a cross reference of the absolute land value against alternative use value (PDL or industrial) and the RLV to GDV position. Within each test we have assumed a level of 'tolerance' so that a scheme that falls within 10% either way of the industrial or PDL land value is deemed to be marginally viable and a scheme that falls within 20% plus or minus of the RLV to GDV test is also deemed to be marginally viable against that test. The two tests are then assessed in parallel rather than sequentially so that a scheme that is not

²⁷ See Thornes letter dated 9th February 2010 (Appendix 8)



viable against the absolute land value will be deemed not viable even if it achieves viability on the RLV to GDV test.

- 6.19 Using these tests of viability, it is possible to inform a policy position that has flexibility and is relevant for the life of the plan to ensure deliverability.
- 6.20 Where shown the results tables set out the three market scenarios, downside, middle and upside and then record whether the notional schemes assessed are likely to be viable, marginal or not viable. The dates in the left hand column refer to the start dates for development.

General Development Sites (15 to 150 units)

- 6.21 This section summarises the results for each value area in Brentwood. We look at the baseline position for each density tested and then we look at sensitivities and their effect on viability. For Brentwood, we report on a baseline affordable housing target of 35% and then for each value area we report on the realistic target above or below that baseline. The baseline position assumes nil public subsidy, 19% gross profit and a 85:15 split of social rented to intermediate affordable housing. Section 106 contributions are in line with 100% of the baseline level as set out in Appendix 6 and section 3 of this main report.
- 6.22 More detailed sensitivity testing regarding Brentwood is contained in the Appendices.

Value Area: CM4

Density 30 dph

- 6.23 Testing at the baseline position (35% affordable housing) demonstrated a current unviable outcome against industrial/greenfield land values in middle market conditions on the 50 unit scheme. Changing the tenure mix to 30:70 social rented however (all other variables remaining the same) resulted in a current marginally viable outcome achieving a residual land value of circa £2.3 million per hectare. This position is shown in Figure BI.



50 units on a 1.917 hectare site (26 units per hectare density) - 0 flat(s) and 50 house(s).			
Brentwood - CM4			
AH Mix:	30-70 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Yellow	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Red	Green	Green
2026	Red	Yellow	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure BI

6.24 Figure BII shows the outcome of testing the baseline position on the smaller 15 unit scheme which currently achieves a marginally viable outcome in middle market conditions.

Brentwood - CM4			
15 units on a 0.5 hectare site (30 units per hectare density) - 0 flat(s) and 15 house(s).			
AH Mix:	85-15 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Yellow	Yellow	Yellow
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Red	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure BII

6.25 Against previously developed residential land values we have tested with baseline assumptions down to 10% affordable housing and this level is unlikely to be achievable with a 85:15 social rent:intermediate tenure mix. Again, if the proportion of intermediate dwellings is increased, viability eases and a marginally viable outcome may be achievable in upside market conditions or later in the Core Strategy period in middle market conditions. This is shown in Figure BIII.



50 units on a 1.917 hectare site (26 units per hectare density) - 0 flat(s) and 50 house(s).			
Brentwood - CM4			
20% Affordable Housing			
AH Mix:	30-70 Social rent:Intermediate		
	100% S106 allowance		
	Higher AUV Nil Grant sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Yellow
2017	Red	Red	Yellow
2018	Red	Yellow	Yellow
2019	Red	Yellow	Yellow
2020	Red	Yellow	Yellow
2021	Red	Yellow	Yellow
2022	Red	Yellow	Yellow
2023	Red	Yellow	Yellow
2024	Red	Yellow	Yellow
2025	Red	Yellow	Yellow
2026	Red	Red	Yellow
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure BIII

- 6.26 Appendix 10 provides more detailed information on sensitivities that we have tested.
- 6.27 It should be noted that notional development schemes at this density do not meet Policy H6 of the Brentwood Replacement Local Plan 2005 which requires all sites of 6 units and above (0.2ha) and above to provide at least 50% of total units as 1 and 2 bedroom properties except where it can be demonstrated such a mix will be inconsistent with the character of existing development in the area or such provision cannot be adequately accommodated.

Value Area: CM4

Density 50 dph

- 6.28 At this density testing at the baseline position (35% affordable housing) demonstrated a current viable outcome against industrial/greenfield land values. For example, the 15 unit development achieves a residual land value of circa £3 million per hectare. Again, this value is not sufficient to clear the previously developed residential value and for these reasons we have tested below 35% for previously developed residential land values and above 35% for industrial/greenfield land values.
- 6.29 Figure BIV shows the position for 15 units with 40% affordable housing (all other parameters in line with the baseline position). This assumes industrial/greenfield alternative land values.



Brentwood - CM4			
15 units on a 0.3 hectare site (50 units per hectare density) - 0 flat(s) and 15 house(s).			
40% Affordable Housing			
AH Mix:	85-15 social rent:intermediate		
	100% S106 allowance		
	Nil grant Lower EUV sensitivity.		
	19% Gross profit sensitivity.		
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Yellow	Yellow	Green
2023	Yellow	Yellow	Green
2024	Yellow	Yellow	Green
2025	Yellow	Yellow	Green
2026	Yellow	Yellow	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=Marginally VIABLE		
	=VIABLE		

Figure BIV

6.30 Figure BV shows the position for 50 units with 35% affordable housing (again, all parameters in line with the baseline position) and demonstrates it may be more challenging to achieve this percentage in the shorter term on schemes of this size should middle market conditions prevail.

Brentwood - CM4			
50 units on a 1.15 hectare site (43 units per hectare density) - 0 flat(s) and 50 house(s).			
35% Affordable Housing			
AH Mix:	85-15 Social Rent:Intermediate		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Yellow	Yellow	Green
2022	Yellow	Yellow	Green
2023	Yellow	Yellow	Green
2024	Yellow	Yellow	Green
2025	Yellow	Yellow	Green
2026	Yellow	Yellow	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=Marginally VIABLE		
	=VIABLE		

Figure BV

6.31 Against previously developed residential land values we have tested with baseline assumptions down to 10% affordable housing on the 50 unit scheme and the results are shown in Figure BVI.



Brentwood - CM4			
50 units on a 1.15 hectare site (43 units per hectare density) - 0 flat(s) and 50 house(s).			
10% Affordable Housing			
AH Mix:	85-15 Social Rent:Intermediate		
	100% S106 allowance		
	Nil Grant Higher EUV sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY DOWNSIDE	VIABILITY MIDDLE	VIABILITY UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Yellow	Green	Green
2021	Yellow	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure BVI

6.32 Grant funding and considerations of tenure and S106 requirements may be required in order to achieve higher levels of affordable housing and sensitivity testing has demonstrated that increasing the proportion of intermediate units at the expense of social rented units results in higher levels of affordable housing. This is shown in Figure BVII.

50 units on a 1.15 hectare site (43 units per hectare density) - 0 flat(s) and 50 house(s).			
Brentwood - CM4			
20% Affordable Housing			
AH Mix:	30-70 Social rent to Intermediate		
	100% S106 allowance		
	Nil Grant Higher AUV sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY DOWNSIDE	VIABILITY MIDDLE	VIABILITY UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure BVII

6.33 See Appendix 10 for more detailed information on sensitivities that we have tested.



6.34 It should be noted that notional development schemes at this density do not meet Policy H6 of the Brentwood Replacement Local Plan 2005 which requires all sites of 6 units and above (0.2ha) and above to provide at least 50% of total units as 1 and 2 bedroom properties except where it can be demonstrated such a mix will be inconsistent with the character of existing development in the area or such provision cannot be adequately accommodated.

Value Area: CM4

Density 70 dph

6.35 At this density testing at the baseline position (35% affordable housing) demonstrated a marginally viable outcome on the 50 unit scheme against industrial/greenfield land values.

6.36 Against previously developed residential land values 35% affordable housing is not viable and therefore we have tested a target below 35%.

6.37 Figure BVIII shows the position of 35% affordable housing on a 50 unit development (all other parameters in line with the baseline position) and demonstrates that in the longer term in middle market conditions, or throughout the Core Strategy period in upside market conditions, this percentage may be achievable against industrial/greenfield land values. 35% affordable housing can be achieved in the short term in middle market conditions if public subsidy at normal levels is introduced or if the affordable housing tenure mix comprises at least 50% intermediate units.

Brentwood - CM4			
50 units on a 0.82 hectare site (61 units per hectare density) - 24 flat(s) and 26 house(s).			
AH Mix: 85-15 Social Rent:Intermediate			
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2011	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2012	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2013	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2014	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2015	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2016	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2017	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2018	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2019	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2020	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2021	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2022	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2023	MARGINALLY VIABLE	VIABLE	VIABLE
2024	MARGINALLY VIABLE	VIABLE	VIABLE
2025	MARGINALLY VIABLE	VIABLE	VIABLE
2026	MARGINALLY VIABLE	VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure BVIII

6.38 Against previously developed residential land values we have tested with baseline assumptions down to 20% affordable housing and this level is only achievable in upside market conditions throughout most of the Core Strategy period and late in the Core Strategy period should middle market conditions endure. This is shown in Figure BIX.



Brentwood - CM4			
50 units on a 0.82 hectare site (61 units per hectare density) - 24 flat(s) and 26 house(s).			
20% Affordable Housing			
AH Mix:	85-15 Social Rent:Intermediate		
	100% S106 allowance		
	Nil Grant Higher EUV sensitivity.		
	19% Gross Profit sensitivity.		
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Red	Yellow	Green
2023	Red	Yellow	Green
2024	Red	Yellow	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure BIX

6.39 Again viability can be eased by increasing the proportion of intermediate units at the expense of social rented units and Figure BX shows the position at 35% affordable housing on the 50 unit scheme with a 30:70 social rent:intermediate tenure mix.

50 units on a 0.82 hectare site (61 units per hectare density) - 24 flat(s) and 26 house(s).			
Brentwood - CM4			
AH Mix:	30-70 Social Rent:Intermediate		
35% Affordable Housing			
	100% S106 allowance		
	Nil Grant Higher AUUV sensitivity.		
	19% Gross Profit sensitivity.		
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Red	Yellow	Green
2023	Red	Yellow	Green
2024	Red	Yellow	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure BX

6.40 Appendix 10 contains more detailed information on sensitivities that we have tested.



Value Area: CM4

Density 100 dph & 120 dph

6.41 At the baseline position 35% affordable housing is viable against industrial/greenfield land values in upside market conditions or later in the Core Strategy period should middle market conditions endure. This is the position for development at both 100 dph and 120 dph and Figure BXI shows the position of the 100 dph scheme.

Brentwood - CM4			
50 units on a 0.575 hectare site (87 units per hectare density) - 40 flat(s) and 10 house(s).			
AH Mix:	85-15 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Green
2011	Red	Red	Green
2012	Red	Red	Green
2013	Red	Red	Green
2014	Red	Red	Green
2015	Red	Red	Green
2016	Red	Red	Green
2017	Red	Red	Green
2018	Red	Red	Green
2019	Red	Red	Green
2020	Red	Yellow	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Red	Green	Green
	Red	=NOT VIABLE	
	Yellow	=Marginally VIABLE	
	Green	=VIABLE	

Figure BXI

6.42 To ease viability in the shorter term in middle market conditions sensitivity testing has demonstrated public subsidy at normal levels or an affordable housing tenure mix containing at least 50% intermediate units would be required. Figure BXII shows the position with grant at normal levels on the 100 dph scheme.



Brentwood - CM4			
50 units on a 0.575 hectare site (87 units per hectare density) - 40 flat(s) and 10 house(s).			
AH Mix:	85-15 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Normal Grant Lower AUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Green	Green
2011	Red	Green	Green
2012	Red	Green	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Green	Green
2021	Red	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure BXII

6.43 35% affordable housing is not viable against previously developed residential land values at the baseline position therefore we have tested as low as 10% affordable housing and the results of the 100 dph scheme are shown in Figure **BXIII**.

Brentwood - CM4			
50 units on a 0.575 hectare site (87 units per hectare density) - 40 flat(s) and 10 house(s).			
AH Mix:	85-15 Social Rent:Intermediate		
10% Affordable Housing			
100% S106 allowance			
Nil Grant Higher EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Yellow	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure BXIII

6.44 Sensitivity testing has demonstrated that 35% affordable housing may be achievable in upside market conditions and later in the Core Strategy period in middle market conditions at a 30:70 social rent:intermediate tenure mix as shown in Figure BXIV.



50 units on a 0.575 hectare site (87 units per hectare density) - 40 flat(s) and 10 house(s).			
Brentwood - CM4			
AH Mix:	30-70 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Higher AUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Green
2011	Red	Red	Green
2012	Red	Red	Green
2013	Red	Red	Green
2014	Red	Red	Green
2015	Red	Red	Green
2016	Red	Red	Green
2017	Red	Red	Green
2018	Red	Red	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Red	Green	Green
	Red	=NOT VIABLE	
	Yellow	=Marginally VIABLE	
	Green	=VIABLE	

Figure BXIV

Value Area: CM13

Density 30 dph

- 6.45 Assuming the baseline position (35% affordable housing) demonstrated a currently unviable position against industrial/greenfield and previously developed residential land values and therefore we have tested at levels below this.
- 6.46 Against industrial/greenfield land values we have tested as low as 10% affordable housing (all other parameters in accordance with the baseline position) and as Figure BXV shows this may be achievable in upside market conditions, or later in the Core Strategy in middle market conditions.



Brentwood - CM13			
50 units on a 1.917 hectare site (26 units per hectare density) - 0 flat(s) and 50 house(s).			
10% Affordable Housing			
AH Mix:	85-15 Social Rent:Intermediate		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Yellow	Green
2015	Red	Red	Green
2016	Red	Red	Green
2017	Red	Red	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Green	Green
2022	Red	Yellow	Green
2023	Red	Yellow	Green
2024	Red	Yellow	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure BXV

6.47 As Figure BXVI demonstrates the impact of increasing the proportion of intermediate units in the affordable housing tenure mix to 50% improves viability and 35% affordable housing may be achievable on this basis in upside market conditions or later in the Core Strategy period in middle market conditions.

50 units on a 1.917 hectare site (26 units per hectare density) - 0 flat(s) and 50 house(s).			
Brentwood - CM13			
AH Mix:	50-50 Social rent:Intermediate		
35% Affordable Housing			
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Green
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Yellow	Green
2015	Red	Red	Green
2016	Red	Red	Green
2017	Red	Red	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Green	Green
2022	Red	Yellow	Green
2023	Red	Yellow	Green
2024	Red	Yellow	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure BXVI

6.48 Against previously developed residential values we have also tested down to 10% affordable housing (all other parameters in line with the baseline position) and Figure BXVII demonstrates that it is unlikely that this percentage could be achievable over the Core Strategy Period regardless of market conditions.



SCHEME TYPE 5			
50 units on a 1.917 hectare site (26 units per hectare density) - 0 flat(s) and 50 house(s).			
Brentwood - CM13			
10% Affordable Housing			
AH Mix:	30-70 Social Rent:Intermediate		
	1 \$106 allowance		
	Nil Grant Higher AUV sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
2027			
2028			
2029			
2030			
2031			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure BXVII

6.49 It should be noted that notional development schemes at this density do not meet Policy H6 of the Brentwood Replacement Local Plan 2005 which requires all sites of 6 units and above (0.2ha) and above to provide at least 50% of total units as 1 and 2 bedroom properties except where it can be demonstrated such a mix will be inconsistent with the character of existing development in the area or such provision cannot be adequately accommodated.

6.50 See Appendix 10 for more detailed information on sensitivities that we have tested.

Density 50 dph

6.51 Assuming the baseline position (35% affordable housing) demonstrated a currently unviable position against industrial/greenfield and previously developed residential land values and therefore we have tested at levels below this.

6.52 Against industrial/greenfield land values testing at the baseline position (35% affordable housing) demonstrates an unviable position in middle market conditions thus 20% affordable housing has been tested. In the longer term in middle market conditions and/or in upside market conditions 35% affordable housing may be achievable at the baseline position against industrial/greenfield land values. Figure BXVIII shows the position at 20% affordable housing.



Brentwood - CM13			
15 units on a 0.3 hectare site (50 units per hectare density) - 0 flat(s) and 15 house(s).			
20% Affordable Housing			
AH Mix:	85-15 Social Rent:Intermediate		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	VIABLE	VIABLE	VIABLE
2011	VIABLE	VIABLE	VIABLE
2012	VIABLE	VIABLE	VIABLE
2013	MARGINALLY VIABLE	VIABLE	VIABLE
2014	MARGINALLY VIABLE	VIABLE	VIABLE
2015	MARGINALLY VIABLE	VIABLE	VIABLE
2016	NOT VIABLE	VIABLE	VIABLE
2017	MARGINALLY VIABLE	VIABLE	VIABLE
2018	MARGINALLY VIABLE	VIABLE	VIABLE
2019	VIABLE	VIABLE	VIABLE
2020	VIABLE	VIABLE	VIABLE
2021	VIABLE	VIABLE	VIABLE
2022	VIABLE	VIABLE	VIABLE
2023	VIABLE	VIABLE	VIABLE
2024	VIABLE	VIABLE	VIABLE
2025	VIABLE	VIABLE	VIABLE
2026	VIABLE	VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure BXVIII

6.53 Figure BXIX demonstrates the position at 35% affordable housing. Further sensitivity testing has demonstrated that increasing the proportion of intermediate units at the expense of social rented units can ease viability further at this percentage (all other baseline variables remaining the same).

Brentwood - CM13			
15 units on a 0.3 hectare site (50 units per hectare density) - 0 flat(s) and 15 house(s).			
35% Affordable Housing			
AH Mix:	85-15 Social Rent:Intermediate		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	NOT VIABLE	NOT VIABLE
2011	NOT VIABLE	NOT VIABLE	VIABLE
2012	NOT VIABLE	NOT VIABLE	VIABLE
2013	NOT VIABLE	NOT VIABLE	VIABLE
2014	NOT VIABLE	NOT VIABLE	VIABLE
2015	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2016	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2017	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2018	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2019	NOT VIABLE	NOT VIABLE	VIABLE
2020	NOT VIABLE	NOT VIABLE	VIABLE
2021	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2022	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2023	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2024	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2025	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2026	NOT VIABLE	MARGINALLY VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure BXIX

6.54 Against previously developed residential land values we have tested with baseline assumptions down to 10% affordable housing and a marginally viable position is only likely to be achievable in upside market conditions should intermediate units comprise at least 70% of the affordable dwellings.



- 6.55 It should be noted that notional development schemes at this density do not meet Policy H6 of the Brentwood Replacement Local Plan 2005 which requires all sites of 6 units and above (0.2ha) and above to provide at least 50% of total units as 1 and 2 bedroom properties except where it can be demonstrated such a mix will be inconsistent with the character of existing development in the area or such provision cannot be adequately accommodated.
- 6.56 See Appendix 10 for more detailed information on sensitivities that we have tested.

Density 70 dph

- 6.57 We have tested with baseline assumptions down to 20% affordable housing and against industrial/greenfield land values this level may only be achievable in upside market conditions or late in the Core Strategy period in middle market conditions. This position is shown in Figure BXX.

Brentwood - CM14			
50 units on a 0.82 hectare site (61 units per hectare density) - 24 flat(s) and 26 house(s).			
20% Affordable Housing			
AH Mix:	85-15 Social Rent:Intermediate		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	NOT VIABLE	VIABLE
2011	NOT VIABLE	NOT VIABLE	VIABLE
2012	NOT VIABLE	NOT VIABLE	VIABLE
2013	NOT VIABLE	NOT VIABLE	VIABLE
2014	NOT VIABLE	NOT VIABLE	VIABLE
2015	NOT VIABLE	NOT VIABLE	VIABLE
2016	NOT VIABLE	NOT VIABLE	VIABLE
2017	NOT VIABLE	NOT VIABLE	VIABLE
2018	NOT VIABLE	NOT VIABLE	VIABLE
2019	NOT VIABLE	NOT VIABLE	VIABLE
2020	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2021	NOT VIABLE	VIABLE	VIABLE
2022	NOT VIABLE	VIABLE	VIABLE
2023	NOT VIABLE	VIABLE	VIABLE
2024	NOT VIABLE	VIABLE	VIABLE
2025	NOT VIABLE	VIABLE	VIABLE
2026	NOT VIABLE	VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure BXX

- 6.58 Sensitivity testing has been undertaken at 20% affordable housing with grant (all other baseline variables remaining the same) and this is sufficient to achieve a viable position in the earlier years in middle market conditions with the exception of 2015- 2017 where the likely additional costs associated with achieving Code for Sustainable Homes Level 6 will impact.
- 6.59 We have tested with baseline assumptions down to 10% affordable housing against previously developed residential land values and this level may only be achievable in upside market conditions and later in the Core Strategy period in middle market conditions and even then, a marginally viable outcome is likely to be achieved at this percentage. This is shown in Figure BXXI.



affordable housing that may be achievable, particularly if the market performs to upside conditions. This is shown in Figure BXXIII.

50 units on a 0.48 hectare site (104 units per hectare density) - 50 flat(s) and 0 house(s).			
Brentwood - CM13			
AH Mix:	30-70 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Green
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Red
2017	Red	Red	Yellow
2018	Red	Red	Yellow
2019	Red	Red	Green
2020	Red	Red	Green
2021	Red	Yellow	Green
2022	Red	Yellow	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Red	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure BXXIII

6.62 Against previously developed residential land values we have tested down to 10% affordable housing (all other assumptions in line with the baseline position) and this percentage is only likely to be achievable in upside market conditions later in the Core Strategy period. Adding grant at normal levels and/or increasing the proportion of intermediate units eases viability and 10% affordable housing may be deliverable in the shorter term in upside market conditions and later in the Core Strategy provided at least middle market conditions are achieved. This is shown in Figure BXXIV.



Brentwood - CM13			
50 units on a 0.48 hectare site (104 units per hectare density) - 50 flat(s) and 0 house(s).			
10% Affordable Housing			
AH Mix:	50-50 Social Rent:Intermediate		
	100% S106 allowance		
	Normal Grant Higher EUV sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2011	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2012	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2013	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2014	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2015	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2016	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2017	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2018	NOT VIABLE	NOT VIABLE	VIABLE
2019	NOT VIABLE	NOT VIABLE	VIABLE
2020	NOT VIABLE	NOT VIABLE	VIABLE
2021	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2022	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2023	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2024	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2025	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2026	NOT VIABLE	MARGINALLY VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure BXXIV

Value Area: CM14

Density 30 dph

- 6.63 Assuming the baseline position (35% affordable housing) demonstrated a currently unviable position against industrial/greenfield and previously developed residential land values and therefore we have tested at levels below this.
- 6.64 Against industrial/greenfield land values we have tested down to 10% affordable housing and the results are shown in Figure BXXV.



Brentwood - CM14			
50 units on a 1.917 hectare site (26 units per hectare density) - 0 flat(s) and 50 house(s).			
10% Affordable Housing			
AH Mix:	85-15 Social Rent:Intermediate		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
	VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2011	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2012	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2013	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2014	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2015	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2016	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2017	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2018	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2019	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2020	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2021	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2022	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2023	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2024	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2025	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2026	NOT VIABLE	MARGINALLY VIABLE	MARGINALLY VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure BXXV

- 6.65 Sensitivity testing has demonstrated that adding grant and/or increasing the proportion of intermediate units can increase the amount of affordable housing that may be deliverable at this density to 20% (see Appendix 10).
- 6.66 Against previously developed residential values sensitivity testing has demonstrated that 10% affordable housing is unlikely to be achievable at any point in the Core Strategy period unless grant at the higher level is available.
- 6.67 It should be noted that notional development schemes at this density do not meet Policy H6 of the Brentwood Replacement Local Plan 2005 which requires all sites of 6 units and above (0.2ha) and above to provide at least 50% of total units as 1 and 2 bedroom properties except where it can be demonstrated such a mix will be inconsistent with the character of existing development in the area or such provision cannot be adequately accommodated.
- 6.68 See Appendix 10 for more detailed information on sensitivities that we have tested.



Value Area: CM14

Density 50 dph

6.69 Assuming the baseline position (35% affordable housing) at this density demonstrated a currently unviable position against industrial/greenfield and previously developed residential land values. In the longer term in middle market conditions or in upside market conditions against industrial/greenfield values this percentage may be achievable as shown in Figure BXXVI.

Brentwood - CM14			
15 units on a 0.3 hectare site (50 units per hectare density) - 0 flat(s) and 15 house(s).			
AH Mix:	85-15 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Red
2011	Red	Red	Green
2012	Red	Red	Green
2013	Red	Red	Green
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Yellow
2017	Red	Red	Yellow
2018	Red	Red	Yellow
2019	Red	Red	Green
2020	Red	Red	Green
2021	Red	Yellow	Green
2022	Red	Yellow	Green
2023	Red	Yellow	Green
2024	Red	Yellow	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Green
	Red		
	Yellow		
	Green		

Figure BXXVI

6.70 Sensitivity testing has shown the addition of public subsidy at normal levels or increasing the proportion of intermediate units at the expense of social rented units can ease viability at 35% affordable housing and Figure BXXVII demonstrates the viability position of 35% affordable housing with grant (all other variables in accordance with the baseline position).



Brentwood - CM14			
15 units on a 0.3 hectare site (50 units per hectare density) - 0 flat(s) and 15 house(s).			
AH Mix:	85-15 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Normal Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Red	Yellow	Green
2023	Red	Yellow	Green
2024	Red	Yellow	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure BXXVII

6.71 Against previously developed residential values we have tested as low as 10% affordable housing (all other variables in accordance with the baseline position) and a marginally viable outcome is achieved in upside market conditions only. Sensitivity testing at this percentage has demonstrated that adding grant and/or increasing the proportion of intermediate units has a positive impact upon this position although the effects remain marginal. This is shown in Figure BXXVIII.

Brentwood - CM14			
50 units on a 1.15 hectare site (43 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix:	30-70 Social Rent:Intermediate		
10% Affordable Housing			
100% S106 allowance			
Nil Grant Higher EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Yellow
2017	Red	Red	Yellow
2018	Red	Red	Yellow
2019	Red	Red	Yellow
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Red	Yellow	Green
2023	Red	Yellow	Green
2024	Red	Yellow	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure BXXVIII

6.72 It should be noted that notional development schemes at this density do not meet Policy H6 of the Brentwood Replacement Local Plan 2005 which requires all sites of 6 units and above (0.2ha) and above to provide at least 50% of total units as 1 and



2 bedroom properties except where it can be demonstrated such a mix will be inconsistent with the character of existing development in the area or such provision cannot be adequately accommodated.

- 6.73 Appendix 10 contains more detailed information on sensitivities that we have tested.

Value Area: CM14

Density 70 dph

- 6.74 Testing at the baseline position against industrial/greenfield land values has demonstrated that delivery of 35% affordable housing is not currently achievable and is unlikely to be achievable until later in the Core Strategy period in upside market conditions. Sensitivity testing at this percentage has demonstrated that a 50:50 social rent:intermediate tenure mix (all other variable as the baseline position) eases viability in upside market conditions and later in the Core Strategy period in middle market conditions as shown in Figure BXXIX.

50 units on a 0.82 hectare site (61 units per hectare density) - 24 flat(s) and 26 house(s).			
Brentwood - CM14			
AH Mix:	50-50 Social rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Green
2011	Red	Red	Green
2012	Red	Red	Green
2013	Red	Red	Green
2014	Red	Red	Green
2015	Red	Red	Green
2016	Red	Red	Green
2017	Red	Red	Green
2018	Red	Red	Green
2019	Red	Red	Green
2020	Red	Yellow	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Red	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure BXXIX

- 6.75 In the short term, in middle market conditions we have tested at the baseline position down to 15% affordable housing and this represents a more likely level at which delivery may be possible.
- 6.76 Against previously developed residential land values we have tested with baseline assumptions down to 10% affordable housing and this level may only be achievable in upside market conditions or late in the Core Strategy period in middle market conditions as shown in Figure BXXX.



Brentwood - CM14			
50 units on a 0.82 hectare site (61 units per hectare density) - 24 flat(s) and 26 house(s).			
10% Affordable Housing			
AH Mix:	85-15 Social Rent:Intermediate		
	100% S106 allowance		
	Nil Grant Higher EUV sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Yellow
2017	Red	Red	Yellow
2018	Red	Red	Green
2019	Red	Red	Green
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Red	Yellow	Green
2023	Red	Yellow	Green
2024	Red	Yellow	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure BXXX

6.77 Sensitivity testing has demonstrated that grant at normal levels has a very marginal impact upon easing viability at this percentage. See Appendix 10 for more detailed information on sensitivities that we have tested.

Value Area: CM14

Density 100 dph & 120 dph

6.78 Testing at the baseline positions has demonstrated that 35% affordable housing is not viable against industrial/greenfield or previously developed residential land values. Sensitivity testing against industrial/greenfield land values at this percentage at 100 dph has demonstrated that increasing the proportion of intermediate units at the expense of social rented units may be sufficient to achieve a viable position at this percentage but only in upside market conditions or later in the Core Strategy period in middle market conditions. This position is shown in Figure BXXXI.



50 units on a 0.575 hectare site (87 units per hectare density) - 40 flat(s) and 10 house(s).			
Brentwood - CM14			
AH Mix:	50-50 Social rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	DOWNSIDE	VIABILITY	
		MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Green
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Red
2017	Red	Red	Yellow
2018	Red	Red	Green
2019	Red	Red	Green
2020	Red	Red	Green
2021	Red	Yellow	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Red	Green	Green
	Red	=NOT VIABLE	
	Yellow	=Marginally Viable	
	Green	=Viable	

Figure BXXXI

- 6.79 As density increases however, achieving a viable position is more challenging and it is unlikely that 35% affordable housing could be achieved on the 120 dph scheme.
- 6.80 We have tested as low as 10% affordable housing (all other variables as the baseline position) and delivery at this percentage remains unlikely on the 120 dph scheme until later in the Core Strategy period should middle market conditions prevail.
- 6.81 Against previously developed residential land values we have tested at the baseline position down to 10% affordable housing and there is potential to achieve delivery at this percentage but it is only likely in upside market conditions. Figure BXXXII shows this on the 120 dph scheme.

Brentwood - CM14			
50 units on a 0.48 hectare site (104 units per hectare density) - 50 flat(s) and 0 house(s).			
10% Affordable Housing			
AH Mix:	85-15 Social Rent:Intermediate		
100% S106 allowance			
Nil Grant Higher EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	DOWNSIDE	VIABILITY	
		MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Yellow
2017	Red	Red	Yellow
2018	Red	Red	Yellow
2019	Red	Red	Green
2020	Red	Red	Green
2021	Red	Yellow	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Red	Green	Green
	Red	=NOT VIABLE	
	Yellow	=Marginally Viable	
	Green	=Viable	

Figure BXXXII



Value Area: CM15

Density 30 dph

- 6.82 Assuming the baseline position (35% affordable housing) demonstrated a currently unviable position against industrial/greenfield and previously developed residential land values and therefore we have tested at levels below this.
- 6.83 Against industrial/greenfield land values we have tested down to 10% affordable housing and the results are shown in Figure BXXXIII.

Brentwood - CM15			
50 units on a 1.917 hectare site (26 units per hectare density) - 0 flat(s) and 50 house(s).			
10% Affordable Housing			
AH Mix:	85-15 Social Rent:Intermediate		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Green
2011	Red	Red	Green
2012	Red	Red	Green
2013	Red	Red	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Yellow	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure BXXXIII

- 6.84 As was the case in CM14 at this density, sensitivity testing has demonstrated that adding grant and/or increasing the proportion of intermediate units can increase the amount of affordable housing that may be deliverable at this density to 20%.
- 6.85 Against previously developed residential values sensitivity testing has demonstrated that 10% affordable housing is unlikely to be achievable at any point in the Core Strategy period even should grant be available at normal levels.
- 6.86 It should be noted that notional development schemes at this density do not meet Policy H6 of the Brentwood Replacement Local Plan 2005 which requires all sites of 6 units and above (0.2ha) and above to provide at least 50% of total units as 1 and 2 bedroom properties except where it can be demonstrated such a mix will be inconsistent with the character of existing development in the area or such provision cannot be adequately accommodated.
- 6.87 See Appendix 10 for more detailed information on sensitivities that we have tested.



Value Area: CM15

Density 50 dph

6.88 Testing at the baseline position currently delivers an unviable result against industrial/greenfield and previously developed residential land values. Against industrial greenfield land values however, 35% affordable housing may be achieved in upside market conditions and later in the Core Strategy period in middle market conditions as shown in Figure BXXXIV.

Brentwood - CM15			
50 units on a 1.15 hectare site (43 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix:	85-15 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2011	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2012	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2013	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2014	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2015	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2016	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2017	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2018	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2019	NOT VIABLE	NOT VIABLE	VIABLE
2020	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2021	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2022	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2023	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2024	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2025	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2026	NOT VIABLE	MARGINALLY VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure BXXXIV

6.89 Sensitivity testing has demonstrated that grant at normal levels and an affordable housing tenure mix with a greater proportion of intermediate dwellings would be required to potentially achieve 35% affordable housing in the shorter term in middle market conditions. This is shown in Figure BXXXV.



50 units on a 1.15 hectare site (43 units per hectare density) - 0 flat(s) and 50 house(s).			
Brentwood - CM15			
AH Mix:	50-50 Social rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Normal Grant Lower AUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
	Red	=NOT VIABLE	
	Yellow	=Marginally VIABLE	
	Green	=VIABLE	

Figure BXXXV

6.90 Against previously developed residential land values we have tested down to 10% affordable housing (all other variables as the baseline position) and a marginally viable outcome at this percent age can be achieved in upside market conditions as shown in Figure BXXXVI.

Brentwood - CM15			
50 units on a 1.15 hectare site (43 units per hectare density) - 0 flat(s) and 50 house(s).			
10% Affordable Housing			
AH Mix:	85-15 Social Rent:Intermediate		
100% S106 allowance			
Nil Grant Higher EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Yellow
2017	Red	Red	Yellow
2018	Red	Red	Yellow
2019	Red	Red	Yellow
2020	Red	Red	Yellow
2021	Red	Yellow	Green
2022	Red	Yellow	Yellow
2023	Red	Yellow	Yellow
2024	Red	Yellow	Yellow
2025	Red	Yellow	Yellow
2026	Red	Yellow	Yellow
	Red	=NOT VIABLE	
	Yellow	=Marginally VIABLE	
	Green	=VIABLE	

Figure BXXXVI

6.91 It should be noted that notional development schemes at this density do not meet Policy H6 of the Brentwood Replacement Local Plan 2005 which requires all sites of 6 units and above (0.2ha) and above to provide at least 50% of total units as 1 and 2 bedroom properties except where it can be demonstrated such a mix will be



inconsistent with the character of existing development in the area or such provision cannot be adequately accommodated.

6.92 See Appendix 10 for more detailed information on sensitivities that we have tested.

Value Area: CM15

Density 70 dph

6.93 Testing at the baseline position delivers unviable results against industrial/greenfield and previously developed residential land values. However, sensitivity testing at 35% affordable housing against industrial/greenfield land values demonstrates that this percentage may be achievable (albeit not currently in middle market conditions) with a 30:70 social rent:intermediate tenure mix as shown in Figure BXXXVII.

50 units on a 0.82 hectare site (61 units per hectare density) - 24 flat(s) and 26 house(s).			
Brentwood - CM15			
AH Mix:	30-70 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Green
2011	Red	Red	Green
2012	Red	Red	Green
2013	Red	Red	Green
2014	Red	Red	Green
2015	Red	Red	Green
2016	Red	Red	Green
2017	Red	Red	Green
2018	Red	Red	Green
2019	Red	Red	Green
2020	Red	Yellow	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Red	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure BXXXVII

6.94 We have tested with baseline assumptions down to 20% affordable housing and against industrial/greenfield land values this level may only be achievable in upside market conditions and later in the Core Strategy period in middle market conditions. This is shown in Figure BXXXVIII.



Brentwood - CM15			
50 units on a 0.82 hectare site (61 units per hectare density) - 24 flat(s) and 26 house(s).			
20% Affordable Housing			
AH Mix:	85-15 Social Rent:Intermediate		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	NOT VIABLE	VIABLE
2011	NOT VIABLE	NOT VIABLE	VIABLE
2012	NOT VIABLE	NOT VIABLE	VIABLE
2013	NOT VIABLE	NOT VIABLE	VIABLE
2014	NOT VIABLE	NOT VIABLE	VIABLE
2015	NOT VIABLE	NOT VIABLE	VIABLE
2016	NOT VIABLE	NOT VIABLE	VIABLE
2017	NOT VIABLE	NOT VIABLE	VIABLE
2018	NOT VIABLE	NOT VIABLE	VIABLE
2019	NOT VIABLE	NOT VIABLE	VIABLE
2020	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2021	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2022	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2023	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2024	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2025	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2026	NOT VIABLE	MARGINALLY VIABLE	VIABLE
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure BXXXVIII

- 6.95 Achieving a viable position with 10% affordable housing (all other variables as the baseline position) against previously developed residential land values on schemes of this density is likely only to be deliverable in upside market conditions.
- 6.96 See Appendix 10 for more detailed information on sensitivities that we have tested.

Value Area: CM15

Density 100 dph & 120 dph

- 6.97 Testing at the baseline positions has demonstrated that 35% affordable housing is not viable against industrial/greenfield or previously developed residential land values. We have tested as low as 10% affordable housing (all other variables as the baseline) and the position against industrial/greenfield land values is shown in Figure BXXXIX.



Brentwood - CM15			
50 units on a 0.575 hectare site (87 units per hectare density) - 40 flat(s) and 10 house(s).			
10% Affordable Housing			
AH Mix:	85-15 Social Rent:Intermediate		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	NOT VIABLE	VIABLE
2011	NOT VIABLE	NOT VIABLE	VIABLE
2012	NOT VIABLE	NOT VIABLE	VIABLE
2013	NOT VIABLE	NOT VIABLE	VIABLE
2014	NOT VIABLE	NOT VIABLE	VIABLE
2015	NOT VIABLE	NOT VIABLE	VIABLE
2016	NOT VIABLE	NOT VIABLE	VIABLE
2017	NOT VIABLE	NOT VIABLE	VIABLE
2018	NOT VIABLE	NOT VIABLE	VIABLE
2019	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2020	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2021	NOT VIABLE	VIABLE	VIABLE
2022	NOT VIABLE	VIABLE	VIABLE
2023	NOT VIABLE	VIABLE	VIABLE
2024	NOT VIABLE	VIABLE	VIABLE
2025	NOT VIABLE	VIABLE	VIABLE
2026	NOT VIABLE	VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure BXXXIX

6.98 Against previously developed residential land values we have tested at the baseline position down to 10% affordable housing and there is potential to achieve delivery at this percentage but it is only likely in upside market conditions in the latter half of the Core Strategy period.

6.99 See Appendix 10 for more detailed information on sensitivities that we have tested.

Value Area: RM4

Density 30 dph

6.100 Testing at the baseline position (35% affordable housing) demonstrated a current unviable outcome against industrial/greenfield land values on the 50 unit scheme. Changing the tenure mix to 30:70 social rented however (all other variables remaining the same) resulted in a current marginally viable outcome in middle market conditions achieving a residual land value of circa £2.5 million per hectare. This position is shown in Figure BXL.



50 units on a 1.917 hectare site (26 units per hectare density) - 0 flat(s) and 50 house(s).			
Brentwood - RM4			
AH Mix:	30-70 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Yellow	Yellow	Green
2021	Yellow	Yellow	Green
2022	Yellow	Yellow	Green
2023	Yellow	Yellow	Green
2024	Yellow	Yellow	Green
2025	Yellow	Yellow	Green
2026	Yellow	Yellow	Green
	Red	=NOT VIABLE	
	Yellow	=Marginally VIABLE	
	Green	=VIABLE	

Figure BXL

6.101 Testing at the baseline position on the 15 unit scheme produces a current marginally viable result as shown in Figure BXL.

Brentwood - RM4			
15 units on a 0.5 hectare site (30 units per hectare density) - 0 flat(s) and 15 house(s).			
AH Mix:	85-15 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Yellow	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Yellow	Yellow	Green
2023	Yellow	Yellow	Green
2024	Yellow	Yellow	Green
2025	Yellow	Yellow	Green
2026	Yellow	Yellow	Green
	Red	=NOT VIABLE	
	Yellow	=Marginally VIABLE	
	Green	=VIABLE	

Figure BXL

6.102 Against previously developed residential land values we have tested with baseline assumptions down to 10% affordable housing and a marginally viable outcome may be achieved in upside market conditions.

6.103 Appendix 10 provides more detailed information on sensitivities that we have tested.



6.104 It should be noted that notional development schemes at this density do not meet Policy H6 of the Brentwood Replacement Local Plan 2005 which requires all sites of 6 units and above (0.2ha) and above to provide at least 50% of total units as 1 and 2 bedroom properties except where it can be demonstrated such a mix will be inconsistent with the character of existing development in the area or such provision cannot be adequately accommodated.

Value Area: RM4

Density 50 dph

6.105 At this density testing at the baseline position (35% affordable housing) demonstrated a current viable outcome against industrial/greenfield land values. For example, the 50 unit development achieves a residual land value of circa £2.9 million per hectare in middle market conditions. This is shown in Figure BXLII.

Brentwood - RM4			
50 units on a 1.15 hectare site (43 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix:	85-15 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Green	Green
2011	Red	Green	Green
2012	Red	Green	Green
2013	Red	Green	Green
2014	Red	Green	Green
2015	Red	Green	Green
2016	Red	Green	Green
2017	Red	Green	Green
2018	Red	Green	Green
2019	Red	Green	Green
2020	Red	Green	Green
2021	Green	Green	Green
2022	Green	Green	Green
2023	Green	Green	Green
2024	Green	Green	Green
2025	Green	Green	Green
2026	Green	Green	Green
	Red		
	Yellow		
	Green		

Figure BXLII

6.106 Again, this value is not sufficient to clear the previously developed residential value and for these reasons we have tested below 35% for previously developed residential land values and above 35% for industrial/greenfield land values.

6.107 Figure BXLIII shows the position for 50 units with 40% affordable housing (all other parameters in line with the baseline position). This assumes industrial/greenfield alternative land values.



50 units on a 1.15 hectare site (43 units per hectare density) - 0 flat(s) and 50 house(s).			
Brentwood - RM4			
40% Affordable Housing			
AH Mix:	85-15 Social Rent:Intermediate		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Red	Yellow	Green
2023	Yellow	Yellow	Green
2024	Yellow	Yellow	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Green
	Red	Yellow	Green
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure BXLIII

6.108 Against previously developed residential land values we have tested with baseline assumptions down to 20% affordable housing and the results are shown in Figure BXLIV and demonstrate delivery at this percentage may be possible throughout the Core Strategy in middle and upside market conditions.

Brentwood - RM4			
50 units on a 1.15 hectare site (43 units per hectare density) - 0 flat(s) and 50 house(s).			
20% Affordable Housing			
AH Mix:	85-15 Social Rent:Intermediate		
	100% S106 allowance		
	Nil Grant Higher EUV sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Red	Yellow	Green
2023	Red	Yellow	Green
2024	Red	Yellow	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Green
	Red	Yellow	Green
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure BXLIV

6.109 See Appendix 10 for more detailed information on sensitivities that we have tested.

6.110 It should be noted that notional development schemes at this density do not meet Policy H6 of the Brentwood Replacement Local Plan 2005 which requires all sites of 6 units and above (0.2ha) and above to provide at least 50% of total units as 1 and



2 bedroom properties except where it can be demonstrated such a mix will be inconsistent with the character of existing development in the area or such provision cannot be adequately accommodated.

Value Area: RM4

Density 70 dph

- 6.111 At this density testing at the baseline position (35% affordable housing) demonstrated an unviable outcome against industrial/greenfield land values and previously developed residential land values.
- 6.112 Sensitivity testing at 35% affordable housing against industrial/greenfield land values demonstrated that altering the affordable housing tenure mix to a 30:70 social:rent:intermediate eased viability as is shown in Figure BXLV.

50 units on a 0.82 hectare site (61 units per hectare density) - 24 flat(s) and 26 house(s).			
Brentwood - RM4			
AH Mix:	30-70 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Red	Green
2014	Red	Red	Green
2015	Red	Red	Green
2016	Red	Red	Green
2017	Red	Red	Green
2018	Red	Red	Green
2019	Red	Green	Green
2020	Red	Green	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Red	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure BXLV

- 6.113 Testing as low as 20% affordable housing was also undertaken at the baseline position against industrial/greenfield land values to ascertain the short term percentage that may be viable in middle market conditions and, as is shown in Figure BXLVI, this resulted in a viable outcome for the duration of the Core Strategy in middle and upside market conditions.



Brentwood - RM4			
50 units on a 0.82 hectare site (61 units per hectare density) - 24 flat(s) and 26 house(s).			
20% Affordable Housing			
AH Mix:	85-15 Social Rent:Intermediate		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
	VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	VIABLE	VIABLE
2011	NOT VIABLE	VIABLE	VIABLE
2012	NOT VIABLE	VIABLE	VIABLE
2013	NOT VIABLE	VIABLE	VIABLE
2014	NOT VIABLE	VIABLE	VIABLE
2015	NOT VIABLE	VIABLE	VIABLE
2016	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2017	NOT VIABLE	VIABLE	VIABLE
2018	NOT VIABLE	VIABLE	VIABLE
2019	NOT VIABLE	VIABLE	VIABLE
2020	NOT VIABLE	VIABLE	VIABLE
2021	VIABLE	VIABLE	VIABLE
2022	VIABLE	VIABLE	VIABLE
2023	VIABLE	VIABLE	VIABLE
2024	VIABLE	VIABLE	VIABLE
2025	VIABLE	VIABLE	VIABLE
2026	VIABLE	VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure BXLVI

6.114 Against previously developed residential land values we have tested with baseline assumptions down to 20% affordable housing and this level may only be achievable in upside market conditions throughout most of the Core Strategy period and late in the Core Strategy period should middle market conditions endure. This is shown in Figure BXLVII. Again viability can be eased by increasing the proportion of intermediate units at the expense of social rented units.

Brentwood - RM4			
50 units on a 0.82 hectare site (61 units per hectare density) - 24 flat(s) and 26 house(s).			
20% Affordable Housing			
AH Mix:	85-15 Social Rent:Intermediate		
	100% S106 allowance		
	Nil Grant Higher EUV sensitivity.		
	19% Gross Profit sensitivity.		
	VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2011	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2012	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2013	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2014	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2015	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2016	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2017	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2018	NOT VIABLE	NOT VIABLE	VIABLE
2019	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2020	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2021	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2022	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2023	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2024	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2025	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2026	NOT VIABLE	MARGINALLY VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure BXLVII

6.115 Appendix 10 contains more detailed information on sensitivities that we have tested.



Value Area: RM4

Density 100 dph & 120 dph

6.116 As density increases viability becomes more challenging. At the baseline position 35% affordable housing is not viable against industrial/ greenfield land values or previously developed residential land values. Against industrial land values we have assessed 10% and 20% affordable housing (all other variables as the baseline position) and the results are shown in Figures BXLVIII and BXLIX .

Brentwood - RM4			
50 units on a 0.575 hectare site (87 units per hectare density) - 40 flat(s) and 10 house(s).			
10% Affordable Housing			
AH Mix:	85-15 Social Rent:Intermediate		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2011	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2012	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2013	NOT VIABLE	NOT VIABLE	VIABLE
2014	NOT VIABLE	NOT VIABLE	VIABLE
2015	NOT VIABLE	NOT VIABLE	VIABLE
2016	NOT VIABLE	NOT VIABLE	VIABLE
2017	NOT VIABLE	NOT VIABLE	VIABLE
2018	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2019	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2020	NOT VIABLE	VIABLE	VIABLE
2021	NOT VIABLE	VIABLE	VIABLE
2022	NOT VIABLE	VIABLE	VIABLE
2023	NOT VIABLE	VIABLE	VIABLE
2024	NOT VIABLE	VIABLE	VIABLE
2025	NOT VIABLE	VIABLE	VIABLE
2026	NOT VIABLE	VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure BXLVIII



Brentwood - RM4			
50 units on a 0.575 hectare site (87 units per hectare density) - 40 flat(s) and 10 house(s).			
20% Affordable Housing			
AH Mix:	85-15 Social Rent:Intermediate		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
	VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	NOT VIABLE	VIABLE
2011	NOT VIABLE	NOT VIABLE	VIABLE
2012	NOT VIABLE	NOT VIABLE	VIABLE
2013	NOT VIABLE	NOT VIABLE	VIABLE
2014	NOT VIABLE	NOT VIABLE	VIABLE
2015	NOT VIABLE	NOT VIABLE	VIABLE
2016	NOT VIABLE	NOT VIABLE	VIABLE
2017	NOT VIABLE	NOT VIABLE	VIABLE
2018	NOT VIABLE	NOT VIABLE	VIABLE
2019	NOT VIABLE	NOT VIABLE	VIABLE
2020	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2021	NOT VIABLE	VIABLE	VIABLE
2022	NOT VIABLE	VIABLE	VIABLE
2023	NOT VIABLE	VIABLE	VIABLE
2024	NOT VIABLE	VIABLE	VIABLE
2025	NOT VIABLE	VIABLE	VIABLE
2026	NOT VIABLE	VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure BXLIX

6.117 Against previously developed residential land values we have tested as low as 10% affordable housing and the results of the 100 dph scheme are shown in Figure BL demonstrating this percentage may only be achievable in upside market conditions or later in the Core Strategy period in middle market conditions.

Brentwood - RM4			
50 units on a 0.575 hectare site (87 units per hectare density) - 40 flat(s) and 10 house(s).			
10% Affordable Housing			
AH Mix:	85-15 Social Rent:Intermediate		
	100% S106 allowance		
	Nil Grant Higher EUV sensitivity.		
	19% Gross Profit sensitivity.		
	VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2011	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2012	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2013	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2014	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2015	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2016	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2017	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2018	NOT VIABLE	NOT VIABLE	VIABLE
2019	NOT VIABLE	NOT VIABLE	VIABLE
2020	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2021	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2022	NOT VIABLE	VIABLE	VIABLE
2023	NOT VIABLE	VIABLE	VIABLE
2024	NOT VIABLE	VIABLE	VIABLE
2025	NOT VIABLE	VIABLE	VIABLE
2026	NOT VIABLE	VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure BL



Notional Site – 6 to 14 unit development at 30 dph

6.118 The ability of small sites to meet a wide range of affordable housing tenure mixes is limited and we have tested sites below the 15 unit threshold as providing either 100% social rented or 100% intermediate affordable housing. Due to the small number of affordable units these sites may generate we have used these tenure mixes as:

- It is more economical for RSLs to provide management services to units of the same tenure on the same site when they are provided in very low numbers;
- Applying the tenure mixes used in respect of larger notional development sites are likely to result in part units rather than whole units on sites of this size.

6.119 Generally these sites are very sensitive to changes in tenure and to grant coming forward. In no cases would more than the 35% target be justified especially as the majority of sites may be coming forward at values equivalent to Previously Developed residential land values. Therefore the assessment of viability against industrial/greenfield values is less important although some sites may be coming forward against that value assumption.

Value Areas: CM4 and RM4

6.120 Generally against industrial/greenfield values 30% affordable housing will be viable for the lifetime of the plan and could be achieved presently. However, against previously developed residential land values it is likely that it will not be possible to achieve more than 10% affordable housing on site or as an equivalent off site. Figure BLI shows the position on a 10 unit scheme of 10% affordable housing in CM4 where it can be seen that the scheme is presently unviable against our tests and marginally viable for the rest of the plan period.

10 units on a 0.333 hectare site (30 units per hectare density) - 0 flat(s) and 15 house(s). Brentwood - CM4			
AH Mix:	100% Social Rent		
10% Affordable Housing			
100% S106 allowance Higher AUV sensitivity. 19% Gross profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Yellow
2011	Red	Yellow	Yellow
2012	Red	Yellow	Yellow
2013	Red	Yellow	Yellow
2014	Red	Yellow	Yellow
2015	Red	Yellow	Yellow
2016	Red	Yellow	Yellow
2017	Red	Yellow	Yellow
2018	Red	Yellow	Yellow
2019	Red	Yellow	Yellow
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Red	Yellow	Green
2023	Red	Yellow	Green
2024	Red	Yellow	Yellow
2025	Red	Yellow	Yellow
2026	Red	Yellow	Yellow
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure BLI



Value Area: CM13

6.121 Schemes of 30% affordable housing are currently marginally viable against industrial/greenfield land values. Viability does however ease over time. Against previously developed residential land values it is likely that no more than 10% affordable housing could be deliverable in any of the market scenarios assessed.

Value Area: CM14 and CM15

6.122 Value areas CM14 and CM15 do show a slightly more healthy viability profile than CM13 however the outcome is in effect very similar. Against upside conditions 30% affordable housing is likely to be achievable, whilst in the middle market scenario a marginally viable outcome may be achieved in the latter half of the Plan period (viable in value area CM15). Figure BLII shows this position. Again it is likely that no more than 10% affordable housing could be deliverable in any of the market scenarios assessed at previously developed residential land values.

10 units on a 0.33 hectare site (30 units per hectare density) - 0 flat(s) and 10 house(s).			
Brentwood - CM15			
AH Mix:	100% Intermediate (25% Initial Share)		
30% Affordable Housing			
100% S106 allowance			
Lower Grant Lower Land AUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2011	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2012	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2013	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2014	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2015	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2016	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2017	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2018	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2019	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2020	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2021	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2022	MARGINALLY VIABLE	VIABLE	VIABLE
2023	MARGINALLY VIABLE	VIABLE	VIABLE
2024	MARGINALLY VIABLE	VIABLE	VIABLE
2025	MARGINALLY VIABLE	VIABLE	VIABLE
2026	MARGINALLY VIABLE	VIABLE	VIABLE
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure BLII



Notional Site - 6 to 14 unit development at 50 dph

Value Areas: CM4 and RM4

- 6.123 Against industrial/greenfield land values, 20% affordable housing has been assessed and a viable outcome can be achieved at this percentage regardless of whether affordable units are social rent or intermediate. This is assuming market conditions achieve at least the middle market scenario. This is shown in Figure BLIII.

Brentwood - CM4			
10 units on a 0.2 hectare site (50 units per hectare density) - 4 flat(s) and 6 house(s).			
AH Mix:	100% Social Rent		
20% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	VIABLE	VIABLE	VIABLE
2011	NOT VIABLE	VIABLE	VIABLE
2012	NOT VIABLE	VIABLE	VIABLE
2013	NOT VIABLE	VIABLE	VIABLE
2014	NOT VIABLE	VIABLE	VIABLE
2015	NOT VIABLE	VIABLE	VIABLE
2016	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2017	NOT VIABLE	VIABLE	VIABLE
2018	NOT VIABLE	VIABLE	VIABLE
2019	NOT VIABLE	VIABLE	VIABLE
2020	NOT VIABLE	VIABLE	VIABLE
2021	NOT VIABLE	VIABLE	VIABLE
2022	VIABLE	VIABLE	VIABLE
2023	VIABLE	VIABLE	VIABLE
2024	VIABLE	VIABLE	VIABLE
2025	VIABLE	VIABLE	VIABLE
2026	VIABLE	VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure BLIII

- 6.124 Assuming previously developed residential land values, whilst 20% affordable housing may be achieved in upside conditions (assuming all units are intermediate), in middle market conditions 10% affordable housing is more likely to be achieved.

Value Area: CM13

- 6.125 It is unlikely that 20% affordable housing (intermediate units) could be achieved unless the market performs to upside market conditions. In middle market conditions delivery of 10% on site (or as an equivalent off site contribution) is more likely to be achievable. This is based on industrial/greenfield land values. Delivery of even the equivalent of 10% affordable housing is likely to be difficult against previously developed residential land values.



Value Area: CM14 and CM15

6.126 Again, value areas CM14 and CM15 do show a slightly more healthy viability profile than CM13. Against industrial/greenfield land values it is likely that 20% affordable housing may be deliverable in upside conditions and in the latter half of the period assessed should middle market conditions prevail. This is shown in Figure BLIV. In the short term however, delivery of 10% affordable housing in middle market conditions is more likely.

Brentwood - CM15			
10 units on a 0.2 hectare site (50 units per hectare density) - 4 flat(s) and 6 house(s).			
AH Mix:	100% Intermediate (25% Initial Share)		
20% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Red
2011	Red	Red	Red
2012	Red	Yellow	Green
2013	Red	Red	Green
2014	Red	Red	Green
2015	Red	Red	Green
2016	Red	Red	Green
2017	Red	Red	Green
2018	Red	Red	Green
2019	Red	Yellow	Green
2020	Red	Green	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
	Red	=NOT VIABLE	
	Yellow	=Marginally VIABLE	
	Green	=VIABLE	

Figure BLIV

6.127 Delivery of even the equivalent of 10% affordable housing is likely to be difficult against previously developed residential land values.

Notional Site - 6 to 14 unit development at 70 dph

Value Areas: CM4 and RM4

6.128 As the density increases delivery of affordable housing becomes more challenging as has been shown previously. Thus 20% affordable housing is likely to only be achievable in upside market conditions or in the last five years or so of the period assessed in the middle market scenario. This assumes industrial/greenfield land values. Assuming previously developed residential land values, up to 10% affordable housing may be achieved in upside market conditions.

Value Area: CM13

6.129 10% affordable housing is marginally viable in upside market conditions against industrial/greenfield land values. It is unlikely delivery of any amount of affordable housing could be achieved assuming previously developed residential land values.



Value Area: CM14 and CM15

- 6.130 20% affordable housing may be achievable in upside market conditions or in the last few years of the period assessed in the middle market scenario. This assumes industrial/greenfield land values and that all affordable units are intermediate.
- 6.131 Delivery of even the equivalent of 10% affordable housing is likely to be difficult against previously developed residential land values.



7.0 Results Analysis – Epping Forest

Introduction

7.1 The general parameters and assumptions set out in Section 3 of this report have been applied to our assessment of notional sites in Epping Forest. We have used these basic assumptions and then made them specific to the Epping Forest situation by looking at a range of housing developments across the District using a residual valuation appraisal tool of the kind recommended in the Government's Delivering Affordable Housing statement. This is then used as the base for testing future cost and value scenarios using upside, middle and downside housing market growth scenarios during the Local Development Framework period. These future assessments take account of changes to property values, inflation, construction, rent and land values over the same timescale. Our assessment is based on the viability of delivering affordable housing across a range of notional sites. These notional sites were selected in consultation with the Council.

Epping Forest Summary

7.2 In Epping Forest, the post code areas used for modelling purposes were as follows:

- CM16
- CM17
- CM5/EN9
- IG7
- IG10
- RM4

7.3 In some cases, postcode areas cross local authority boundaries.

7.4 In all of these areas, the notional sites confirmed as appropriate in consultation with the Council were tested. These notional sites were as follows:

- 15 unit site (at 30 dph, 50 dph, 70 dph);
- 50 unit site (at 30 dph, 50 dph, 70 dph, 100 dph, 120 dph);
- 150 unit site (at 30 dph, 50 dph, 70 dph)

7.5 In addition sites below the 15 unit level were also tested.

7.6 In consultation with Council officers, it was agreed to test the following large strategic site in Epping Forest:

- 1500 unit scheme (at 40 dph)

7.7 In Epping Forest it is essential to establish a baseline to determine at which point land will come forward for development. In order for this to happen residual land



values must exceed existing or alternative uses of the site. We have utilised the services of an independent qualified valuer to help us assess values in the sub region partly because of the lack of transparent information on land values. In particular, the level of transactions in the District, indeed in the sub-region as a whole, has been very low. Therefore it is very difficult to make any firm assessments about the absolute value at which land will come forward. A letter from the valuer²⁸ confirms this situation and confirms the relationship of land value to Gross development Value which has been used to influence our viability testing. We are also aware of the differences between developing on previously developed land and Greenfield or other land where competing uses may be commercial or industrial. Other viability studies undertake their assessments using only the industrial land value as a test against which sites may come forward. In our view this type of assessment may be limited and therefore we have tested against three key areas.

- 7.8 The first is Valuation Office Agency (VOA) data regarding industrial land values in the areas as at July 2009, and takes into account an uplift of 20%²⁹. Secondly, we have used residential values from VOA (July 2009) in order to test what we have termed previously developed land. Finally, we are aware that VOA data does have a number of limitations. Therefore, in order to 'future proof' this assessment, and to reflect land owners differing expectations we have instead looked at the relationship between residual land values and gross development value.
- 7.9 In line with the rest of this study and as explained in detail in section 3 Levvel's methodology enables the effect of a range of delivery timescales, thus all development scenarios selected are tested assuming development start dates of the date of modelling, date of modelling plus 1 year, plus 2 years, plus 3 years, and so on until 2026.
- 7.10 The use of the Levvel methodology allows for variations in land value over time to be accounted for, again ensuring 'future proofing' of the viability study. We know that there is a minimum land value which schemes need to achieve in order to be brought forward, otherwise it becomes more economic for the site to continue in its existing (or alternative) use.
- 7.11 The Valuation Office Agency (VOA) provided data on agricultural land and property values. It is unrealistic however to assume that Greenfield development land would be traded for residential use at these rates. For example the average value of unequipped arable land per hectare with vacant possession in the East of England as at July 2009 was £14,924 while in the South East it was £19,671. It is likely that landowners on agricultural land will be looking for a considerable uplift on these values. Stakeholder engagement (see Appendix 9) has confirmed this view.
- 7.12 Thus in respect of development occurring on Greenfield or industrial sites, VOA data on industrial land values in the district³⁰ will be used as a check. In Epping Forest, this level has been assessed at £2,434,000 per hectare plus 20% uplift (totalling £2,920,800 per hectare).

²⁸ See letter date 9th February 2010 from Thornes (Appendix 8)

²⁹ See paragraph 3.21

³⁰ See Paragraph 3.21



- 7.13 In respect of development occurring on previously developed residential land, (VOA) data on residential land prices have been used as the check and inflated by 20% in the same manner as for industrial land, that is, £4,500,000 per hectare plus 20% uplift (totalling £5,400,000 per hectare).
- 7.14 Both of these values will be linked to the future growth assessments as outlined in Appendix 3 to this report to reflect the relationship between land and property values and ensure effective 'future proofing' of the assessment.
- 7.15 Whilst we will use VOA data as outlined above as one test of viability, we recognise that VOA data can be as much as six months out of date and not available at a sufficiently local level to enable local variations in land values to be assessed. Furthermore, the imposition of affordable housing planning policy will necessarily reduce land values in certain schemes. Therefore it is not enough to assess the viability of a particular scheme purely against a fixed value. We have therefore developed a methodology that assesses how much landowners have been willing to accept for their land in the past, and expressed it in terms of the ratio between Gross Development Value and Residual Land Value (GDV:RLV). That is to say how much of the revenue from a scheme can be used to pay for the land. This allows for variations due to locality to be accounted for. It is our belief that this more readily accounts for local variations in land values and represents a more robust and credible evidence base.
- 7.16 The ratio between RLV and GDV has thus been assessed over the period 2001 to 2009 using VOA data. The effect can be seen that in a rising and somewhat overheated market, landowner expectations rise and the price that developers are willing to pay also increases (often based on future expectations of property values). However, in a falling and "normal" market landowner expectations fall to more "reasonable" levels. Thus the relationship between GDV and RLV as a check provides a further degree of future proofing as if housing market values increase, the land value will also increase. Conversely, if values fall, then land value can also be expected to fall.
- 7.17 We have also taken the advice of a valuer who has confirmed that our approach is a reasonable one. The levels of RLV to GDV have been set in accordance with the valuers assessment³¹. In respect of sites of 10 units and less, a figure of 28% to 35% of Gross Development Value depending on density (see paragraph 3.20 -3.24) has been used as a test for the level at which the Residual Land Value may need to reach in order to incentivise the landowner sufficiently to bring forward his parcel of land. This reflects our assessment of the relative value of small sites. For lower density sites in general, a level of 30% RLV to GDV has been used, for mid density schemes 28% has been used and for high density developments the 25% level of RLV to GDV has been used. In respect of large scale strategic sites (1500 units and above) a figure of 20% of Gross Development Value (GDV) as the level at which the Residual Land Value may need to reach has been used as a test.
- 7.18 Our assessment for viability involves a cross reference of the absolute land value against alternative use value (PDL or industrial) and the RLV to GDV position. Within each test we have assumed a level of 'tolerance' so that a scheme that falls

³¹ See Thornes letter dated 9th February 2010 (Appendix 8)



within 10% either way of the industrial or PDL land value is deemed to be marginally viable and a scheme that falls within 20% plus or minus of the RLV to GDV test is also deemed to be marginally viable against that test. The two tests are then assessed in parallel rather than sequentially so that a scheme that is not viable against the absolute land value will be deemed not viable even if it achieves viability on the RLV to GDV test.

- 7.19 Using these tests of viability, it is possible to inform a policy position that has flexibility and is relevant for the life of the plan to ensure deliverability.
- 7.20 Where shown the results tables set out the three market scenarios, downside, middle and upside and then record whether the notional schemes assessed are likely to be viable, marginal or not viable. The dates in the left hand column refer to the start dates for development.

General Development Sites (15 to 150 units)

- 7.21 This section summarises the results for each value area in Epping Forest. We look at the baseline position for each density tested and then we look at sensitivities and their effect on viability. For Epping Forest, we report on a baseline affordable housing target of 35% as this relates to the regional target and then for each value area we report on the realistic target above or below that baseline. The baseline position assumes nil public subsidy, 19% gross profit and a 70:30 split of social rented to intermediate affordable housing. Section 106 contributions are in line with 100% of the baseline level as set out in Appendix 6 and section 3 of this main report.
- 7.22 More detailed sensitivity testing regarding Epping Forest is contained in the Appendices.

Value Area: CM16

Density 30 dph

- 7.23 Testing at the baseline position (35% affordable housing) demonstrated a current marginally viable outcome against industrial/greenfield land values on the 50 unit scheme and a viable outcome on the 15 unit scheme due mainly to the higher gross to net developable area for the larger unit schemes. For example, the 15 unit development currently achieves a residual land value of circa £3.7 million per hectare. This value is not sufficient to clear the previously developed residential value but is sufficient against industrial/greenfield. For these reasons we have tested a target below 35% for previously developed residential land values.
- 7.24 Figure EPI shows the position for 15 units with 35% affordable housing (all other parameters in line with the baseline position). Figure EPII shows the position on the 50 unit scheme and the same assumptions. Both of these assume industrial/greenfield alternative land values. We have undertaken further sensitivity testing at 40% affordable housing (all other assumptions as the baseline position) and as Figure EPIII demonstrates this percentage may be achievable over the life of the Core Strategy as long as downside market conditions are not experienced.



Epping Forest CM16			
15 units on a 0.5 hectare site (30 units per hectare density) - 0 flat(s) and 15 house(s).			
AH Mix:	70:30 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	VIABLE	VIABLE	VIABLE
2011	VIABLE	VIABLE	VIABLE
2012	VIABLE	VIABLE	VIABLE
2013	VIABLE	VIABLE	VIABLE
2014	VIABLE	VIABLE	VIABLE
2015	VIABLE	VIABLE	VIABLE
2016	VIABLE	VIABLE	VIABLE
2017	NOT VIABLE	VIABLE	VIABLE
2018	VIABLE	VIABLE	VIABLE
2019	VIABLE	VIABLE	VIABLE
2020	VIABLE	VIABLE	VIABLE
2021	VIABLE	VIABLE	VIABLE
2022	VIABLE	VIABLE	VIABLE
2023	VIABLE	VIABLE	VIABLE
2024	VIABLE	VIABLE	VIABLE
2025	VIABLE	VIABLE	VIABLE
2026	VIABLE	VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure EPI

Epping Forest CM16			
50 units on a 1.83 hectare site (27 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix:	70:30 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2011	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2012	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2013	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2014	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2015	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2016	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2017	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2018	NOT VIABLE	VIABLE	VIABLE
2019	NOT VIABLE	VIABLE	VIABLE
2020	MARGINALLY VIABLE	VIABLE	VIABLE
2021	MARGINALLY VIABLE	VIABLE	VIABLE
2022	MARGINALLY VIABLE	VIABLE	VIABLE
2023	MARGINALLY VIABLE	VIABLE	VIABLE
2024	MARGINALLY VIABLE	VIABLE	VIABLE
2025	MARGINALLY VIABLE	VIABLE	VIABLE
2026	MARGINALLY VIABLE	VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure EPII



Epping Forest CM16			
15 units on a 0.5 hectare site (30 units per hectare density) - 0 flat(s) and 15 house(s).			
40% Affordable Housing			
AH Mix:	70:30 Social Rent:Intermediate		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Green	Green
2020	Red	Green	Green
2021	Yellow	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
	Red		
	Yellow		
	Green		

Figure EPIII

7.25 Against previously developed residential land values we have tested with baseline assumptions down to 10% affordable housing and on the 50 unit scheme this level is only marginally viable in upside economic conditions and for limited periods later in the Core Strategy period, in middle market conditions. This is shown in Figure EPIV.

Epping Forest CM16			
50 units on a 1.83 hectare site (27 units per hectare density) - 0 flat(s) and 50 house(s).			
10% Affordable Housing			
AH Mix:	70:30 Social Rent/Intermediate		
	100% S106 allowance		
	Nil Grant Higher EUV sensitivity.		
	19% Gross Profit sensitivity.		
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Yellow
2017	Red	Red	Yellow
2018	Red	Red	Yellow
2019	Red	Red	Yellow
2020	Red	Yellow	Yellow
2021	Red	Yellow	Yellow
2022	Red	Yellow	Yellow
2023	Red	Yellow	Yellow
2024	Red	Yellow	Yellow
2025	Red	Yellow	Yellow
2026	Red	Yellow	Yellow
	Red		
	Yellow		
	Green		

Figure EPIV

7.26 Among our sensitivity testing we have looked at the effect of affordable housing tenure mix and this has shown that increasing the proportion of social rented units at the expense of intermediate reduces viability. See appendix 11 for more detailed information on sensitivities that we have tested.



Value Area: CM16

Density 50 dph

- 7.27 At this density testing at the baseline position (35% affordable housing) demonstrated a viable outcome against industrial/greenfield land values. For example, the 50 unit development achieves a residual land value of circa £3.69 million per hectare. Again, this value is not sufficient to clear the previously developed residential value and for these reasons we have tested below 35% for previously developed residential land values.
- 7.28 We have tested 40% affordable housing against industrial/greenfield land values and Figure EPV shows this position (all other parameters in line with the baseline position). Further sensitivity testing at 50% affordable housing found a viable outcome at this percentage could be achieved in upside market conditions or later in the Core Strategy period in middle market conditions, housing (again, all other parameters in line with the baseline position).

Epping Forest CM16			
50 units on a 1.1 hectare site (45 units per hectare density) - 0 flat(s) and 50 house(s).			
40% Affordable Housing			
AH Mix:	70:30 Social Rent:Intermediate		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	VIABLE	VIABLE
2011	NOT VIABLE	VIABLE	VIABLE
2012	NOT VIABLE	VIABLE	VIABLE
2013	NOT VIABLE	VIABLE	VIABLE
2014	NOT VIABLE	VIABLE	VIABLE
2015	NOT VIABLE	VIABLE	VIABLE
2016	NOT VIABLE	VIABLE	VIABLE
2017	NOT VIABLE	VIABLE	VIABLE
2018	NOT VIABLE	VIABLE	VIABLE
2019	NOT VIABLE	VIABLE	VIABLE
2020	NOT VIABLE	VIABLE	VIABLE
2021	MARGINALLY VIABLE	VIABLE	VIABLE
2022	MARGINALLY VIABLE	VIABLE	VIABLE
2023	MARGINALLY VIABLE	VIABLE	VIABLE
2024	MARGINALLY VIABLE	VIABLE	VIABLE
2025	MARGINALLY VIABLE	VIABLE	VIABLE
2026	MARGINALLY VIABLE	VIABLE	VIABLE
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EPV

- 7.29 Against previously developed residential land values we have tested with baseline assumptions down to 20% affordable housing and the viability position is shown in Figure EPVI.



Epping Forest CM16			
15 units on a 0.3 hectare site (50 units per hectare density) - 0 flat(s) and 15 house(s).			
20% Affordable Housing			
AH Mix:	70:30 Social Rent/Intermediate		
	100% S106 allowance		
	Nil Grant Higher EUV sensitivity.		
	19% Gross Profit sensitivity.		
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Yellow	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EPVI

7.30 See appendix 11 for more detailed information on sensitivities that we have tested.

Value Area: CM16

Density 70 dph

7.31 At this density testing at the baseline position (35% affordable housing) demonstrated an unviable outcome against industrial/greenfield land values and previously developed residential land values. For these reasons we have tested a target below 35%.

7.32 Figure EPVII shows the position of 35% affordable housing on a 50 unit development and demonstrates that in the longer term, and/or in upside market conditions, this percentage may be achievable against industrial/greenfield land values. We have undertaken further sensitivity testing to assess what percentage of affordable housing may be achieved in the short term in middle market conditions and the testing indicates 20-25% affordable housing is the likely maximum at the baseline position.



Epping Forest CM16			
50 units on a 0.714 hectare site (70 units per hectare density) - 24 flat(s) and 26 house(s).			
AH Mix:	70:30 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Green
2011	Red	Red	Green
2012	Red	Red	Green
2013	Red	Red	Green
2014	Red	Red	Green
2015	Red	Red	Green
2016	Red	Red	Green
2017	Red	Red	Yellow
2018	Red	Red	Green
2019	Red	Red	Green
2020	Red	Yellow	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Red	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure EPVII

7.33 Against previously developed residential land values we have tested with baseline assumptions down to 10% affordable housing and this level may only be achievable in upside market conditions throughout most of the Core Strategy period and very late in the Core Strategy period should middle market conditions endure. This is shown in Figure EPVIII.

Epping Forest CM16			
50 units on a 0.714 hectare site (70 units per hectare density) - 24 flat(s) and 26 house(s).			
AH Mix:	60:40 Social Rent/Intermediate		
10% Affordable Housing			
100% S106 allowance			
Nil Grant Higher EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Yellow
2017	Red	Red	Yellow
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Red	Yellow	Green
2023	Red	Yellow	Green
2024	Red	Yellow	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure EPVIII

7.34 See appendix 11 for more detailed information on sensitivities that we have tested.



Value Area: CM16

Density 100 dph & 120 dph

7.35 35% affordable housing at the baseline position is not viable against industrial/greenfield land values or previously developed residential land values. Figure EPIX shows the viability position of 35% affordable housing against industrial/greenfield land values on the 100 dph schemes and this percentage may be achieved in upside market conditions, or later in the Core Strategy in middle market conditions. As density increases viability worsens and this percentage is only achievable on the 120 dph scheme in upside market conditions only and in the latter half of the Core Strategy.

Epping Forest CM16			
50 units on a 0.5 hectare site (100 units per hectare density) - 40 flat(s) and 10 house(s).			
AH Mix:	70:30 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Green
2012	Red	Red	Green
2013	Red	Red	Green
2014	Red	Red	Green
2015	Red	Red	Green
2016	Red	Red	Yellow
2017	Red	Red	Green
2018	Red	Red	Green
2019	Red	Red	Green
2020	Red	Yellow	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Red	Green	Green
	Red		=NOT VIABLE
	Yellow		=MARGINALLY VIABLE
	Green		=VIABLE

Figure EPIX

7.36 Against previously developed residential land values we have tested at the baseline position down to 10% affordable housing and the results are shown in Figure EPX, again it is more challenging to achieve this percentage at the baseline position on the 120 dph scheme.



Epping Forest CM16			
50 units on a 0.5 hectare site (100 units per hectare density) - 40 flat(s) and 10 house(s).			
10% Affordable Housing			
AH Mix:	60:40 Social Rent/Intermediate		
	100% S106 allowance		
	Nil Grant Higher EUV sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	DOWNSIDE	VIABILITY MIDDLE	UPSIDE
2010	Red	Red	Green
2011	Red	Red	Green
2012	Red	Red	Green
2013	Red	Red	Green
2014	Red	Red	Green
2015	Red	Red	Green
2016	Red	Red	Green
2017	Red	Red	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Green	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Red	Green	Green
	Red		
	Yellow		
	Green		

Figure EPX

7.37 Appendix 11 contains more detailed information on sensitivities that we have tested.

Value Area: CM17

Density 30 dph

7.38 Assuming the baseline position (35% affordable housing) demonstrated an unviable position against industrial/greenfield and previously developed residential land values and we have therefore tested at percentages below this.

7.39 Against industrial/greenfield land values we have tested down to 10% affordable housing and this may be achievable in upside market conditions or later in the Core Strategy period in upside market conditions as shown in Figure EPXI. Adding grant and/or increasing the proportion of intermediate units improves viability at this percentage. It should also be noted that on the smaller 15 unit development we have undertaken sensitivity testing at the baseline position down to 14% affordable housing and delivery at this percentage is likely to be achievable in upside market conditions and later in the Core Strategy period in middle market conditions as shown in Figure EPXII.



Epping Forest CM17			
50 units on a 1.83 hectare site (27 units per hectare density) - 0 flat(s) and 50 house(s).			
10% Affordable Housing			
AH Mix:	70:30 Social Rent:Intermediate		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
	VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Yellow
2017	Red	Red	Yellow
2018	Red	Red	Yellow
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Red	Yellow	Green
2023	Red	Yellow	Green
2024	Red	Yellow	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Yellow
Red	=NOT VIABLE		
Yellow	=MARGINALLY VIABLE		
Green	=VIABLE		

Figure EPXI

Epping Forest CM17			
15 units on a 0.5 hectare site (30 units per hectare density) - 0 flat(s) and 15 house(s).			
14% Affordable Housing			
AH Mix:	70:30 Social Rent:Intermediate		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
	VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Red
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Red	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Yellow	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Red	Yellow	Green
Red	=NOT VIABLE		
Yellow	=MARGINALLY VIABLE		
Green	=VIABLE		

Figure EPXII

- 7.40 Against previously developed residential values we have also tested as low as 10% affordable housing and the results suggest it would be very difficult to achieve this percentage over the Core Strategy period, even with the addition of public subsidy.
- 7.41 See appendix 11 for more detailed information on sensitivities that we have tested.



Value Area: CM17

Density 50 dph

- 7.42 Assuming the baseline position (35% affordable housing) demonstrated an unviable position against industrial/greenfield and previously developed residential land values and we have therefore tested at percentages below this.
- 7.43 Against industrial/greenfield land values we have tested at the baseline position down to 20% affordable housing and the results of the 50 unit scheme are shown in Figure EPXIII and the 15 unit scheme in Figure EPXIV. Sensitivity testing has demonstrated that adding grant and/or increasing the proportion of intermediate units eases viability at this percentage.

Epping Forest CM17			
50 units on a 1.1 hectare site (45 units per hectare density) - 0 flat(s) and 50 house(s).			
20% Affordable Housing			
AH Mix:	70:30 Social Rent:Intermediate		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Yellow
2017	Red	Red	Yellow
2018	Red	Red	Yellow
2019	Red	Red	Green
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Red	Yellow	Green
2023	Red	Yellow	Green
2024	Red	Yellow	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=Marginally VIABLE		
	=VIABLE		

Figure EPXIII



Epping Forest CM17			
15 units on a 0.3 hectare site (50 units per hectare density) - 0 flat(s) and 15 house(s).			
20% Affordable Housing			
AH Mix:	70:30 Social Rent:Intermediate		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Red
2011	Red	Red	Green
2012	Red	Yellow	Green
2013	Red	Red	Green
2014	Red	Red	Green
2015	Red	Red	Green
2016	Red	Red	Green
2017	Red	Red	Green
2018	Red	Red	Green
2019	Red	Yellow	Green
2020	Red	Red	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Red	Green	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EPXIV

- 7.44 Against previously developed residential values we have also tested as low as 10% affordable housing and the results suggest it would be very difficult to achieve this percentage over the Core Strategy period, even with the addition of public subsidy.
- 7.45 See appendix 11 for more detailed information on sensitivities that we have tested.

Value Area: CM17

Density 70 dph

- 7.46 We have tested with baseline assumptions down to 10% affordable housing and against industrial/greenfield land values this level may only be achievable in upside market conditions or late in the Core Strategy period in middle market conditions. This position is shown in Figure EPXV and also assumes grant at normal levels.



Epping Forest CM17			
50 units on a 0.714 hectare site (70 units per hectare density) - 24 flat(s) and 26 house(s).			
10% Affordable Housing			
AH Mix:	70:30 Social Rent:Intermediate		
	100% S106 allowance		
	Normal Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Red
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Red
2017	Red	Red	Yellow
2018	Red	Red	Yellow
2019	Red	Red	Green
2020	Red	Red	Green
2021	Red	Yellow	Green
2022	Red	Yellow	Green
2023	Red	Yellow	Green
2024	Red	Yellow	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Green
	Red	=NOT VIABLE	
	Yellow	=Marginally VIABLE	
	Green	=VIABLE	

Figure EPXV

7.47 Achieving a viable position with any amount of affordable housing against previously developed residential land values on schemes of this density will be very difficult to achieve, even with grant and/or considerations of tenure and S106 requirements.

Value Area: CM17

Density 100 dph & 120 dph

7.48 The ability to achieve affordable housing on schemes of this density is extremely challenging and it will be very difficult to achieve a viable position with 10% affordable housing against industrial/greenfield unless upside conditions prevail. Against previously developed residential land values it will be very challenging to deliver 10% affordable housing regardless of market conditions. The exception may be where flatted developments attract executive style luxury apartments and consequently achieve higher sales values than we have tested. For example, where flats are sold for up to, say, £300,000 then an element of affordable housing may be afforded.

Value Area: CM5/EN9

Density 30 dph

7.49 Assuming the baseline position (35% affordable housing) at this density demonstrated a currently unviable position against industrial/greenfield land values on the 50 unit scheme and a marginally viable position on the 15 unit scheme (achieving a residual land value per hectare of circa £2.85 million). This is shown in Figure EPXVI.



Epping Forest EN9/CM5			
15 units on a 0.5 hectare site (30 units per hectare density) - 0 flat(s) and 15 house(s).			
AH Mix:	70:30 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Yellow	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
Red	=NOT VIABLE		
Yellow	=MARGINALLY VIABLE		
Green	=VIABLE		

Figure EPXVI

7.50 We have tested at the baseline position down to 25% affordable housing on the 50 unit scheme against industrial/greenfield land values and the results are shown in Figure EPXVII. Adding grant and/or increasing the proportion of intermediate units in the affordable housing mix eases viability in middle market conditions at this percentage.

Epping Forest EN9/CM5			
50 units on a 1.83 hectare site (27 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix:	70:30 Social Rent:Intermediate		
25% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Green
2011	Red	Red	Yellow
2012	Red	Yellow	Yellow
2013	Red	Yellow	Yellow
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Red	Yellow	Green
2024	Red	Yellow	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Green
Red	=NOT VIABLE		
Yellow	=MARGINALLY VIABLE		
Green	=VIABLE		

Figure EPXVII



7.51 Against previously developed residential values the baseline position is not viable and we have tested as low as 10% affordable housing. As is shown in Figure EPXVIII, a marginally viable outcome is only likely in upside market conditions.

Epping Forest EN9/CM5			
15 units on a 0.5 hectare site (30 units per hectare density) - 0 flat(s) and 15 house(s).			
40% Affordable Housing			
AH Mix:	50:50 Social Rent:Intermediate		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2011	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2012	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2013	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2014	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2015	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2016	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2017	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2018	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2019	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2020	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2021	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2022	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2023	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2024	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2025	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2026	NOT VIABLE	MARGINALLY VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure EPXVIII

7.52 Appendix 11 contains more detailed information on sensitivities that we have tested.

Value Area: CM5/EN9

Density 50 dph

7.53 Assuming the baseline position (35% affordable housing) at this density demonstrated a currently unviable position against industrial/greenfield land values on the 50 unit scheme and a marginally viable position on the 15 unit scheme (achieving a residual land value per hectare of circa £2.65 million).

7.54 Figure EPXIX shows the viability position of 35% affordable housing on the 50 unit scheme and demonstrates that at the baseline position delivery at this percentage is achievable in upside market conditions and later in the Core Strategy period in middle market conditions. Sensitivity testing found that grant at normal levels is sufficient to achieve a marginally viable position in the early years of the Core Strategy should middle market conditions endure. Our sensitivity testing has shown that an alternative way to ease viability in the early years of the Core Strategy may be to provide higher numbers of intermediate affordable units and/or reduce S106 requirements to 50% of the baseline level.



Epping Forest EN9/CM5			
50 units on a 1.83 hectare site (27 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix:	70:30 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Yellow
2017	Red	Red	Yellow
2018	Red	Red	Yellow
2019	Red	Red	Yellow
2020	Red	Yellow	Yellow
2021	Red	Yellow	Green
2022	Red	Yellow	Green
2023	Red	Yellow	Yellow
2024	Red	Yellow	Yellow
2025	Red	Yellow	Yellow
2026	Red	Yellow	Yellow
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure EPXIX

- 7.55 Against previously developed residential values we have tested down to 10% affordable housing at the baseline position and a marginally viable outcome may be achieved in upside market conditions only.
- 7.56 Appendix 11 contains more detailed information on sensitivities that we have tested.

Value Area: CM5/EN9

Density 70 dph

- 7.57 We have tested with baseline assumptions down to 10% affordable housing on the 50 unit scheme and against industrial/greenfield land values this level is only be achievable in upside market conditions or later late in the Core Strategy period in middle market conditions. This position is shown in Figure EPXX. On the smaller 15 unit scheme we have tested down to 20% affordable housing and the viability position can be seen in Figure EPXXI.



Epping Forest EN9/CM5			
50 units on a 0.714 hectare site (70 units per hectare density) - 24 flat(s) and 26 house(s).			
10% Affordable Housing			
AH Mix:	70:30 Social Rent:Intermediate		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Green
2011	Red	Red	Green
2012	Red	Red	Green
2013	Red	Red	Green
2014	Red	Red	Green
2015	Red	Red	Green
2016	Red	Red	Green
2017	Red	Red	Green
2018	Red	Red	Green
2019	Red	Red	Green
2020	Red	Yellow	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Red	Green	Green
Red	=NOT VIABLE		
Yellow	=MARGINALLY VIABLE		
Green	=VIABLE		

Figure EPXX

Epping Forest EN9/CM5			
15 units on a 0.214 hectare site (70 units per hectare density) - 10 flat(s) and 5 house(s).			
20% Affordable Housing			
AH Mix:	70:30 Social Rent:Intermediate		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Yellow	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Red	Green
2014	Red	Red	Green
2015	Red	Red	Green
2016	Red	Red	Green
2017	Red	Red	Green
2018	Red	Red	Green
2019	Red	Red	Green
2020	Red	Yellow	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Red	Green	Green
Red	=NOT VIABLE		
Yellow	=MARGINALLY VIABLE		
Green	=VIABLE		

Figure EPXXI

7.58 Achieving a viable position with 10% affordable housing against previously developed residential land values on schemes of this density will be very difficult to achieve, even with grant and/or considerations of tenure and S106 requirements.



Value Area: CM5/EN9

Density 100 dph & 120 dph

7.59 At these densities the ability to achieve affordable housing on schemes of this density is extremely challenging. Against industrial/greenfield land values we have tested at the baseline position down to 10% affordable housing and the results are shown in Figure EPXXII demonstrating delivery at this percentage may only be achievable in upside market conditions or later in the Core Strategy period.

Epping Forest CM17			
50 units on a 0.5 hectare site (100 units per hectare density) - 40 flat(s) and 10 house(s).			
10% Affordable Housing			
AH Mix:	60:40 Social Rent:Intermediate		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Green
2012	Red	Red	Green
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Yellow
2017	Red	Red	Yellow
2018	Red	Red	Green
2019	Red	Red	Green
2020	Red	Red	Green
2021	Red	Yellow	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Red	Green	Green
	Red		
	Yellow		
	Green		

Figure EPXXII

7.60 Sensitivity testing has shown that it will be very difficult to achieve viability with any affordable housing against previously developed residential land values. The only exception to this may be where flatted developments achieve higher sales values than we have tested.

Value Area: IG7

Density 30 dph

7.61 Assuming the baseline position (35% affordable housing) a viable outcome is achieved against industrial/greenfield land values and an unviable is achieved against previously developed residential land values. For these reasons we have tested at higher percentages against industrial/greenfield land values and lower percentages against previously developed residential land values.

7.62 Figure EPXXIII shows the viability of 35% affordable housing achieving a residual land value currently of circa £3.25 million in middle market conditions. Figure EPXXIV shows the position at 40% affordable housing (all other variables as the baseline position) demonstrating a viable outcome in upside market conditions and later in the Core Strategy period in middle market conditions. This is against industrial/greenfield land values.



Epping Forest IG7			
50 units on a 1.83 hectare site (27 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix:	70:30 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	VIABLE	VIABLE
2011	NOT VIABLE	VIABLE	VIABLE
2012	NOT VIABLE	VIABLE	VIABLE
2013	NOT VIABLE	VIABLE	VIABLE
2014	MARGINALLY VIABLE	VIABLE	VIABLE
2015	NOT VIABLE	VIABLE	VIABLE
2016	NOT VIABLE	VIABLE	VIABLE
2017	NOT VIABLE	VIABLE	VIABLE
2018	MARGINALLY VIABLE	VIABLE	VIABLE
2019	MARGINALLY VIABLE	VIABLE	VIABLE
2020	MARGINALLY VIABLE	VIABLE	VIABLE
2021	VIABLE	VIABLE	VIABLE
2022	VIABLE	VIABLE	VIABLE
2023	VIABLE	VIABLE	VIABLE
2024	MARGINALLY VIABLE	VIABLE	VIABLE
2025	MARGINALLY VIABLE	VIABLE	VIABLE
2026	MARGINALLY VIABLE	VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure EPXXIII

Epping Forest IG7			
50 units on a 1.83 hectare site (27 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix:	70:30 Social Rent:Intermediate		
40% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2011	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2012	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2013	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2014	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2015	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2016	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2017	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2018	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2019	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2020	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2021	MARGINALLY VIABLE	VIABLE	VIABLE
2022	MARGINALLY VIABLE	VIABLE	VIABLE
2023	MARGINALLY VIABLE	VIABLE	VIABLE
2024	MARGINALLY VIABLE	VIABLE	VIABLE
2025	MARGINALLY VIABLE	VIABLE	VIABLE
2026	MARGINALLY VIABLE	VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure EPXXIV

7.63 Against previously developed residential land values, testing at the baseline position has demonstrated a marginally viable outcome in upside market conditions only at 35% affordable housing on the smaller 15 unit scheme. On the larger 50 unit scheme we have tested down to 10% affordable housing and at this percentage, a marginally viable outcome may be achievable in upside market conditions only.

7.64 See appendix 11 for more detailed information on sensitivities that we have tested.



Value Area: IG7

Density 50 dph

7.65 Testing at the baseline position (35% affordable housing) delivers a viable outcome against greenfield/industrial land values on the 15 unit scheme and a marginally viable outcome on the 50 unit scheme. Figure EPXXV shows the viability position for the 50 unit development. We have undertaken further testing against industrial/greenfield land values at 40% affordable housing and again a viable position at this percentage can be achieved throughout the Core Strategy period on the 15 unit development assuming market conditions achieve at least middle market conditions. 40% affordable housing may be achievable on the 50 unit development in upside market conditions or later in the Core Strategy period in middle market conditions as demonstrated in Figure EPXXVI.

Epping Forest IG7			
50 units on a 1.1 hectare site (45 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix:	70:30 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
	VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2011	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2012	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2013	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2014	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2015	NOT VIABLE	NOT VIABLE	VIABLE
2016	NOT VIABLE	NOT VIABLE	VIABLE
2017	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2018	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2019	NOT VIABLE	VIABLE	VIABLE
2020	NOT VIABLE	VIABLE	VIABLE
2021	NOT VIABLE	VIABLE	VIABLE
2022	MARGINALLY VIABLE	VIABLE	VIABLE
2023	MARGINALLY VIABLE	VIABLE	VIABLE
2024	MARGINALLY VIABLE	VIABLE	VIABLE
2025	MARGINALLY VIABLE	VIABLE	VIABLE
2026	MARGINALLY VIABLE	VIABLE	VIABLE
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EPXXV



Epping Forest IG7			
50 units on a 1.1 hectare site (45 units per hectare density) - 0 flat(s) and 50 house(s).			
40% Affordable Housing			
AH Mix:	70:30 Social Rent:Intermediate		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Green
2011	Red	Red	Green
2012	Red	Red	Green
2013	Red	Red	Green
2014	Red	Red	Green
2015	Red	Red	Green
2016	Red	Red	Green
2017	Red	Red	Green
2018	Red	Red	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Green
Red	=NOT VIABLE		
Yellow	=MARGINALLY VIABLE		
Green	=VIABLE		

Figure EPXXVI

7.66 Against previously developed residential land values at the baseline position, 35% affordable housing is marginally viable in upside market conditions only on the 15 unit scheme. We have tested down to 10% affordable housing (all other variables as the baseline position) on the 50 unit scheme and this position is shown in Figure EPXXVII. The addition of public subsidy at normal level makes a very marginal improvement to scheme viability.

Epping Forest IG7			
50 units on a 1.1 hectare site (45 units per hectare density) - 0 flat(s) and 50 house(s).			
10% Affordable Housing			
AH Mix:	70:30 Social Rent/Intermediate		
	100% S106 allowance		
	Nil Grant Higher EUV sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Yellow
2017	Red	Red	Yellow
2018	Red	Red	Yellow
2019	Red	Yellow	Yellow
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Red	Yellow	Green
2023	Red	Yellow	Yellow
2024	Red	Yellow	Yellow
2025	Red	Yellow	Yellow
2026	Red	Yellow	Yellow
Red	=NOT VIABLE		
Yellow	=MARGINALLY VIABLE		
Green	=VIABLE		

Figure EPXXVII

7.67 See appendix 11 for more detailed information on sensitivities that we have tested.



Value Area: IG7

Density 70 dph

7.68 At this density, 35% affordable housing is not viable currently against industrial/greenfield or previously developed residential land values. On the smaller 15 unit development this percentage is likely however to be achievable against industrial/greenfield land values if market conditions perform to the upside and later in the Core Strategy in middle market conditions. This is shown in Figure EPXXVIII. On the larger 50 unit notional site we have tested against industrial/greenfield land values as low as 20% affordable housing (all other variables as the baseline position) and the viability results are shown in Figure EPXXIX.

Epping Forest IG7			
15 units on a 0.214 hectare site (70 units per hectare density) - 10 flat(s) and 5 house(s).			
AH Mix:	70:30 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Red
2011	Red	Red	Red
2012	Red	Red	Green
2013	Red	Red	Green
2014	Red	Red	Green
2015	Red	Red	Green
2016	Red	Red	Green
2017	Red	Red	Green
2018	Red	Red	Green
2019	Red	Red	Green
2020	Red	Yellow	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Red	Green	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EPXXVIII



Epping Forest EN9/CM5			
50 units on a 0.714 hectare site (70 units per hectare density) - 24 flat(s) and 26 house(s).			
20% Affordable Housing			
AH Mix:	70:30 Social Rent:Intermediate		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
	VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	NOT VIABLE	VIABLE
2011	NOT VIABLE	NOT VIABLE	VIABLE
2012	NOT VIABLE	NOT VIABLE	VIABLE
2013	NOT VIABLE	NOT VIABLE	VIABLE
2014	NOT VIABLE	NOT VIABLE	VIABLE
2015	NOT VIABLE	NOT VIABLE	VIABLE
2016	NOT VIABLE	NOT VIABLE	VIABLE
2017	NOT VIABLE	NOT VIABLE	VIABLE
2018	NOT VIABLE	NOT VIABLE	VIABLE
2019	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2020	NOT VIABLE	VIABLE	VIABLE
2021	NOT VIABLE	VIABLE	VIABLE
2022	NOT VIABLE	VIABLE	VIABLE
2023	NOT VIABLE	VIABLE	VIABLE
2024	NOT VIABLE	VIABLE	VIABLE
2025	MARGINALLY VIABLE	VIABLE	VIABLE
2026	MARGINALLY VIABLE	VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure EPXXIX

7.69 Achieving a viable position with 10% affordable housing against previously developed residential land values on schemes of this density will be very difficult to achieve, and 10% affordable housing is likely only to be deliverable in upside market conditions.

Value Area: IG7

Density 100 dph & 120 dph

7.70 Values for flats across the District are highest in this value area. Nevertheless achieving 35% affordable housing is only likely to be achievable against industrial/greenfield land values in upside market conditions or later in the Core Strategy period in middle market conditions. Figure EPXXX shows this baseline position for the 100 dph scheme. Sensitivity testing has demonstrated that in the early half of the Core Strategy period in middle market conditions 10-20% affordable housing (all other variables as the baseline position) is more likely to be achievable.



Epping Forest IG7			
50 units on a 0.5 hectare site (100 units per hectare density) - 40 flat(s) and 10 house(s).			
AH Mix:	70:30 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Green
2011	Red	Red	Green
2012	Red	Red	Green
2013	Red	Red	Green
2014	Red	Red	Green
2015	Red	Red	Green
2016	Red	Red	Yellow
2017	Red	Red	Green
2018	Red	Red	Green
2019	Red	Red	Green
2020	Red	Yellow	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Red	Green	Green
	Red		
	Yellow		
	Green		

Figure EPXXX

7.71 Against previously developed residential we have tested down to 10% affordable housing (all other variables as the baseline position) and the viability results of the 120 dph scheme are shown in Figure EPXXXI.

Epping Forest IG7			
50 units on a 0.417 hectare site (120 units per hectare density) - 50 flat(s) and 0 house(s).			
AH Mix:	70:30 Social Rent/Intermediate		
10% Affordable Housing			
100% S106 allowance			
Nil Grant Higher EUV sensitivity.			
19% Gross Profit sensitivity.			
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Green
2011	Red	Red	Green
2012	Red	Red	Green
2013	Red	Red	Green
2014	Red	Red	Green
2015	Red	Red	Green
2016	Red	Red	Green
2017	Red	Red	Green
2018	Red	Red	Green
2019	Red	Red	Green
2020	Red	Yellow	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Red	Green	Green
	Red		
	Yellow		
	Green		

Figure EPXXI

7.72 See appendix 11 for more detailed information on sensitivities that we have tested.



Value Area: IG10

Density 30 dph

- 7.73 Assuming the baseline position (35% affordable housing) a viable outcome is achieved against industrial/greenfield land values. For these reasons we have tested at higher percentages against industrial/greenfield land values.
- 7.74 Figure EPXXXII shows the viability position of 40% affordable housing (all other variables as the baseline position) demonstrating a viable outcome for the majority of the Core Strategy should the market perform to at least middle conditions. Further sensitivity testing has been undertaken at 47% affordable housing achieving viable outcomes on the 15 unit scheme in middle and upside market conditions.

Epping Forest IG10			
50 units on a 1.83 hectare site (27 units per hectare density) - 0 flat(s) and 50 house(s).			
40% Affordable Housing			
AH Mix:	70:30 Social Rent:Intermediate		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Yellow	Yellow	Green
2020	Yellow	Yellow	Green
2021	Yellow	Yellow	Green
2022	Yellow	Yellow	Green
2023	Yellow	Yellow	Green
2024	Yellow	Yellow	Green
2025	Yellow	Yellow	Green
2026	Yellow	Yellow	Green
	Red		
	Yellow		
	Green		

Figure EPXXXII

- 7.75 Against previously developed residential land values, testing at the baseline position has demonstrated a marginally viable outcome in middle and upside market conditions only, at 35% affordable housing on the smaller 15 unit scheme. On the larger 50 unit scheme we have tested down to 10% affordable housing and at this percentage, and the results are shown in Figure EPXXXIII.



Epping Forest IG10			
50 units on a 1.83 hectare site (27 units per hectare density) - 0 flat(s) and 50 house(s).			
10% Affordable Housing			
AH Mix:	60:40 Social Rent/Intermediate		
	100% S106 allowance		
	Nil Grant Higher EUV sensitivity.		
	19% Gross Profit sensitivity.		
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Yellow
2012	Red	Yellow	Yellow
2013	Red	Yellow	Yellow
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Yellow	Yellow	Green
2020	Yellow	Green	Green
2021	Yellow	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Yellow	Green
2024	Yellow	Yellow	Yellow
2025	Yellow	Yellow	Yellow
2026	Red	Yellow	Yellow
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EPXXXIII

7.76 See appendix 11 for more detailed information on sensitivities that we have tested.

Value Area: IG10

Density 50 dph

7.77 Assuming the baseline position (35% affordable housing) a viable outcome is achieved against industrial/greenfield land values. For these reasons we have tested at higher percentages against industrial/greenfield land values.

7.78 Figure EPXXXIV shows the viability position of 40% affordable housing (all other variables as the baseline position) demonstrating a viable outcome for the majority of the Core Strategy should the market perform to at least middle conditions. Again, further sensitivity testing has been undertaken at 47% affordable housing achieving viable outcomes on most scenarios on the 15 unit scheme in middle and upside market conditions.



Epping Forest IG10			
50 units on a 1.1 hectare site (45 units per hectare density) - 0 flat(s) and 50 house(s).			
40% Affordable Housing			
AH Mix:	70:30 Social Rent:Intermediate		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Yellow	Yellow	Green
2023	Yellow	Yellow	Green
2024	Yellow	Yellow	Green
2025	Yellow	Yellow	Green
2026	Yellow	Yellow	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EPXXXIV

7.79 Against previously developed residential land values at the baseline position, 35% affordable housing is marginally viable in upside market conditions only and later in the Core Strategy period in middle market conditions on the 15 unit scheme. This is shown in Figure EPXXXV. We have tested down to 10% affordable housing (all other variables as the baseline position) on the 50 unit scheme against previously developed residential land values and this position is shown in Figure EPXXXVI.

Epping Forest IG10			
15 units on a 0.3 hectare site (50 units per hectare density) - 0 flat(s) and 15 house(s).			
35% Affordable Housing			
AH Mix:	70:30 Social Rent/Intermediate		
	100% S106 allowance		
	Nil Grant Higher EUV sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Red
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Yellow
2017	Red	Red	Yellow
2018	Red	Red	Yellow
2019	Red	Yellow	Yellow
2020	Red	Yellow	Yellow
2021	Red	Yellow	Green
2022	Red	Yellow	Green
2023	Red	Yellow	Green
2024	Red	Yellow	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EPXXXV



Epping Forest IG10			
50 units on a 1.1 hectare site (45 units per hectare density) - 0 flat(s) and 50 house(s).			
10% Affordable Housing			
AH Mix:	60:40 Social Rent/Intermediate		
	100% S106 allowance		
	Nil Grant Higher EUV sensitivity.		
	19% Gross Profit sensitivity.		
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Green	Green
2021	Yellow	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=Marginally VIABLE		
	=VIABLE		

Figure EPXXXVI

7.80 See appendix 11 for more detailed information on sensitivities that we have tested.

Value Area: IG10

Density 70 dph

7.81 Testing at the baseline position (35% affordable housing) is currently marginally viable on the 15 unit development against industrial/greenfield or previously developed residential land values achieving a residual land value of circa £3 million per hectare. The viability position over time at the baseline position on this scheme is shown in Figure EPXXXVII. Testing of the baseline position against industrial/greenfield land values on the larger 50 unit scheme demonstrates this percentage may be achievable in upside market conditions or very late in the Core Strategy period in middle market conditions. See Figure EPXXXVIII. In the shorter term, should middle market conditions endure, sensitivity testing has demonstrated that 20% affordable housing is likely to be achieved.



Epping Forest IG10			
15 units on a 0.214 hectare site (70 units per hectare density) - 10 flat(s) and 5 house(s).			
AH Mix:	70:30 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2011	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2012	NOT VIABLE	VIABLE	VIABLE
2013	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2014	NOT VIABLE	NOT VIABLE	VIABLE
2015	NOT VIABLE	NOT VIABLE	VIABLE
2016	NOT VIABLE	NOT VIABLE	VIABLE
2017	NOT VIABLE	NOT VIABLE	VIABLE
2018	NOT VIABLE	NOT VIABLE	VIABLE
2019	NOT VIABLE	VIABLE	VIABLE
2020	NOT VIABLE	VIABLE	VIABLE
2021	NOT VIABLE	VIABLE	VIABLE
2022	NOT VIABLE	VIABLE	VIABLE
2023	MARGINALLY VIABLE	VIABLE	VIABLE
2024	MARGINALLY VIABLE	VIABLE	VIABLE
2025	MARGINALLY VIABLE	VIABLE	VIABLE
2026	MARGINALLY VIABLE	VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure XXXVII

Epping Forest IG10			
50 units on a 0.714 hectare site (70 units per hectare density) - 24 flat(s) and 26 house(s).			
AH Mix:	70:30 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2011	NOT VIABLE	NOT VIABLE	VIABLE
2012	NOT VIABLE	NOT VIABLE	VIABLE
2013	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2014	NOT VIABLE	NOT VIABLE	VIABLE
2015	NOT VIABLE	NOT VIABLE	VIABLE
2016	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2017	NOT VIABLE	NOT VIABLE	VIABLE
2018	NOT VIABLE	NOT VIABLE	VIABLE
2019	NOT VIABLE	NOT VIABLE	VIABLE
2020	NOT VIABLE	NOT VIABLE	VIABLE
2021	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2022	NOT VIABLE	VIABLE	VIABLE
2023	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2024	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2025	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2026	NOT VIABLE	MARGINALLY VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure EPXXXVIII

7.82 Against previously developed residential land values we have tested down to 15% and 10% affordable housing (dependent upon scheme size). Figure EPXXXIX shows the viability position of 14% affordable housing on the smaller 15 unit schemes and assumes all affordable units are intermediate.



Epping Forest IG10			
15 units on a 0.214 hectare site (70 units per hectare density) - 10 flat(s) and 5 house(s).			
14% Affordable Housing			
AH Mix:	100% Intermediate		
	100% S106 allowance		
	Nil Grant Higher EUV sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2011	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2012	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2013	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2014	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2015	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2016	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2017	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2018	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2019	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2020	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2021	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2022	MARGINALLY VIABLE	VIABLE	VIABLE
2023	MARGINALLY VIABLE	VIABLE	VIABLE
2024	MARGINALLY VIABLE	VIABLE	VIABLE
2025	MARGINALLY VIABLE	VIABLE	VIABLE
2026	NOT VIABLE	VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure EPXXXIX

7.83 See appendix 11 for more detailed information on sensitivities that we have tested.

Value Area: IG10

Density 100 dph & 120 dph

7.84 35% affordable housing may be achievable against industrial/greenfield land values in upside market conditions or late in the Core Strategy period in middle market conditions. Figure EPXL shows this baseline position for the 100 dph scheme. As density increases to 120 dph, viability reduces and it is likely 35% affordable housing at the baseline position would only be viable late in the Core Strategy period in upside market conditions on this scheme.



Epping Forest IG10			
50 units on a 0.5 hectare site (100 units per hectare density) - 40 flat(s) and 10 house(s).			
AH Mix:	70:30 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Green
2012	Red	Red	Green
2013	Red	Red	Green
2014	Red	Red	Green
2015	Red	Red	Green
2016	Red	Red	Green
2017	Red	Red	Yellow
2018	Red	Red	Green
2019	Red	Red	Green
2020	Red	Red	Green
2021	Red	Yellow	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Red	Green	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EPXL

- 7.85 Sensitivity testing has demonstrated that in the early half of the Core Strategy period in middle market conditions 10% affordable housing (all other variables as the baseline position) is more likely to be achievable.
- 7.86 Against previously developed residential we have tested down to 10% affordable housing and assumed grant funding and the viability results of the 100 dph scheme are shown in Figure EPXLI demonstrating a viable outcome on this sensitivity test in upside market conditions and later in the Core Strategy period in middle market conditions. Again as density increases to 120 dph, viability reduces and it is likely 10% affordable housing with grant would only be viable or marginally viable in upside market conditions.

Epping Forest IG10			
50 units on a 0.5 hectare site (100 units per hectare density) - 40 flat(s) and 10 house(s).			
AH Mix:	60:40 Social Rent/Intermediate		
10% Affordable Housing			
100% S106 allowance			
Normal Grant Higher EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Green
2011	Red	Red	Green
2012	Red	Red	Green
2013	Red	Red	Green
2014	Red	Red	Green
2015	Red	Red	Green
2016	Red	Red	Green
2017	Red	Red	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Red	Green	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EPXLI



7.87 See appendix 11 for more detailed information on sensitivities that we have tested.

Value Area: RM4

Density 30 dph

7.88 Assuming the baseline position (35% affordable housing) a marginally viable outcome is achieved against industrial/greenfield land values on the 15 unit scheme and an unviable outcome on the 50 unit scheme.

7.89 Figure EPXLII shows the viability position of the baseline position (35% affordable housing) on the 50 unit scheme and Figure EPXLIII shows the viability position of 20% affordable housing again on the 50 unit scheme (all other variables as the baseline position) demonstrating this percentage is more likely to be achievable in the shorter term should middle market conditions endure.

Epping Forest RM4			
50 units on a 1.83 hectare site (27 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix: 70:30 Social Rent:Intermediate			
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2011	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2012	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2013	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2014	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2015	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2016	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2017	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2018	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2019	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2020	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2021	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2022	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2023	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2024	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2025	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2026	NOT VIABLE	MARGINALLY VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure EPXLII



Epping Forest RM4			
50 units on a 1.83 hectare site (27 units per hectare density) - 0 flat(s) and 50 house(s).			
20% Affordable Housing			
AH Mix:	70:30 Social Rent:Intermediate		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Yellow	Yellow	Green
2022	Yellow	Yellow	Green
2023	Yellow	Yellow	Green
2024	Yellow	Yellow	Green
2025	Yellow	Yellow	Green
2026	Yellow	Yellow	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EPXLIII

- 7.90 Against previously developed residential land values, testing has demonstrated that 10% affordable housing is the likely maximum percentage that could be achieved and this may only be deliverable in upside market conditions.
- 7.91 See appendix 11 for more detailed information on sensitivities that we have tested.

Value Area: RM4

Density 50 dph

- 7.92 Assuming the baseline position (35% affordable housing) a marginally viable outcome is achieved against industrial/greenfield land values. For example the 50 unit scheme achieves a residual land value of circa £3 million per hectare in middle market conditions. Against previously developed residential land values the baseline position is not viable and therefore we have tested at levels below this.
- 7.93 Figure EPXLIV shows the viability position of 35% affordable housing whilst Figure EPXLV shows the position for 40% affordable housing (all other variables the same) and demonstrates a viable outcome in upside market conditions and later in the Core Strategy period in middle market conditions is achieved at this percentage.



Epping Forest RM4			
50 units on a 1.1 hectare site (45 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix:	70:30 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
	VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Green	Green
2019	Red	Green	Green
2020	Red	Green	Green
2021	Red	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure EPXLIV

Epping Forest RM4			
50 units on a 1.1 hectare site (45 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix:	70:30 Social Rent:Intermediate		
40% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
	VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Red	Green
2014	Red	Red	Green
2015	Red	Red	Green
2016	Red	Red	Green
2017	Red	Red	Green
2018	Red	Red	Green
2019	Red	Yellow	Green
2020	Red	Green	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Red	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure EPXLV

- 7.94 Against previously developed residential land values we have tested down to 10% affordable housing (all other variables as the baseline position) and a marginally viable outcome may be achievable in upside market conditions and later in the Core Strategy period in upside market conditions.
- 7.95 See appendix 11 for more detailed information on sensitivities that we have tested.



Value Area: RM4

Density 70 dph

7.96 Testing at the baseline position (35% affordable housing) demonstrated that this percentage may only be viable in upside market conditions or later in the Core Strategy period in upside market conditions. This assumes industrial/greenfield land values, see Figure EPXLVI. Sensitivity testing demonstrates that increasing the proportion of intermediate units at the expense of social rented units eases viability in these periods, however in the shorter term in middle market conditions, 20% affordable housing is the likely maximum that could be achieved and even then, public subsidy at normal levels is likely to be required to achieve this.

Epping Forest RM4			
50 units on a 0.714 hectare site (70 units per hectare density) - 24 flat(s) and 26 house(s).			
AH Mix:	70:30 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2011	NOT VIABLE	NOT VIABLE	VIABLE
2012	NOT VIABLE	NOT VIABLE	VIABLE
2013	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2014	NOT VIABLE	NOT VIABLE	VIABLE
2015	NOT VIABLE	NOT VIABLE	VIABLE
2016	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2017	NOT VIABLE	NOT VIABLE	VIABLE
2018	NOT VIABLE	NOT VIABLE	VIABLE
2019	NOT VIABLE	NOT VIABLE	VIABLE
2020	NOT VIABLE	NOT VIABLE	VIABLE
2021	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2022	NOT VIABLE	VIABLE	VIABLE
2023	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2024	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2025	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2026	NOT VIABLE	MARGINALLY VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure EPXLVI

7.97 Against previously developed residential land values we have tested down to 7% and 10% affordable housing (dependent upon scheme size). Figure EPXLVII shows the viability position of 7% affordable housing on the smaller 15 unit scheme and assumes all affordable units are intermediate.



Epping Forest RM4			
15 units on a 0.214 hectare site (70 units per hectare density) - 10 flat(s) and 5 house(s).			
7% Affordable Housing			
AH Mix:	100% Intermediate		
	100% S106 allowance		
	Nil Grant Higher EUV sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Red
2011	Red	Red	Red
2012	Red	Red	Red
2013	Red	Red	Red
2014	Red	Red	Red
2015	Red	Red	Red
2016	Red	Red	Red
2017	Red	Red	Red
2018	Red	Red	Red
2019	Red	Red	Red
2020	Red	Red	Red
2021	Red	Yellow	Green
2022	Red	Yellow	Green
2023	Red	Yellow	Green
2024	Red	Yellow	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure EPXLVII

7.98 See appendix 11 for more detailed information on sensitivities that we have tested.

Value Area: RM4

Density 100 dph & 120 dph

7.99 Against both industrial/greenfield and previously developed residential land values we have tested down to 10% affordable housing and, as can be seen in Figure EPXLVIII this percentage can be achieved on the 100 dph scheme in upside market conditions and, during some periods, in middle market conditions assuming greenfield/industrial land values.



Epping Forest RM4			
50 units on a 0.5 hectare site (100 units per hectare density) - 40 flat(s) and 10 house(s).			
AH Mix:	60:40 Social Rent:Intermediate		
10% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Green
2011	Red	Red	Green
2012	Red	Red	Green
2013	Red	Red	Green
2014	Red	Red	Green
2015	Red	Red	Green
2016	Red	Red	Green
2017	Red	Red	Green
2018	Red	Red	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Red	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure EPXLVIII

- 7.100 Against previously developed residential land values, testing at 10% affordable housing has shown that this is the likely maximum that could be achieved and grant funding along with upside market conditions would be required to achieve this percentage.
- 7.101 See appendix 11 for more detailed information on sensitivities that we have tested

Notional Site - 6-14 unit development at 30 dph

- 7.102 Delivery of 30% affordable housing (and iterations below this where necessary) on schemes of this size has been assessed with a 100% social rent and a 100% intermediate tenure mix, with and without public subsidy at normal levels. Due to the small number of affordable units these sites may generate we have used these tenure mixes as:
 - It is more economical for RSLs to provide management services to units of the same tenure on the same site when they are provided in very low numbers;
 - Applying the tenure mixes used in respect of larger notional development sites are likely to result in part units rather than whole units on sites of this size.

- 7.103 S106 costs assumed are at 100% of the baseline level.

Value Areas CM16 and IG10

- 7.104 In the higher value areas of CM16 and IG10 up to 30% affordable housing may be deliverable against industrial/greenfield land values. Figure EPXLIX shows the position of 30% affordable housing in CM16 assuming all units are social rented. 20% affordable housing (2 social rented units) is viable throughout the period assessed assuming the market achieves at least middle conditions when developer profit is assumed at the higher level (25% gross profit).



Epping Forest CM16			
10 units on a 0.33333 hectare site (30 units per hectare density) - 0 flat(s) and 10 house(s).			
30% Affordable Housing			
AH Mix:	100% Social Rented		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY	MIDDLE	UPSIDE
2010	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2011	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2012	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2013	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2014	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2015	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2016	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2017	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2018	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2019	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2020	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2021	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2022	MARGINALLY VIABLE	VIABLE	VIABLE
2023	MARGINALLY VIABLE	VIABLE	VIABLE
2024	MARGINALLY VIABLE	VIABLE	VIABLE
2025	MARGINALLY VIABLE	VIABLE	VIABLE
2026	MARGINALLY VIABLE	VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure EPXLIX

7.105 Against previously developed residential land values 10% affordable housing (one intermediate unit) is marginally viable with grant at normal levels throughout the period assessed should at least middle market conditions be achieved. Figure EPL.

10 units on a 0.33 hectare site (30 units per hectare density) - 0 flat(s) and 10 house(s).			
Epping Forest CM16			
10% Affordable Housing			
AH Mix:	100% Shared Ownership		
	100% S106 allowance		
	Normal Grant Higher EUV sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY	MIDDLE	UPSIDE
2010	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2011	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2012	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2013	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2014	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2015	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2016	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2017	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2018	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2019	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2020	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2021	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2022	MARGINALLY VIABLE	VIABLE	VIABLE
2023	MARGINALLY VIABLE	VIABLE	VIABLE
2024	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2025	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2026	NOT VIABLE	MARGINALLY VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure EPL



Value Areas CM5/EN9, RM4 and IG7

- 7.106 Within these value areas 20% affordable housing is likely to be viable against industrial/greenfield land values in most periods without grant assuming at least middle market conditions are achieved and the units are of intermediate tenure. Figure EPLI. A marginally viable outcome is more likely to be achieved with a 100% social rented tenure mix.

SCHEME TYPE 3			
10 units on a 0.33333 hectare site (30 units per hectare density) - 0 flat(s) and 10 house(s).			
Epping Forest EN9 CM5			
AH Mix:	100% Shared Ownership		
20% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Green	Green
2011	Red	Green	Green
2012	Red	Green	Green
2013	Red	Green	Green
2014	Red	Green	Green
2015	Red	Green	Green
2016	Red	Green	Green
2017	Red	Green	Green
2018	Red	Green	Green
2019	Red	Green	Green
2020	Yellow	Green	Green
2021	Yellow	Green	Green
2022	Green	Green	Green
2023	Green	Green	Green
2024	Green	Green	Green
2025	Green	Green	Green
2026	Green	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure EPLI

- 7.107 Against previously developed residential land values, value area IG7 may be able to deliver 10% (one intermediate unit) with grant at normal levels should upside conditions be achieved. It should be noted however that only a marginally viable outcome is likely. In CM5/EN9 and RM4 it is unlikely that any affordable housing could be delivered on this notional site type throughout the period assessed.

Value Area CM17

- 7.108 In the lower value area of CM17, 10% affordable housing (one intermediate unit only) may be achievable without grant but this is only likely to be achievable in upside market conditions and in limited periods in middle market conditions as shown in Figure EPLII



10 units on a 0.33333 hectare site (30 units per hectare density) - 0 flat(s) and 10 house(s).			
Epping Forest CM17			
10% Affordable Housing			
AH Mix:	100% Shared Ownership		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Red
2011	Red	Red	Red
2012	Red	Red	Green
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Yellow
2017	Red	Red	Yellow
2018	Red	Red	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Red	Yellow	Green
2023	Red	Yellow	Green
2024	Red	Yellow	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EPLII

7.109 Against previously developed residential land values delivery of any amount of affordable housing is unlikely in this value area.

Notional Site - 6-14 unit development at 50 dph

Value Area: CM16

7.110 Value area CM16 may be able to support delivery of 20% affordable housing against industrial/greenfield land values without grant throughout the period assessed assuming at least middle market conditions are achieved. Figure EPLIII. There are some periods (circa 2014-2018) where achieving this percentage may be challenging in the delivery of social rented units however the delivery of intermediate units in this period is likely to remain viable.



Epping Forest CM16			
10 units on a 0.33333 hectare site (30 units per hectare density) - 0 flat(s) and 10 house(s).			
AH Mix:	100% Social Rented		
20% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EPLIII

7.111 Against previously developed residential land values it may be possible to deliver 10% affordable housing without grant should upside conditions prevail (and later in the period assessed assuming middle market conditions).

Value Areas: IG10, RM4 and IG7

7.112 In value areas IG7, RM4 and IG10 delivery of 10% affordable housing (intermediate only) without grant is likely only to be achievable against industrial/greenfield land values in the second half of the period assessed should middle market conditions be achieved and potentially throughout if upside conditions prevail. Figure EPLIV demonstrates this position in respect of IG7.

10 units on a 0.2 hectare site (50 units per hectare density) - 4 flat(s) and 6 house(s).			
Epping Forest IG7			
10% Affordable Housing			
AH Mix:	100% Shared Ownership		
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EPLIV



7.113 Against previously developed residential land values it is unlikely a viable position could be achieved with any level of affordable housing.

Value Area CM5/EN9

7.114 Delivery of 10% affordable housing (intermediate only) without grant is likely only to be achievable should upside market conditions be achieved. Against previously developed residential land values it is unlikely that a viable position could be achieved with any level of affordable housing.

Value Area CM17

7.115 In this value area it is unlikely that any affordable housing could be viably delivered against either industrial/greenfield or previously developed residential land values throughout the period assessed.

Notional Site - 6-14 unit development at 70 dph

Value Areas: IG10, CM16 and IG7

7.116 Against industrial/greenfield land values, it may be possible to deliver 10% affordable housing (one intermediate unit) in some periods assessed as demonstrated in Figure EPLV.

7.117 Against previously developed residential land values delivery of any amount of affordable housing is unlikely regardless of market conditions.

10 units on a 0.1428 hectare site (70 units per hectare density) - 10 flat(s) and 0 house(s).			
Epping Forest CM16			
10% Affordable Housing			
AH Mix:	100% Shared Ownership		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Red
2011	Red	Red	Green
2012	Red	Red	Green
2013	Red	Red	Green
2014	Red	Red	Green
2015	Red	Red	Green
2016	Red	Red	Green
2017	Red	Red	Green
2018	Red	Red	Green
2019	Red	Red	Green
2020	Red	Red	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Red	Green	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EPLV



Value Area: RM4

- 7.118 It may be to deliver 10% affordable housing (one intermediate unit) against industrial/greenfield land values however this is only likely in upside market conditions in the second half of the period assessed. Against previously developed residential land values it is unlikely that any affordable housing could be delivered on sites of this type throughout the period assessed.

Value Areas: CM17 and CM5/EN9

- 7.119 It is unlikely that any affordable housing could be delivered on sites of this type against either industrial/greenfield or previously developed residential land values throughout the period assessed.



8.0 Results Analysis - Harlow

Introduction

- 8.1 The general parameters and assumptions set out in Section 3 of this report have been applied to our assessment of notional sites in Harlow. We have used these basic assumptions and then made them specific to the Harlow situation by looking at a range of housing developments across the District using a residual valuation appraisal tool of the kind recommended in the Government's Delivering Affordable Housing statement. This is then used as the base for testing future cost and value scenarios using upside, middle and downside housing market growth scenarios during the Local Development Framework period. These future assessments take account of changes to property values, inflation, construction, rent and land values over the same timescale. Our assessment is based on the viability of delivering affordable housing across a range of notional sites. These notional sites were selected in consultation with the Council.

Harlow Summary

- 8.2 In Harlow, the post code areas used for modelling purposes were as follows:
- CM17
 - CM18
 - CM19
 - CM20-
- 8.3 In some cases, postcode areas cross local authority boundaries.
- 8.4 In all of these areas, the notional sites confirmed as appropriate in consultation with the Council were tested. These notional sites were as follows:
- 15 unit site (at 30 dph, 50 dph, 70 dph);
 - 50 unit site (at 30 dph, 50 dph, 70 dph, 100 dph, 120 dph);
 - 150 unit site (at 30 dph, 50 dph, 70 dph)
- 8.5 In addition sites below the 15 unit level were also tested.
- 8.6 In consultation with Council officers, it was agreed to test the following large strategic sites in Harlow:
- 1500 unit scheme (at 40 dph)
 - 3000 unit scheme (at 40 dph)
 - 5000 unit scheme (at 30 dph and 50 dph)
- 8.7 In Harlow it is essential to establish a baseline to determine at which point land will come forward for development. In order for this to happen residual land values



must exceed existing or alternative uses of the site. We have utilised the services of an independent qualified valuer to help us assess values in the sub region partly because of the lack of transparent information on land values. In particular, the level of transactions in the District, indeed in the sub-region as a whole, has been very low. Therefore it is very difficult to make any firm assessments about the absolute value at which land will come forward. A letter from the valuer³² confirms this situation and confirms the relationship of land value to Gross development Value which has been used to influence our viability testing. We are also aware of the differences between developing on previously developed land and Greenfield or other land where competing uses may be commercial or industrial. Other viability studies undertake their assessments using only the industrial land value as a test against which sites may come forward. In our view this type of assessment may be limited and therefore we have tested against three key areas.

- 8.8 The first is Valuation Office Agency (VOA) data regarding industrial land values in the areas as at July 2009, and takes into account an uplift of 20%. Secondly, we have used residential values from VOA (July 2009) in order to test what we have termed previously developed land. Finally, we are aware that VOA data does have a number of limitations. Therefore, in order to 'future proof' this assessment, and to reflect land owners differing expectations we have instead looked at the relationship between residual land values and gross development value.
- 8.9 In line with the rest of this study and as explained in detail in section 3 Levvel's methodology enables the effect of a range of delivery timescales, thus all development scenarios selected are tested assuming development start dates of the date of modelling, date of modelling plus 1 year, plus 2 years, plus 3 years, and so on until 2026.
- 8.10 The use of the Levvel methodology allows for variations in land value over time to be accounted for, again ensuring 'future proofing' of the viability study. We know that there is a minimum land value which schemes need to achieve in order to be brought forward, otherwise it becomes more economic for the site to continue in its existing (or alternative) use.
- 8.11 The Valuation Office Agency (VOA) provided data on agricultural land and property values. It is unrealistic however to assume that Greenfield development land would be traded for residential use at these rates. For example the average value of unequipped arable land with vacant possession in the East of England as at July 2009 was £14,924 while in the South East it was £19,671. It is likely that landowners on agricultural land will be looking for a considerable uplift on these values. Stakeholder engagement (see Appendix 9) has confirmed this view.
- 8.12 Thus in respect of development occurring on Greenfield or industrial sites, VOA data on industrial land values in the district³³ will be used as a check. In Harlow, this level has been assessed at £775,000 per hectare plus 20% uplift (totalling £930,000 per hectare).

³² See letter date 9th February 2010 from Thornes (Appendix 8)

³³ See Paragraph 3.21



- 8.13 In respect of development occurring on previously developed residential land, (VOA) data on residential land prices have been used as the check and inflated by 20% in the same manner as for industrial land £1,900,000 per hectare plus 20% uplift (totalling £2,280,000 per hectare).
- 8.14 Both of these values will be linked to the future growth assessments as outlined in Appendix 3 to this report to reflect the relationship between land and property values and ensure effective 'future proofing' of the assessment.
- 8.15 Whilst we will use VOA data as outlined above as one test of viability, we recognise that VOA data can be as much as six months out of date and not available at a sufficiently local level to enable local variations in land values to be assessed. Furthermore, the imposition of affordable housing planning policy will necessarily reduce land values in certain schemes. Therefore it is not enough to assess the viability of a particular scheme purely against a fixed value. We have therefore developed a methodology that assesses how much landowners have been willing to accept for their land in the past, and expressed it in terms of the ratio between Gross Development Value and Residual Land Value (GDV:RLV). That is to say how much of the revenue from a scheme can be used to pay for the land. This allows for variations due to locality to be accounted for. It is our belief that this more readily accounts for local variations in land values and represents a more robust and credible evidence base.
- 8.16 The ratio between RLV and GDV has thus been assessed over the period 2001 to 2009 using VOA data. The effect can be seen that in a rising and somewhat overheated market, landowner expectations rise and the price that developers are willing to pay also increases (often based on future expectations of property values). However, in a falling and "normal" market landowner expectations fall to more "reasonable" levels. Thus the relationship between GDV and RLV as a check provides a further degree of future proofing as if housing market values increase, the land value will also increase. Conversely, if values fall, then land value can also be expected to fall.
- 8.17 We have also taken the advice of a valuer who has confirmed that our approach is a reasonable one. The levels of RLV to GDV have been set in accordance with the valuers assessment³⁴. In respect of sites of 10 units and less, a figure of 28% to 35% of Gross Development Value depending on density (see paragraph 3.20 -3.24) has been used as a test for the level at which the Residual Land Value may need to reach in order to incentivise the landowner sufficiently to bring forward his parcel of land. This reflects our assessment of the relative value of small sites. For lower density sites in general, a level of 30% RLV to GDV has been used, for mid density schemes 28% has been used and for high density developments the 25% level of RLV to GDV has been used. In respect of large scale strategic sites (1500 units and above) a figure of 20% of Gross Development Value (GDV) as the level at which the Residual Land Value may need to reach has been used as a test.
- 8.18 Our assessment for viability involves a cross reference of the absolute land value against alternative use value (PDL or industrial) and the RLV to GDV position. Within each test we have assumed a level of 'tolerance' so that a scheme that falls

³⁴ See Thornes letter dated 9th February 2010 (Appendix 8)



within 10% either way of the industrial or PDL land value is deemed to be marginally viable and a scheme that falls within 20% plus or minus of the RLV to GDV test is also deemed to be marginally viable against that test. The two tests are then assessed in parallel rather than sequentially so that a scheme that is not viable against the absolute land value will be deemed not viable even if it achieves viability on the RLV to GDV test.

- 8.19 Using these tests of viability, it is possible to inform a policy position that has flexibility and is relevant for the life of the plan to ensure deliverability.
- 8.20 Where shown the results tables set out the three market scenarios, downside, middle and upside and then record whether the notional schemes assessed are likely to be viable, marginal or not viable. The dates in the left hand column refer to the start dates for development.

General Development Sites (15 to 150 units)

- 8.21 This section summarises the results for each value area in Harlow. We look at the baseline position for each density tested and then we look at sensitivities and their effect on viability. For Harlow, we report on a baseline affordable housing target of 35% and then for each value area we report on the realistic target above or below that baseline. The baseline position assumes nil public subsidy, 19% gross profit and a 70:30 split of social rented to intermediate affordable housing. Section 106 contributions are in line with 100% of the baseline level as set out in Appendix 6 and section 3 of this main report.
- 8.22 More detailed sensitivity testing regarding Harlow is contained in the Appendices.

Value Area: CM17

Density 30 dph

- 8.23 Testing at the baseline position (35% affordable housing) demonstrated a current marginally viable outcome against industrial/greenfield land values. For example, the 15 unit development achieves a residual land value of circa £1.35million per hectare. This value is not sufficient to clear the previously developed residential value but is sufficient against industrial/greenfield. For these reasons we have tested a target below 35% for previously developed residential land values.
- 8.24 Figure HI shows the position for 15 units with 35% affordable housing (all other parameters in line with the baseline position). Figure HII shows the position on the 50 unit scheme and the same assumptions. Both of these assume industrial/greenfield alternative land values.



Harlow CM17			
15 units on a 0.5 hectare site (30 units per hectare density) - 0 flat(s) and 15 house(s).			
AH Mix:	70-30 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure HI

Harlow CM17			
50 units on a 1.67 hectare site (30 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix:	70-30 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Yellow	Green	Green
2021	Yellow	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure HII

8.25 Against previously developed residential land values we have tested with baseline assumptions down to 20% affordable housing and this level will only be viable in upside economic conditions and later in the Core Strategy period, in middle market conditions. This is shown in Figure HIII.



SCHEME TYPE 5			
50 units on a 1.67 hectare site (30 units per hectare density) - 0 flat(s) and 50 house(s).			
Harlow CM17			
20% Affordable Housing			
AH Mix:	70-30 social rent to intermediate		
	100% S106 allowance		
	nil grant higher AUV sensitivity.		
	19% Gross profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Red	Yellow	Green
2023	Red	Yellow	Green
2024	Red	Yellow	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Green
	Red	Yellow	Green
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure HIII

8.26 Among our sensitivity testing we have looked at the effect of affordable housing tenure mix and this has shown that increasing the proportion of social rented units at the expense of intermediate reduces viability. See appendix 12 for more detailed information on sensitivities that we have tested.

Value Area: CM17

Density 50 dph

8.27 At this density testing at the baseline position (35% affordable housing) demonstrated a current marginally viable outcome against industrial/greenfield land values. For example, the 50 unit development achieves a residual land value of circa £1.61 million per hectare. Again, this value is not sufficient to clear the previously developed residential value and for these reasons we have tested below 35% for previously developed residential land values.

8.28 Figure HIV shows the position for 50 units with 35% affordable housing (all other parameters in line with the baseline position). This assumes industrial/greenfield alternative land values. Figure HV shows the position for 15 units with 35% affordable housing (again, all other parameters in line with the baseline position) and demonstrates it may be more challenging to achieve this percentage in the shorter terms on schemes of this size and grant and/or a consideration of tenure mix and percentage may be required unless market conditions achieve the upside.



Harlow CM17			
50 units on a 1 hectare site (50 units per hectare density) - 0 flat(s) and 50 house(s).			
35% Affordable Housing			
AH Mix:	70-30 Social Rent:Intermediate		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2011	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2012	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2013	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2014	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2015	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2016	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2017	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2018	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2019	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2020	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2021	MARGINALLY VIABLE	VIABLE	VIABLE
2022	MARGINALLY VIABLE	VIABLE	VIABLE
2023	MARGINALLY VIABLE	VIABLE	VIABLE
2024	MARGINALLY VIABLE	VIABLE	VIABLE
2025	MARGINALLY VIABLE	VIABLE	VIABLE
2026	MARGINALLY VIABLE	VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure HIV

Harlow CM17			
15 units on a 0.3 hectare site (50 units per hectare density) - 0 flat(s) and 15 house(s).			
35% Affordable Housing			
AH Mix:	70-30 Social Rent:Intermediate		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	MARGINALLY VIABLE	MARGINALLY VIABLE	VIABLE
2011	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2012	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2013	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2014	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2015	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2016	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2017	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2018	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2019	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2020	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2021	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2022	MARGINALLY VIABLE	VIABLE	VIABLE
2023	MARGINALLY VIABLE	VIABLE	VIABLE
2024	NOT VIABLE	VIABLE	VIABLE
2025	MARGINALLY VIABLE	VIABLE	VIABLE
2026	MARGINALLY VIABLE	VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure HV

8.29 Against previously developed residential land values we have tested with baseline assumptions down to 25% affordable housing on the 50 unit scheme and this level is achievable in upside market conditions throughout the Core Strategy period and later in the middle economic assumption. This is shown in Figure HVI. Testing of the 15 unit scheme demonstrates it may be more challenging to achieve 25% affordable housing on schemes of this size and Figure HVII demonstrates the viability position of 13% affordable housing. Grant funding and considerations of



tenure and S106 requirements may be required in order to achieve higher levels of affordable housing.

Harlow CM17			
50 units on a 1 hectare site (50 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix:	70-30 Social Rent:Intermediate		
25% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Green
2011	Red	Red	Green
2012	Red	Red	Green
2013	Red	Red	Green
2014	Red	Red	Green
2015	Red	Red	Green
2016	Red	Red	Green
2017	Red	Red	Green
2018	Red	Red	Green
2019	Red	Yellow	Green
2020	Red	Green	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Red	Green	Green
	Red		=NOT VIABLE
	Yellow		=Marginally VIABLE
	Green		=VIABLE

Figure HVI

Harlow CM17			
15 units on a 0.3 hectare site (50 units per hectare density) - 0 flat(s) and 15 house(s).			
AH Mix:	70-30 Social Rent:Intermediate		
13% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Red
2011	Red	Red	Yellow
2012	Red	Red	Green
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Yellow
2017	Red	Red	Yellow
2018	Red	Red	Yellow
2019	Red	Red	Green
2020	Red	Red	Green
2021	Red	Yellow	Green
2022	Red	Yellow	Green
2023	Red	Yellow	Green
2024	Red	Yellow	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Green
	Red		=NOT VIABLE
	Yellow		=Marginally VIABLE
	Green		=VIABLE

Figure HVII

8.30 See appendix 12 for more detailed information on sensitivities that we have tested.



Value Area: CM17

Density 70 dph

- 8.31 At this density testing at the baseline position (35% affordable housing) demonstrated an unviable outcome against industrial/greenfield land values and previously developed residential land values. For these reasons we have tested a target below 35%.
- 8.32 Figure HVIII shows the position of 25% affordable housing on a 50 unit development (all other parameters in line with the baseline position) and demonstrates that in the longer term, and/or in upside market conditions, this percentage may be achievable against industrial/greenfield land values.

Harlow CM17			
50 units on a 0.714 hectare site (70 units per hectare density) - 24 flat(s) and 26 house(s).			
AH Mix:	70-30 Social Rent:Intermediate		
25% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2011	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2012	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2013	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2014	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2015	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2016	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2017	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2018	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2019	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2020	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2021	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2022	NOT VIABLE	VIABLE	VIABLE
2023	MARGINALLY VIABLE	VIABLE	VIABLE
2024	MARGINALLY VIABLE	VIABLE	VIABLE
2025	MARGINALLY VIABLE	VIABLE	VIABLE
2026	MARGINALLY VIABLE	VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure HVIII

- 8.33 Against previously developed residential land values we have tested with baseline assumptions down to 25% affordable housing on the larger notional schemes (50 units+) and this level is only achievable in upside market conditions throughout most of the Core Strategy period and very late in the Core Strategy period should middle market conditions endure. This is shown in Figure HIX. Additional grant eases viability however delivery at this percentage in the first half of the Core Strategy period is likely to remain unviable unless upside market conditions are experienced. Figure HX shows the position with grant.



Harlow CM17			
50 units on a 0.714 hectare site (70 units per hectare density) - 24 flat(s) and 26 house(s).			
AH Mix:	70-30 Social Rent:Intermediate		
25% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Green
2012	Red	Red	Green
2013	Red	Red	Yellow
2014	Red	Red	Green
2015	Red	Red	Green
2016	Red	Red	Yellow
2017	Red	Red	Green
2018	Red	Red	Green
2019	Red	Red	Green
2020	Red	Yellow	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Yellow	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure HIX

SCHEME TYPE 2 (50/50)		Harlow CM17	
50 units on a 0.714 hectare site (70 units per hectare density) - 24 flat(s) and 26 house(s).			
AH Mix:	70-30 Social Rent:Intermediate		
25% Affordable Housing			
100% S106 allowance			
Normal Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Red	Green
2013	Red	Red	Green
2014	Red	Red	Green
2015	Red	Red	Green
2016	Red	Red	Green
2017	Red	Red	Green
2018	Red	Red	Green
2019	Red	Yellow	Green
2020	Red	Green	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Red	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure HX

- 8.34 Achieving a viable position against previously developed residential land values on the 15 unit scheme is more challenging. We have tested down to 10% affordable housing (all other parameters in line with the baseline position) and delivery of this percentage may only be achievable in upside market conditions.
- 8.35 See appendix 12 for more detailed information on sensitivities that we have tested.



Value Area: CM17

Density 100 dph & 120 dph

8.36 Generally, the ability to achieve affordable housing on schemes of this density is extremely challenging and it will be very difficult to achieve viability with any affordable housing again either industrial/greenfield or previously developed residential land values. The exception may be where flatted developments attract executive style luxury apartments and consequently achieve higher sales values than we have tested. For example, where flats are sold for up to, say, £300,000 then an element of affordable housing may be afforded.

Value Area: CM18

Density 30 dph

8.37 Assuming the baseline position (35% affordable housing) demonstrated a currently unviable position. For example, on the 50 unit scheme a residual value of circa £671,000 per hectare can be achieved currently and in middle market conditions. In the longer term and/or in upside market conditions 35% affordable housing may be achievable at the baseline position against industrial/greenfield land values as shown in figure HXI although public subsidy at normal levels would ease delivery of this percentage in middle and upside market conditions as Figure HXII shows.

Harlow CM18			
50 units on a 1.67 hectare site (30 units per hectare density) - 0 Flat(s) and 50 house(s).			
AH Mix:	70-30 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
	VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2011	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2012	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2013	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2014	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2015	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2016	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2017	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2018	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2019	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2020	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2021	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2022	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2023	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2024	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2025	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2026	NOT VIABLE	MARGINALLY VIABLE	VIABLE
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure HXI



SCHEME TYPE 2 (50/50)		Harlow CM18	
50 units on a 1.67 hectare site (30 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix:		70-30 Social Rent:Intermediate	
35% Affordable Housing			
100% S106 allowance			
Normal Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Red	Yellow	Green
2023	Red	Yellow	Green
2024	Red	Yellow	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure HXII

8.38 Against previously developed residential values the baseline position is not viable. Therefore we have tested down to 10% affordable housing (all other parameters in line with the baseline position) and only a marginally viable outcome can be achieved in upside market conditions in the latter half of the Core Strategy period.

8.39 See appendix 12 for more detailed information on sensitivities that we have tested.

Density 50 dph

8.40 Testing at the baseline position (35% affordable housing) demonstrates an unviable position in middle market conditions thus 30% affordable housing has been tested. In the longer term in middle market conditions and/or in upside market conditions 30% affordable housing may be achievable at the baseline position against industrial/greenfield land values as shown in figure HXIII. Further sensitivity testing has demonstrated that increasing the proportion of intermediate units at the expense of social rented units can ease viability further at this percentage (all other baseline variables remaining the same). This is shown in Figure HXIV.



Harlow CM18			
50 units on a 1 hectare site (50 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix:	70-30 Social Rent:Intermediate		
25% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Green
2012	Red	Red	Green
2013	Red	Red	Yellow
2014	Red	Red	Green
2015	Red	Red	Yellow
2016	Red	Red	Green
2017	Red	Red	Green
2018	Red	Red	Green
2019	Red	Red	Green
2020	Red	Yellow	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Yellow	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure HXV

- 8.43 Sensitivity testing has demonstrated that grant and considerations of S106 requirements is likely to be required in order to achieve a marginally viable outcome at this percentage (25% affordable housing) in the short term in middle market conditions against previously developed residential land values.
- 8.44 See appendix 12 for more detailed information on sensitivities that we have tested.

Density 70 dph

- 8.45 We have tested with baseline assumptions down to 10% affordable housing and against industrial/greenfield land values this level may only be achievable in upside market conditions or late in the Core Strategy period in middle market conditions. This position is shown in Figure HXVI. Sensitivity testing has been undertaken at 10% affordable housing with grant (all other baseline variables remaining the same) and this is not sufficient to achieve a viable position in the earlier years in middle market conditions.



Harlow CM18			
50 units on a 0.714 hectare site (70 units per hectare density) - 24 flat(s) and 26 house(s).			
10% Affordable Housing			
AH Mix:	70-30 Social Rent:Intermediate		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
	VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Yellow
2017	Red	Red	Yellow
2018	Red	Red	Yellow
2019	Red	Red	Yellow
2020	Red	Red	Yellow
2021	Red	Yellow	Green
2022	Red	Yellow	Green
2023	Red	Yellow	Green
2024	Red	Yellow	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure HXVI

8.46 Achieving a viable position with any amount of affordable housing against previously developed residential land values on schemes of this density will be very difficult to achieve, even with grant and/or considerations of tenure and S106 requirements.

Density 100 dph & 120 dph

8.47 As was the case for CM17, the ability to achieve affordable housing on schemes of this density is extremely challenging and it will be very difficult to achieve viability with any affordable housing again either industrial/greenfield or previously developed residential land values. The exception may be where flatted developments attract executive style luxury apartments and consequently achieve higher sales values than we have tested. For example, where flats are sold for up to, say, £300,000 then an element of affordable housing may be afforded.

Value Area: CM19

Density 30 dph

8.48 Assuming the baseline position (35% affordable housing) at this density demonstrated a currently viable position. For example, on the 50 unit scheme a residual value of circa £1.9 million per hectare can be achieved currently and in middle market conditions. This value is not sufficient to clear the previously developed residential land value but is sufficient against industrial/greenfield. For these reasons we have tested a target above 35% for industrial/greenfield land values and below it for previously developed residential land values.

8.49 Figure HXVII shows the position with 40% affordable housing (all other baseline variables remaining the same) and demonstrates that this percentage may be achievable should at least middle market conditions be achieved. Figure HXVIII shows the same assumptions on the 15 unit notional scheme.



Harlow CM19			
15 units on a 0.5 hectare site (30 units per hectare density) - 0 flat(s) and 15 house(s).			
AH Mix:	70-30 Social Rent:Intermediate		
40% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2011	MARGINALLY VIABLE	MARGINALLY VIABLE	VIABLE
2012	MARGINALLY VIABLE	MARGINALLY VIABLE	VIABLE
2013	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2014	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2015	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2016	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2017	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2018	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2019	MARGINALLY VIABLE	MARGINALLY VIABLE	VIABLE
2020	MARGINALLY VIABLE	MARGINALLY VIABLE	VIABLE
2021	MARGINALLY VIABLE	MARGINALLY VIABLE	VIABLE
2022	MARGINALLY VIABLE	MARGINALLY VIABLE	VIABLE
2023	VIABLE	VIABLE	VIABLE
2024	VIABLE	VIABLE	VIABLE
2025	VIABLE	VIABLE	VIABLE
2026	VIABLE	VIABLE	VIABLE
	NOT VIABLE	MARGINALLY VIABLE	VIABLE

Figure HXVII

Figure HXXII

Harlow CM19			
50 units on a 1.67 hectare site (30 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix:	70-30 Social Rent:Intermediate		
40% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2011	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2012	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2013	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2014	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2015	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2016	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2017	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2018	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2019	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2020	MARGINALLY VIABLE	MARGINALLY VIABLE	VIABLE
2021	MARGINALLY VIABLE	MARGINALLY VIABLE	VIABLE
2022	MARGINALLY VIABLE	MARGINALLY VIABLE	VIABLE
2023	MARGINALLY VIABLE	MARGINALLY VIABLE	VIABLE
2024	MARGINALLY VIABLE	MARGINALLY VIABLE	VIABLE
2025	MARGINALLY VIABLE	MARGINALLY VIABLE	VIABLE
2026	MARGINALLY VIABLE	MARGINALLY VIABLE	VIABLE
	NOT VIABLE	MARGINALLY VIABLE	VIABLE

Figure HXVIII

8.50 Against previously developed residential values the baseline position is not viable. Therefore we have tested 35% affordable housing with grant and a marginally viable position can be reached currently on the 50 unit notional scheme in middle market conditions, achieving a residual land value of circa £2.26 million per hectare. A viable outcome can be achieved at this sensitivity throughout the Core



Strategy period in upside market conditions and in the latter half should middle market conditions be experienced.

- 8.51 On the smaller notional scheme of 15 units, 27% affordable housing has been tested (all other baseline variables remaining the same) and found to be viable throughout most of the Core Strategy period in middle and upside market conditions. Figure HXIX shows this position.

Harlow CM19			
15 units on a 0.5 hectare site (30 units per hectare density) - 0 flat(s) and 15 house(s).			
AH Mix:	70-30 Social Rent:Intermediate		
27% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Green	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Green	Green
2019	Red	Green	Green
2020	Red	Green	Green
2021	Red	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure HXIX

- 8.52 See appendix 12 for more detailed information on sensitivities that we have tested.

Value Area: CM19

Density 50 dph

- 8.53 Assuming the baseline position (35% affordable housing) at this density demonstrated a marginally viable position. In the longer term and/or in upside market conditions, 35% affordable housing is achievable at the baseline position against industrial/greenfield land values as shown in figure HXX.
- 8.54 Against previously developed residential values the baseline position is not viable. Therefore we have tested below 35% and it would appear that delivery of 25% affordable housing may be achievable at the baseline position in upside market conditions and in the latter half of the Core Strategy period as Figure HXXI demonstrates.
- 8.55 Our sensitivity testing has shown that an alternative way to ease viability in the early years of the Core Strategy may be to provide higher numbers of intermediate affordable units, reduce S106 requirements to 50% of the baseline level and/or seek grant funding.



Harlow CM19			
50 units on a 1 hectare site (50 units per hectare density) - 0 flat(s) and 50 house(s).			
35% Affordable Housing			
AH Mix:	70-30 Social Rent:Intermediate		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2011	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2012	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2013	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2014	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2015	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2016	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2017	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2018	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2019	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2020	MARGINALLY VIABLE	VIABLE	VIABLE
2021	MARGINALLY VIABLE	VIABLE	VIABLE
2022	MARGINALLY VIABLE	VIABLE	VIABLE
2023	MARGINALLY VIABLE	VIABLE	VIABLE
2024	MARGINALLY VIABLE	VIABLE	VIABLE
2025	MARGINALLY VIABLE	VIABLE	VIABLE
2026	MARGINALLY VIABLE	VIABLE	VIABLE
	NOT VIABLE	MARGINALLY VIABLE	VIABLE

Figure HXX

Harlow CM19			
50 units on a 1 hectare site (50 units per hectare density) - 0 flat(s) and 50 house(s).			
25% Affordable Housing			
AH Mix:	70-30 Social Rent:Intermediate		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	NOT VIABLE	VIABLE
2011	NOT VIABLE	NOT VIABLE	VIABLE
2012	NOT VIABLE	NOT VIABLE	VIABLE
2013	NOT VIABLE	NOT VIABLE	VIABLE
2014	NOT VIABLE	NOT VIABLE	VIABLE
2015	NOT VIABLE	NOT VIABLE	VIABLE
2016	NOT VIABLE	NOT VIABLE	VIABLE
2017	NOT VIABLE	NOT VIABLE	VIABLE
2018	NOT VIABLE	NOT VIABLE	VIABLE
2019	NOT VIABLE	NOT VIABLE	VIABLE
2020	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2021	NOT VIABLE	VIABLE	VIABLE
2022	NOT VIABLE	VIABLE	VIABLE
2023	NOT VIABLE	VIABLE	VIABLE
2024	NOT VIABLE	VIABLE	VIABLE
2025	NOT VIABLE	VIABLE	VIABLE
2026	NOT VIABLE	VIABLE	VIABLE
	NOT VIABLE	MARGINALLY VIABLE	VIABLE

Figure HXXI



Value Area: CM19

Density 70 dph

- 8.56 We have tested with baseline assumptions down to 10% affordable housing and against industrial/greenfield land values this level may only be achievable in upside market conditions late in the Core Strategy period. Achieving a viable position with any amount of affordable housing against previously developed residential land values on schemes of this density will be very difficult to achieve, even with grant and/or considerations of tenure and S106 requirements.

Density 100 dph & 120 dph

- 8.57 As was the case for the previous two value areas, the ability to achieve affordable housing on schemes of this density is extremely challenging and it will be very difficult to achieve viability with any affordable housing against either industrial/greenfield or previously developed residential land values. The only exception to this may be where flatted developments achieve higher sales values than we have tested.

Value Area: CM20

Density 30 dph

- 8.58 Assuming the baseline position (35% affordable housing) at this density the 50 unit development is currently marginally viable (achieving a residual land value of circa £1.66 million per hectare and the 15 unit scheme is currently viable (achieving a residual land value of circa £1.9 million per hectare). This is against industrial/greenfield land values.
- 8.59 In upside market conditions and later in the Core Strategy 40% affordable housing is achievable. Figure HXXII shows the baseline position at 35% affordable housing while figure HXIII shows the same with 40% affordable housing against industrial/greenfield land values.



Harlow CM20			
50 units on a 1.67 hectare site (30 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix:	70-30 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Yellow	Yellow	Green
2020	Yellow	Green	Green
2021	Yellow	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure HXXII

Harlow CM20			
50 units on a 1.67 hectare site (30 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix:	70-30 Social Rent:Intermediate		
40% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Yellow	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure HXXIII

8.60 Against previously developed residential values the baseline position is not currently viable. Therefore we have tested down to 20% affordable housing and a marginally viable outcome is currently achievable in middle market conditions as shown in Figure HXXIV. Later in the Core Strategy period and in upside market conditions up to 35% affordable housing may be achievable and Figure HXXV shows this position.



Harlow CM20			
50 units on a 1.67 hectare site (30 units per hectare density) - 0 Flat(s) and 50 house(s).			
20% Affordable Housing			
AH Mix:	70-30 Social Rent:Intermediate		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Green	Green
2021	Red	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Red	Green	Green
2026	Red	Green	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure HXXIV

Harlow CM20			
50 units on a 1.67 hectare site (30 units per hectare density) - 0 Flat(s) and 50 house(s).			
35% Affordable Housing			
AH Mix:	70-30 Social Rent:Intermediate		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Yellow
2017	Red	Red	Yellow
2018	Red	Red	Green
2019	Red	Red	Green
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Red	Yellow	Green
2023	Red	Yellow	Green
2024	Red	Yellow	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure HXXV

8.61 See appendix 12 for more detailed information on sensitivities that we have tested.

Density 50 dph

8.62 Testing at the baseline position delivers a marginally viable outcome against greenfield/industrial land values on the 50 unit scheme achieving a residual land value of circa £1.6 million per hectare in middle market conditions. This position is shown in Figure HXXVI.



Harlow CM19			
40% Affordable Housing			
AH Mix:	50:50 Social Rent to Intermediate		
	100 \$106 allowance		
	Lower AUV sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Yellow	Yellow	Green
2021	Yellow	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure HXXVI

8.63 On the smaller notional scheme (15 units) the baseline position is not currently viable and we have tested down to 25% affordable housing and again a marginally viable position in middle market conditions is the current outcome against industrial/greenfield land values (achieving a residual land value of circa £1.26 million per hectare). This position is shown in Figure HXXVII.

Harlow CM20			
50 units on a 1 hectare site (50 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix:	70-30 Social Rent:Intermediate		
25% Affordable Housing			
	100% \$106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Yellow	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Yellow	Yellow	Green
2020	Yellow	Green	Green
2021	Yellow	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure HXXVII

8.64 Against previously developed residential land values the baseline position is not viable. We have tested 25% affordable housing on the 50 unit scheme and this may be achievable in upside market conditions and late in the Core Strategy period should middle market conditions prevail. This position is shown in Figure HXXVIII. The addition of public subsidy at normal level is not sufficient to achieve a viable outcome in the short term in middle market conditions therefore we have tested



down to 10% (all other variables as the baseline position) and the results of this are shown in Figure HXXIX.

Harlow CM20			
50 units on a 1 hectare site (50 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix:	70-30 Social Rent:Intermediate		
25% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2011	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2012	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2013	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2014	NOT VIABLE	NOT VIABLE	VIABLE
2015	NOT VIABLE	NOT VIABLE	VIABLE
2016	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2017	NOT VIABLE	NOT VIABLE	VIABLE
2018	NOT VIABLE	NOT VIABLE	VIABLE
2019	NOT VIABLE	NOT VIABLE	VIABLE
2020	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2021	NOT VIABLE	VIABLE	VIABLE
2022	NOT VIABLE	VIABLE	VIABLE
2023	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2024	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2025	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2026	NOT VIABLE	MARGINALLY VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure HXXVIII

Harlow CM20			
50 units on a 1 hectare site (50 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix:	70-30 Social Rent:Intermediate		
10% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2011	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2012	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2013	NOT VIABLE	NOT VIABLE	VIABLE
2014	NOT VIABLE	NOT VIABLE	VIABLE
2015	NOT VIABLE	NOT VIABLE	VIABLE
2016	NOT VIABLE	NOT VIABLE	VIABLE
2017	NOT VIABLE	NOT VIABLE	VIABLE
2018	NOT VIABLE	NOT VIABLE	VIABLE
2019	NOT VIABLE	VIABLE	VIABLE
2020	NOT VIABLE	VIABLE	VIABLE
2021	NOT VIABLE	VIABLE	VIABLE
2022	NOT VIABLE	VIABLE	VIABLE
2023	MARGINALLY VIABLE	VIABLE	VIABLE
2024	MARGINALLY VIABLE	VIABLE	VIABLE
2025	MARGINALLY VIABLE	VIABLE	VIABLE
2026	MARGINALLY VIABLE	VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure HXXXIX

8.65 See appendix 12 for more detailed information on sensitivities that we have tested including more detailed testing of the 15 unit scheme.

Density 70 dph



8.66 We have tested with baseline assumptions down to 10% affordable housing and against industrial/greenfield land values this level may only be achievable in upside market conditions and later in the Core Strategy period in middle market conditions. This is shown in Figure HXXX.

Harlow CM20			
50 units on a 1 hectare site (50 units per hectare density) - 0 flat(s) and 50 house(s).			
35% Affordable Housing			
AH Mix:	70-30 Social Rent:Intermediate		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Yellow	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure HXXX

8.67 Achieving a viable position with 10% affordable housing against previously developed residential land values on schemes of this density will be very difficult to achieve, and is likely only to be deliverable late in the Core Strategy period in upside market conditions.

Density 100 dph & 120 dph

8.68 The ability to achieve affordable housing on schemes of this density is extremely challenging in this value area and it will be very difficult to achieve viability with any affordable housing against either industrial/greenfield or previously developed residential land values. The only exception to this may be where flatted developments achieve higher sales values than we have tested.

Notional Site – 6 to 14 unit development at 30 dph

8.69 The ability of small sites to meet a wide range of affordable housing tenure mixes is limited and we have tested sites below the 15 unit threshold as providing either 100% social rented or 100% intermediate affordable housing. Due to the small number of affordable units these sites may generate we have used these tenure mixes as:

- It is more economical for RSLs to provide management services to units of the same tenure on the same site when they are provided in very low numbers;



- Applying the tenure mixes used in respect of larger notional development sites are likely to result in part units rather than whole units on sites of this size.

8.70 Generally these sites are very sensitive to changes in tenure and to grant coming forward. In no cases would more than a 30% target be justified especially as the majority of sites may be coming forward at values equivalent to Previously Developed residential land values. However the assessment of viability against industrial/greenfield values may still be relevant as some sites may be coming forward against that value assumption.

Value Area: CM17

8.71 Generally against industrial/greenfield values 30% affordable housing will be viable for the lifetime of the plan and could be achieved presently. However, against previously developed residential land values it is likely that it will not be possible to achieve more than 20% affordable housing on site or as an equivalent off site and even this is only likely in upside conditions. Figure HXXXI shows the position of a 10 unit scheme of 20% affordable housing in CM17 whilst Figure HXXXII shows the position of 10% affordable housing.

Harlow CM17			
10 units on a 0.33 hectare site (30 units per hectare density) - 0 flat(s) and 10 house(s).			
20% Affordable Housing			
AH Mix:	100% Intermediate		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Red
2011	Red	Red	Green
2012	Red	Red	Green
2013	Red	Red	Green
2014	Red	Red	Green
2015	Red	Red	Green
2016	Red	Red	Green
2017	Red	Red	Green
2018	Red	Red	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Yellow	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure HXXXI



Harlow CM17			
10 units on a 0.33 hectare site (30 units per hectare density) - 0 flat(s) and 10 house(s).			
10% Affordable Housing			
AH Mix:	100% Intermediate		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	DOWNSIDE	VIABILITY MIDDLE	UPSIDE
2010	Red	Red	Red
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Red	Yellow	Green
	Red		
	Yellow		
	Green		

Figure HXXXII

Value Area: CM18

8.72 Schemes of 20% affordable housing with nil grant (100% shared ownership) are only currently marginally viable against industrial/greenfield and values. In upside conditions however and later in the period assessed in middle market conditions delivery of this percentage is likely to be viable. Figure HXXXIII. Against previously developed land values no sensitivity shows scheme viability at any percentage of affordable housing currently. In the longer term it is very likely that no more than 10% affordable housing could be achieved against previously developed land.

Harlow CM18			
10 units on a 0.333 hectare site (30 units per hectare density) - 0 flat(s) and 10 house(s).			
AH Mix:	100% Intermediate		
20% Affordable Housing			
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	DOWNSIDE	VIABILITY MIDDLE	UPSIDE
2010	Yellow	Yellow	Yellow
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Yellow	Yellow	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
	Red		
	Yellow		
	Green		

Figure HXXXIII



Value Area: CM19

8.73 Currently schemes of 30% affordable housing (100% shared ownership) are viable against industrial/greenfield land values while against previously developed residential values they are marginally viable. Figure HXXXIV shows the viability position of 30% affordable housing with nil grant.

Harlow CM19			
10 units on a 0.33 hectare site (30 units per hectare density) - 0 flat(s) and 10 house(s).			
30% Affordable Housing			
AH Mix:	100% Intermediate		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2011	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2012	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2013	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2014	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2015	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2016	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2017	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2018	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2019	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2020	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2021	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2022	MARGINALLY VIABLE	MARGINALLY VIABLE	VIABLE
2023	MARGINALLY VIABLE	MARGINALLY VIABLE	VIABLE
2024	MARGINALLY VIABLE	MARGINALLY VIABLE	VIABLE
2025	MARGINALLY VIABLE	MARGINALLY VIABLE	VIABLE
2026	MARGINALLY VIABLE	MARGINALLY VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure HXXXIV

8.74 In the longer term assuming at least middle economic conditions, 30% is likely to be viable in this area even against previously developed values.

Value Area: CM20

8.75 30% affordable housing is currently viable against intermediate and marginal with 100% social rent against industrial/greenfield value land. Against previously developed land currently only 10% affordable housing could be achieved assuming 100% social rent. It is likely that 20% affordable housing may be achieved later in the Core Strategy, or throughout should upside market conditions be achieved. This is demonstrated in Figure HXXXV.



Harlow CM20			
10 units on a 0.33 hectare site (30 units per hectare density) - 0 flat(s) and 10 house(s).			
20% Affordable Housing			
AH Mix:	100% Social Rent		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Red
2011	Red	Red	Red
2012	Red	Yellow	Green
2013	Red	Red	Green
2014	Red	Red	Green
2015	Red	Red	Green
2016	Red	Red	Green
2017	Red	Red	Green
2018	Red	Red	Green
2019	Red	Red	Green
2020	Red	Green	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure HXXXV

Notional Site – 6 to 14 unit development at 50 dph

Value Area: CM17

- 8.76 Delivery of 20% affordable housing (all units assessed as intermediate) is currently marginally viable against industrial/greenfield land values and remains so for the duration of the period assessed in middle market conditions.
- 8.77 Against previously developed residential land values, 10% affordable housing has been assessed and it is likely that this could be the maximum achievable amount even in upside market conditions.

Value Area: CM18

- 8.78 Delivery of any amount of affordable housing on schemes of this nature is unlikely to be viable on sites coming forward against previously developed residential land values. Against industrial/greenfield land values 10% affordable housing (intermediate tenure only) is marginally viable in upside market conditions or later in the Plan period in middle market conditions.

Value Area: CM19

- 8.79 As with value area CM18, delivery of any amount of affordable housing on schemes of this nature is unlikely to be viable on sites coming forward against previously developed residential land values. Against industrial/greenfield land values 10% affordable housing (intermediate tenure only) is marginally viable in upside market conditions or later in the Plan period in middle market conditions.



Value Area: CM20

8.80 The viability position of 10% affordable housing (intermediate tenure) assuming industrial/greenfield land values is shown in Figure HXXXVI and demonstrates delivery at even this level is likely to be challenging. Although should upside conditions prevail it is likely to be achievable in the second half of the period assessed.

Harlow CM20			
10 units on a 0.2 hectare site (50 units per hectare density) - 4 flat(s) and 6 house(s).			
AH Mix:	100% Intermediate		
10% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Yellow
2011	Red	Yellow	Yellow
2012	Red	Yellow	Yellow
2013	Red	Yellow	Yellow
2014	Red	Yellow	Yellow
2015	Red	Yellow	Yellow
2016	Red	Yellow	Yellow
2017	Red	Yellow	Yellow
2018	Red	Yellow	Yellow
2019	Red	Yellow	Yellow
2020	Red	Yellow	Yellow
2021	Yellow	Yellow	Green
2022	Yellow	Yellow	Green
2023	Yellow	Yellow	Green
2024	Yellow	Yellow	Green
2025	Yellow	Yellow	Green
2026	Yellow	Yellow	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure HXXXVI

8.81 On land coming forward with an existing residential use delivery of even 10% affordable housing (or equivalent off site contribution) is unlikely to be achievable until later in the Plan period and even then only should market conditions achieve the upside.

Notional Site – 6 to 14 unit development at 70 dph

8.82 It is unlikely that development of this nature would be able to support any affordable housing contribution over the period assessed unless schemes are coming forward with values equivalent or higher than those assessed for value area CM17. In the case of value area CM17, up to 10% affordable housing may be achieved against industrial/greenfield land values although it is unlikely that a viable affordable housing position could be achieved where the existing land use is residential. There of course may be instances where high value executive style higher density developments come forward and these may be able to support an affordable housing contribution provided sales values are in excess of those tested for the purposes of this study.



9.0 Results Analysis - Uttlesford

Introduction

- 9.1 The general parameters and assumptions set out in Section 3 of this report have been applied to our assessment of notional sites in Uttlesford. We have used these basic assumptions and then made them specific to the Uttlesford situation by looking at a range of housing developments across the District using a residual valuation appraisal tool of the kind recommended in the Government's Delivering Affordable Housing statement. This is then used as the base for testing future cost and value scenarios using upside, middle and downside housing market growth scenarios during the Local Development Framework period. These future assessments take account of changes to property values, inflation, construction, rent and land values over the same timescale. Our assessment is based on the viability of delivering affordable housing across a range of notional sites. These notional sites were selected in consultation with the Council.

Uttlesford Summary

- 9.2 In Uttlesford, the post code areas used for modelling purposes were as follows:
- CB10
 - CB11
 - CM6
 - CM22
 - CM23
- 9.3 In some cases, postcode areas cross local authority boundaries.
- 9.4 In all of these areas, the notional sites confirmed as appropriate in consultation with the Council were tested. These notional sites were as follows:
- 15 unit site (at 30 dph, 50 dph, 67 dph);
 - 50 unit site (at 30 dph, 50 dph, 67 dph);
 - 250 unit site (at 30 dph, 50 dph, 67 dph)
- 9.5 In addition sites below the 15 unit level were also tested.
- 9.6 In consultation with Council officers, it was agreed to test the following large strategic sites in Uttlesford:
- 3000 unit scheme (at 30 dph and 50 dph)
 - 5000 unit scheme (at 30 dph and 50 dph)
- 9.7 In Uttlesford it is essential to establish a baseline to determine at which point land will come forward for development. In order for this to happen residual land values



must exceed existing or alternative uses of the site. We have utilised the services of an independent qualified valuer to help us assess values in the sub region partly because of the lack of transparent information on land values. In particular, the level of transactions in the District, indeed in the sub-region as a whole, has been very low. Therefore it is very difficult to make any firm assessments about the absolute value at which land will come forward. A letter from the valuer³⁵ confirms this situation and confirms the relationship of land value to Gross development Value which has been used to influence our viability testing. We are also aware of the differences between developing on previously developed land and Greenfield or other land where competing uses may be commercial or industrial. Other viability studies undertake their assessments using only the industrial land value as a test against which sites may come forward. In our view this type of assessment may be limited and therefore we have tested against three key areas.

- 9.8 The first is Valuation Office Agency (VOA) data regarding industrial land values in the areas as at July 2009, and takes into account an uplift of 20%. Secondly, we have used residential values from VOA (July 2009) in order to test what we have termed previously developed land. Finally, we are aware that VOA data does have a number of limitations. Therefore, in order to 'future proof' this assessment, and to reflect land owners differing expectations we have instead looked at the relationship between residual land values and gross development value.
- 9.9 In line with the rest of this study and as explained in detail in section 3 Levvel's methodology enables the effect of a range of delivery timescales, thus all development scenarios selected are tested assuming development start dates of the date of modelling, date of modelling plus 1 year, plus 2 years, plus 3 years, and so on until 2026.
- 9.10 The use of the Levvel methodology allows for variations in land value over time to be accounted for, again ensuring 'future proofing' of the viability study. We know that there is a minimum land value which schemes need to achieve in order to be brought forward, otherwise it becomes more economic for the site to continue in its existing (or alternative) use.
- 9.11 The Valuation Office Agency (VOA) provided data on agricultural land and property values. It is unrealistic however to assume that Greenfield development land would be traded for residential use at these rates. For example the average value of unequipped arable land with vacant possession in the East of England as at July 2009 was £14,924 while in the South East it was £19,671. It is likely that landowners on agricultural land will be looking for a considerable uplift on these values. Stakeholder engagement (see Appendix 9) has confirmed this view.
- 9.12 Thus in respect of development occurring on Greenfield or industrial sites, VOA data on industrial land values in the district³⁶ will be used as a check. In Uttlesford, this level has been assessed at £1,200,000 per hectare plus 20% uplift (totalling £1,440,000 per hectare).

³⁵ See letter date 9th February 2010 from Thornes (Appendix 8)

³⁶ See Paragraph 3.21



- 9.13 In respect of development occurring on previously developed residential land, (VOA) data on residential land prices have been used as the check and inflated by 20% in the same manner as for industrial land £3,615,000 per hectare plus 20% uplift (totalling £4,338,000 per hectare).
- 9.14 Both of these values will be linked to the future growth assessments as outlined in Appendix 3 to this report to reflect the relationship between land and property values and ensure effective 'future proofing' of the assessment.
- 9.15 Whilst we will use VOA data as outlined above as one test of viability, we recognise that VOA data can be as much as six months out of date and not available at a sufficiently local level to enable local variations in land values to be assessed. Furthermore, the imposition of affordable housing planning policy will necessarily reduce land values in certain schemes. Therefore it is not enough to assess the viability of a particular scheme purely against a fixed value. We have therefore developed a methodology that assesses how much landowners have been willing to accept for their land in the past, and expressed it in terms of the ratio between Gross Development Value and Residual Land Value (GDV:RLV). That is to say how much of the revenue from a scheme can be used to pay for the land. This allows for variations due to locality to be accounted for. It is our belief that this more readily accounts for local variations in land values and represents a more robust and credible evidence base.
- 9.16 The ratio between RLV and GDV has thus been assessed over the period 2001 to 2009 using VOA data. The effect can be seen that in a rising and somewhat overheated market, landowner expectations rise and the price that developers are willing to pay also increases (often based on future expectations of property values). However, in a falling and "normal" market landowner expectations fall to more "reasonable" levels. Thus the relationship between GDV and RLV as a check provides a further degree of future proofing as if housing market values increase, the land value will also increase. Conversely, if values fall, then land value can also be expected to fall.
- 9.17 We have also taken the advice of a valuer who has confirmed that our approach is a reasonable one. The levels of RLV to GDV have been set in accordance with the valuers assessment³⁷. In respect of sites of 10 units and less, a figure of 28% to 35% of Gross Development Value depending on density (see paragraph 3.20 -3.24) has been used as a test for the level at which the Residual Land Value may need to reach in order to incentivise the landowner sufficiently to bring forward his parcel of land. This reflects our assessment of the relative value of small sites. For lower density sites in general, a level of 30% RLV to GDV has been used, for mid density schemes 28% has been used and for high density developments the 25% level of RLV to GDV has been used. In respect of large scale strategic sites (1500 units and above) a figure of 20% of Gross Development Value (GDV) as the level at which the Residual Land Value may need to reach has been used as a test.
- 9.18 Our assessment for viability involves a cross reference of the absolute land value against alternative use value (PDL or industrial) and the RLV to GDV position. Within each test we have assumed a level of 'tolerance' so that a scheme that falls

³⁷ See Thornes letter dated 9th February 2010 (Appendix 8)



within 10% either way of the industrial or PDL land value is deemed to be marginally viable and a scheme that falls within 20% plus or minus of the RLV to GDV test is also deemed to be marginally viable against that test. The two tests are then assessed in parallel rather than sequentially so that a scheme that is not viable against the absolute land value will be deemed not viable even if it achieves viability on the RLV to GDV test.

- 9.19 Using these three tests of viability, it is possible to inform a policy position that has flexibility and is relevant for the life of the plan to ensure deliverability.
- 9.20 Where shown the results tables set out the three market scenarios, downside, middle and upside and then record whether the notional schemes assessed are likely to be viable, marginal or not viable. The dates in the left hand column refer to the start dates for development.

General Development Sites (15 to 250 units)

- 9.21 This section summarises the results for each value area in Uttlesford. We look at the baseline position for each density tested and then we look at sensitivities and their effect on viability. For Uttlesford, we report on a baseline affordable housing target of 35% and then for each value area we report on the realistic target above or below that baseline. The baseline position assumes nil public subsidy, 19% gross profit and a 70:30 split of social rented to intermediate affordable housing. Section 106 contributions are in line with 100% of the baseline level as set out in Appendix 6 and section 3 of this main report.
- 9.22 More detailed sensitivity testing regarding Uttlesford is contained in the Appendices.

Value Area: CB10

Density 30 dph

- 9.23 Testing at the baseline position (35% affordable housing) demonstrated a current viable outcome against industrial/greenfield land values. For example, the 15 unit development achieves a residual land value of circa £2.2million per hectare. This value is not sufficient to clear the previously developed residential value but is sufficient against industrial/greenfield. For these reasons we have tested a target above 35% for industrial/greenfield land values and below it for previously developed residential land values.
- 9.24 The results of these sensitivities show that up to 40% affordable housing is likely to be achievable against greenfield/industrial with the middle economic assumption. Indeed, on the medium sized sites (50 units for example) 45% may even be achievable and certainly in upside economic conditions. Grant will not be necessary to achieve these levels.
- 9.25 Figure UI shows the position for 15 units with 40% affordable housing (all other parameters in line with the baseline position). Figure UII shows the position on the 50 unit scheme and the same assumptions. Both of these assume industrial/greenfield alternative land values.



15 units on a 0.5 hectare site (30 units per hectare density) - 0 flat(s) and 15 house(s). Uttlesford - CB10			
40% Affordable Housing			
AH Mix:	70:30 Social Rent:Intermediate 100% S106 allowance Nil Grant Lower EUV sensitivity. 19% Gross Profit sensitivity.		
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Green	Green
2011	Red	Green	Green
2012	Red	Green	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Green	Green
2020	Red	Green	Green
2021	Red	Green	Green
2022	Yellow	Green	Green
2023	Green	Green	Green
2024	Green	Green	Green
2025	Green	Green	Green
2026	Green	Green	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure UI

Uttlesford CB10			
50 units on a 1.666 hectare site (30 units per hectare density) - 0 flat(s) and 50 house(s).			
40% Affordable Housing			
AH Mix:	70:30 Social Rent:Intermediate 100% S106 allowance Nil Grant Lower EUV sensitivity. 19% Gross Profit sensitivity.		
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Green	Green
2011	Red	Green	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Green	Green
2020	Red	Green	Green
2021	Yellow	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Green	Green	Green
2025	Green	Green	Green
2026	Green	Green	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure UII

9.26 Against previously developed residential land values we have tested with baseline assumptions down to 10% affordable housing and this level will only be marginally viable even in upside economic conditions. Therefore we have tested with additional grant and this will have a marginal impact.



9.27 Among our sensitivity testing we have looked at the effect of affordable housing tenure mix and this has shown that increasing the proportion of intermediate tenure at the expense of social rented improves viability and may increase the amount of affordable housing that can be achieved. See appendix 13 for more detailed information on sensitivities that we have tested.

Value Area: CB10

Density 50 dph

9.28 At this density testing at the baseline position (35% affordable housing) demonstrated a current viable outcome against industrial/greenfield land values. For example, the 15 unit development achieves a residual land value of circa £2.8million per hectare demonstrating that development at this density achieves a more viable outcome than at 30 dph. Again, this value is not sufficient to clear the previously developed residential value but is sufficient against industrial/greenfield. For these reasons we have tested a target above 35% for industrial/greenfield land values and below it for previously developed residential land values.

9.29 The results of these sensitivities show that up to 45% affordable housing may be achievable against greenfield/industrial with the middle economic assumption. Grant will not be necessary to achieve these levels.

9.30 Figure UIII shows the position for 50 units with 45% affordable housing (all other parameters in line with the baseline position). This assumes industrial/greenfield alternative land values

Uttlesford CB10			
50 units on a 1 hectare site (50 units per hectare density) - 0 flat(s) and 50 house(s).			
45% Affordable Housing			
AH Mix:	70:30 Social Rent/Intermediate		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Yellow	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure UIII

9.31 Against previously developed residential land values we have tested with baseline assumptions down to 10% affordable housing and this level is achievable in upside market conditions throughout the Core Strategy period and later in the middle economic assumption. Therefore we have tested with additional grant and this



eases viability in the first half of the Core Strategy period in middle market conditions. Figure UIV shows the position with grant.

Uttlesford CB10			
50 units on a 1 hectare site (50 units per hectare density) - 0 flat(s) and 50 house(s).			
10% Affordable Housing			
AH Mix:	70:30 Social Rent/Intermediate		
	100% S106 allowance		
	Normal Grant Higher EUV sensitivity.		
	19% Gross Profit sensitivity.		
	VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2011	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2012	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2013	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2014	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2015	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2016	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2017	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2018	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2019	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2020	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2021	MARGINALLY VIABLE	VIABLE	VIABLE
2022	MARGINALLY VIABLE	VIABLE	VIABLE
2023	MARGINALLY VIABLE	VIABLE	VIABLE
2024	MARGINALLY VIABLE	VIABLE	VIABLE
2025	NOT VIABLE	VIABLE	VIABLE
2026	NOT VIABLE	VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure UIV

9.32 Among our sensitivity testing we have looked at the effect of affordable housing tenure mix and again this has shown that increasing the proportion of intermediate tenure at the expense of social rented improves viability and may increase the amount of affordable housing that can be achieved. See appendix 13 for more detailed information on sensitivities that we have tested.

Value Area: CB10

Density 67 dph

9.33 At this density testing at the baseline position (35% affordable housing) demonstrated either an unviable or marginally viable outcome (dependent upon scheme size) against industrial/greenfield land values. For example, the 15 unit development achieves a residual land value of circa £845,000 per hectare. However, residual values of circa £2.1 million per hectare are achieved currently on the 50 unit scheme in middle market conditions although only an RLV:GDV of 16% is reached. Therefore this is only a marginally viable outcome. Again, it is clear that these values are not sufficient to clear the previously developed residential value. For these reasons we have tested a target below 35% for previously developed residential land values.

9.34 Although 35% is not achievable currently against industrial/greenfield land values, Figure UV demonstrates that in the longer term, and/or in upside market conditions, this percentage may be achievable.



Uttlesford CB10			
50 units on a 0.746 hectare site (67 units per hectare density) - 24 flat(s) and 26 house(s).			
AH Mix:	70:30 Social Rent/Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Green	Green
2021	Yellow	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
	Red	=NOT VIABLE	
	Yellow	=Marginally VIABLE	
	Green	=VIABLE	

Figure UV

9.35 Against previously developed residential land values we have tested down to 10% affordable housing and this level is only achievable in upside market conditions throughout the Core Strategy period. Therefore we have tested with additional grant and this eases viability in the first half of the Core Strategy period in middle market conditions. Figure UVI shows the position with grant.

Uttlesford CB10			
50 units on a 0.746 hectare site (67 units per hectare density) - 24 flat(s) and 26 house(s).			
AH Mix:	50:50 Social Rent/Intermediate		
10% Affordable Housing			
100% S106 allowance			
Normal Grant Higher EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Green	Green
2020	Red	Green	Green
2021	Yellow	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
	Red	=NOT VIABLE	
	Yellow	=Marginally VIABLE	
	Green	=VIABLE	

Figure UVI



9.36 We tested a tenure split of 30:70 social rented to intermediate without public subsidy and the position at 35% affordable housing is shown in figure UVII indicating a mainly marginally viable outcome may be achievable in upside market conditions against previously developed residential land values. Marginal viability may also be achievable later in the Core Strategy period under middle market conditions.

SCHEME TYPE 3			
50 units on a 0.746 hectare site (67 units per hectare density) - 24 flat(s) and 26 house(s).			
Uttlesford CB10			
AH Mix:	30:70 Social rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Higher EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Yellow
2017	Red	Red	Yellow
2018	Red	Red	Yellow
2019	Red	Red	Yellow
2020	Red	Red	Green
2021	Red	Yellow	Green
2022	Red	Yellow	Green
2023	Red	Yellow	Green
2024	Red	Yellow	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure UVII

Value Area: CB11

All Densities

9.37 The results at all densities in CB11 are very similar to those for value area CB10 albeit residual values at 30 dph are marginally higher and at 50 dph marginally lower. The outcomes are therefore the same although precise residual values may vary. The baseline positions on a 50 unit scheme at 30, 50 and 67 dph are shown in figures UVIII, UIX and UX against industrial/greenfield land values.



Uttlesford CB 11			
50 units on a 1.666 hectare site (30 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix:	70:30 Social Rent/Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Green	Green
2011	Red	Green	Green
2012	Red	Green	Green
2013	Red	Green	Green
2014	Red	Green	Green
2015	Red	Green	Green
2016	Red	Yellow	Green
2017	Red	Green	Green
2018	Red	Green	Green
2019	Yellow	Green	Green
2020	Yellow	Green	Green
2021	Green	Green	Green
2022	Green	Green	Green
2023	Green	Green	Green
2024	Green	Green	Green
2025	Green	Green	Green
2026	Green	Green	Green
Red	=NOT VIABLE		
Yellow	=MARGINALLY VIABLE		
Green	=VIABLE		

Figure UVIII

Uttlesford CB 11			
50 units on a 1 hectare site (50 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix:	70:30 Social Rent/Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Green	Green
2020	Yellow	Green	Green
2021	Yellow	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Green	Green	Green
Red	=NOT VIABLE		
Yellow	=MARGINALLY VIABLE		
Green	=VIABLE		

Figure UIX



Uttlesford CB 1 1			
50 units on a 0.746 hectare site (67 units per hectare density) - 24 flat(s) and 26 house(s).			
AH Mix:	70:30 Social Rent/Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Yellow	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
Red	=NOT VIABLE		
Yellow	=Marginally VIABLE		
Green	=VIABLE		

Figure UX

Value Area: CM6

Density 30 dph

9.38 Assuming the baseline position (35% affordable housing) at this density demonstrated a currently unviable position. For example, on the 50 unit scheme a residual value of only circa £1.2million per hectare can be achieved currently and in middle market conditions. In the longer term and/or in upside market conditions 35% affordable housing is achievable at the baseline position against industrial/greenfield land values as shown in figure UX1.

Uttlesford CM6			
50 units on a 1.666 hectare site (30 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix:	70:30 Social Rent/Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Green
2012	Red	Red	Green
2013	Red	Red	Green
2014	Red	Red	Green
2015	Red	Red	Green
2016	Red	Red	Green
2017	Red	Red	Green
2018	Red	Red	Green
2019	Red	Red	Green
2020	Red	Yellow	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Red	Green	Green
Red	=NOT VIABLE		
Yellow	=Marginally VIABLE		
Green	=VIABLE		

Figure UX1



- 9.39 Against previously developed residential values the baseline position is not viable. Therefore we have tested below 35% and even at 6% affordable housing only a marginally viable outcome can be achieved.
- 9.40 We have assessed 35% affordable housing with public subsidy against industrial/greenfield land values and this eases viability in some earlier years in middle market conditions. Figure UXII shows the position on the same scheme as Figure UXI but with grant.

SCHEME TYPE 2 (50/50)		Uttlesford CM6	
50 units on a 1.666 hectare site (30 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix:		70:30 Social Rent/Intermediate	
35% Affordable Housing			
100% S106 allowance			
Normal Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2011	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2012	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2013	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2014	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2015	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2016	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2017	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2018	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2019	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2020	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2021	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2022	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2023	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2024	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2025	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2026	NOT VIABLE	MARGINALLY VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure UXII

- 9.41 Our sensitivity testing has shown that an alternative way to ease viability in the early years of the Core Strategy may be to provide higher numbers of intermediate affordable units.

Value Area: CM6

Density 50 dph

- 9.42 Assuming the baseline position (35% affordable housing) at this density demonstrated an unviable position and residual values are currently very similar to the 30 dph scheme in middle market conditions (circa £1.15million per hectare on the 50 unit scheme). In the longer term and/or in upside market conditions, 35% affordable housing is achievable at the baseline position against industrial/greenfield land values as shown in figure UXIII.



Uttlesford CM6			
50 units on a 1 hectare site (50 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix: 70:30 Social Rent/Intermediate			
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Green
2012	Red	Red	Green
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Yellow
2017	Red	Red	Yellow
2018	Red	Red	Green
2019	Red	Red	Green
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Red	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure UXIII

- 9.43 Against previously developed residential values the baseline position is not viable. Therefore we have tested below 35% and it would appear that delivery of any amount of affordable housing is unlikely to be achievable.
- 9.44 We have assessed 35% affordable housing with public subsidy against industrial/greenfield land values and this eases viability in some earlier years in middle market conditions. Figure UXIV shows the position on the same scheme as Figure UXIII but with grant.

SCHEME TYPE 2 (50/50)		Uttlesford CM6	
50 units on a 1 hectare site (50 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix: 70:30 Social Rent/Intermediate			
35% Affordable Housing			
100% S106 allowance			
Normal Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Red	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Red	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure UXIV



9.45 Our sensitivity testing has shown that an alternative way to ease viability in the early years of the Core Strategy may be to provide higher numbers of intermediate affordable units.

Value Area: CM6

Density 67 dph

9.46 Assuming the baseline 35% affordable housing is currently not viable and residual values are in the region of £900,000 per hectare for a 50 unit scheme. Later in the period (post 2020) in middle market conditions and throughout the Core Strategy period in upside market conditions, 35% affordable housing may be achievable. This is shown in Figure UXV. However, on the 15 unit scheme achieving a viable position at 35% affordable housing is unlikely in all scenarios.

Uttlesford CM6			
50 units on a 0.746 hectare site (67 units per hectare density) - 24 flat(s) and 26 house(s).			
AH Mix:	70:30 Social Rent/Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2011	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2012	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2013	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2014	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2015	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2016	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2017	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2018	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2019	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2020	NOT VIABLE	NOT VIABLE	VIABLE
2021	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2022	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2023	NOT VIABLE	VIABLE	VIABLE
2024	NOT VIABLE	VIABLE	VIABLE
2025	NOT VIABLE	VIABLE	VIABLE
2026	NOT VIABLE	VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure UXV

9.47 Against previously developed residential land values testing has shown that any affordable housing is likely to make schemes unviable.

9.48 We have assessed 35% affordable housing with public subsidy against industrial/greenfield land values and this eases viability in some earlier years in middle market conditions. Our sensitivity testing has also shown that an alternative way to ease viability in the early years of the Core Strategy may be to provide higher numbers of intermediate affordable units. Figure UXVI shows a 30:70 tenure split.



SCHEME TYPE 3			
50 units on a 0.746 hectare site (67 units per hectare density) - 24 flat(s) and 26 house(s).			
Uttlesford CM6			
AH Mix:	30:70 Social rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2011	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2012	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2013	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2014	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2015	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2016	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2017	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2018	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2019	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2020	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2021	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2022	NOT VIABLE	VIABLE	VIABLE
2023	NOT VIABLE	VIABLE	VIABLE
2024	NOT VIABLE	VIABLE	VIABLE
2025	NOT VIABLE	VIABLE	VIABLE
2026	NOT VIABLE	VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure UXVI

Value Area: CM22

Density 30 dph

9.49 Assuming the baseline position (35% affordable housing) at this density schemes are generally currently marginally viable in middle market conditions. The residual value that is generated on a 50 unit scheme is approximately £1.7million per hectare. In upside market conditions and post 2020 40% may be achievable. Figure UXVII shows the baseline position at 35% affordable housing while figure UXVIII shows the same with 40% affordable housing against industrial/greenfield land values.



Uttlesford CM22			
50 units on a 1.666 hectare site (30 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix:	70:30 Social Rent/Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	DOWNSIDE	VIABILITY	
		MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Green	Green
2020	Red	Green	Green
2021	Yellow	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Green	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure UXVII

Uttlesford CM22			
50 units on a 1.666 hectare site (30 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix:	70:30 Social Rent/Intermediate		
40% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	DOWNSIDE	VIABILITY	
		MIDDLE	UPSIDE
2010	Red	Red	Green
2011	Red	Red	Green
2012	Red	Red	Green
2013	Red	Red	Green
2014	Red	Red	Green
2015	Red	Red	Green
2016	Red	Red	Green
2017	Red	Red	Green
2018	Red	Red	Green
2019	Red	Yellow	Green
2020	Red	Green	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Red	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure UXVIII

- 9.50 Against previously developed residential values the baseline position is not viable. Therefore we have tested below 35% and even at 6% affordable housing only a marginally viable outcome can be achieved unless upside economic conditions are experienced.
- 9.51 In the early years of the Core Strategy it may be necessary to increase the proportion of intermediate affordable housing to achieve a more fully viable outcome in middle market conditions. Figure UXIX shows the position with a 30:70 tenure split (social rent:intermediate).



SCHEME TYPE 3			
50 units on a 1.666 hectare site (30 units per hectare density) - 0 flat(s) and 50 house(s).			
Uttlesford CM22			
AH Mix:	30:70 Social rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Green	Green
2011	Red	Green	Green
2012	Red	Green	Green
2013	Red	Green	Green
2014	Red	Green	Green
2015	Red	Green	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Green	Green
2019	Red	Green	Green
2020	Yellow	Green	Green
2021	Yellow	Green	Green
2022	Green	Green	Green
2023	Green	Green	Green
2024	Green	Green	Green
2025	Green	Green	Green
2026	Green	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure UXIX

Value Area: CM22

Density 50 dph

9.52 The results for the 50 dph scheme in CM22 show similar results to the 30 dph scheme although residual values are marginally higher (£2 million per hectare). The results for the 30 dph schemes can be seen to be materially the same as the 50 dph situation.

Value Area: CM22

Density 67 dph

9.53 Assuming the baseline position (35% affordable housing) at this density there is a difference between smaller and larger schemes. At this density smaller schemes (15 units for example) contain a higher proportion of flats than for 50 unit schemes and above. In line with our findings in the rest of the study, the greater the proportion of flats to houses the larger the impact on residual value.

9.54 Against greenfield/industrial alternative use values on 15 unit schemes at this density residual values equate to £380,000 per hectare while on the 50 unit and 250 unit schemes that we tested the residual value is between £1.44 million and £1.6 million per hectare. These values are for 2010 in the middle market scenario. Therefore, the effect at the baseline position is that on the larger schemes 35% affordable housing may be achievable throughout the Core Strategy period in upside conditions and in the second half of the period in middle market conditions. Whereas on the small schemes to achieve the baseline (35% position) it is only possible in upside market conditions only and in the last 8 to 10 years of the Core Strategy. Figure UXX shows the position for 15 units and Figure UXXI for 50 units.



Uttlesford - CM22			
15 units on a 0.223 hectare site (67 units per hectare density) - 9 flat(s) and 6 house(s).			
AH Mix:	70:30 Social Rent/Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Red
2011	Red	Red	Red
2012	Red	Red	Yellow
2013	Red	Red	Red
2014	Red	Red	Red
2015	Red	Red	Red
2016	Red	Red	Red
2017	Red	Red	Red
2018	Red	Red	Red
2019	Red	Red	Yellow
2020	Red	Red	Yellow
2021	Red	Red	Green
2022	Red	Red	Green
2023	Red	Red	Green
2024	Red	Red	Green
2025	Red	Red	Green
2026	Red	Red	Green
Red	=NOT VIABLE		
Yellow	=MARGINALLY VIABLE		
Green	=VIABLE		

Figure UXX

Uttlesford CM22			
50 units on a 0.746 hectare site (67 units per hectare density) - 24 flat(s) and 26 house(s).			
AH Mix:	70:30 Social Rent/Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Yellow
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Red	Green
2014	Red	Red	Green
2015	Red	Red	Green
2016	Red	Red	Yellow
2017	Red	Red	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Yellow	Green	Green
Red	=NOT VIABLE		
Yellow	=MARGINALLY VIABLE		
Green	=VIABLE		

Figure UXXI

- 9.55 Against previously developed residential values the baseline position is not viable in any scenario. We have tested down to 10% and this level may be achievable in upside market conditions.
- 9.56 Taking the above into account the allocation of grant may be necessary on smaller schemes especially. Figure UXXII shows the position on a 15 unit scheme with "normal" grant levels.



SCHEME TYPE 2 (50/50)		Uttlesford - CM22	
15 units on a 0.223 hectare site (67 units per hectare density) - 9 flat(s) and 6 house(s).			
AH Mix:		70:30 Social Rent/Intermediate	
35% Affordable Housing			
100% S106 allowance			
Normal Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Red
2011	Red	Red	Green
2012	Red	Red	Green
2013	Red	Red	Green
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Yellow
2017	Red	Red	Yellow
2018	Red	Red	Yellow
2019	Red	Red	Green
2020	Red	Red	Green
2021	Red	Red	Green
2022	Red	Yellow	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Red	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure UXXII

9.57 Our sensitivity testing has shown that an alternative or additional way to ease viability in the early years of the Core Strategy may be to provide higher numbers of intermediate affordable units.

Value Area: CM23

Density 30 dph

9.58 Assuming the baseline position (35% affordable housing) at this density schemes are generally currently unviable in middle market conditions. The residual value that is generated on a 50 unit scheme is approximately £1.3million per hectare. In upside market conditions and post 2020 35% is likely to be achievable. Figure UXXIII shows the baseline position at 35% affordable housing.



Uttlesford CM23			
50 units on a 1.666 hectare site (30 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix:	70:30 Social Rent/Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Green
2011	Red	Red	Green
2012	Red	Red	Green
2013	Red	Red	Green
2014	Red	Red	Green
2015	Red	Red	Green
2016	Red	Red	Green
2017	Red	Red	Green
2018	Red	Red	Green
2019	Red	Red	Green
2020	Red	Yellow	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Red	Green	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=Marginally VIABLE		
	=VIABLE		

Figure UXXIII

- 9.59 Against previously developed residential values the baseline position is not viable in any scenario. We have tested down to 10% and even this level is unlikely to be achievable.
- 9.60 Taking the above into account the allocation of grant may be necessary in the short term on land coming forward at industrial/greenfield values. Figure UXXIV shows the position on a 50 unit scheme with "normal" grant levels.

SCHEME TYPE 2 (50/50)		Uttlesford CM23	
50 units on a 1.666 hectare site (30 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix:	70:30 Social Rent/Intermediate		
35% Affordable Housing			
100% S106 allowance			
Normal Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Red	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Green	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Red	Green	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=Marginally VIABLE		
	=VIABLE		

Figure UXXIV



9.61 Our sensitivity testing has shown that an alternative or additional way to ease viability in the early years of the Core Strategy may be to provide higher numbers of intermediate affordable units.

Value Area: CM23

Density 50 dph

9.62 Assuming the baseline position (35% affordable housing) at this density schemes are generally currently unviable in middle market conditions. The results at 50dph are marginally better than at 30 dph. The residual value that is generated on a 50 unit scheme is approximately £1.6million per hectare. In upside market conditions and post 2017 35% is likely to be achievable. Figure UXXV shows the baseline position at 35% affordable housing.

Uttlesford CM23			
50 units on a 1 hectare site (50 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix:	70:30 Social Rent/Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2011	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2012	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2013	NOT VIABLE	NOT VIABLE	VIABLE
2014	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2015	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2016	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2017	NOT VIABLE	NOT VIABLE	VIABLE
2018	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2019	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2020	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2021	NOT VIABLE	VIABLE	VIABLE
2022	MARGINALLY VIABLE	VIABLE	VIABLE
2023	MARGINALLY VIABLE	VIABLE	VIABLE
2024	MARGINALLY VIABLE	VIABLE	VIABLE
2025	MARGINALLY VIABLE	VIABLE	VIABLE
2026	MARGINALLY VIABLE	VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure UXXV

9.63 Against previously developed residential values the baseline position is not viable. Therefore we have tested below 35% and at 10% it may be possible to achieve some affordable housing in upside market conditions.

9.64 We have considered the position both with grant at historic levels and changes to the tenure split and it is possible to achieve a marginally viable position at 35% affordable housing with either of these options.

Value Area: CM23

Density 67 dph

9.65 Assuming the baseline position (35% affordable housing) at this density there is a difference between smaller and larger schemes. At this density smaller schemes (15 units for example) contain a higher proportion of flats than for 50 unit schemes and above. In line with our findings in the rest of the study, the greater the proportion of flats to houses the larger the impact on residual value



9.66 Against greenfield/industrial alternative use values on 15 unit schemes at this density, residual values equate to approximately £320,000 per hectare while on the 50 unit and 250 unit schemes that we tested the residual value is between £1million and £1.14 million per hectare. These values are for 2010 in the middle market scenario. Therefore, the effect at the baseline position is that on the larger schemes 35% affordable housing may be achievable throughout most of the Core Strategy period in upside conditions and post 2020 in middle market conditions. Whereas on the small schemes to achieve the baseline (35% position) it is only possible in upside market conditions only and in the last 6 years of the Core Strategy. Figure UXXVI shows the position for 15 units and Figure UXXVII for 50 units.

Uttlesford - CM23			
15 units on a 0.223 hectare site (67 units per hectare density) - 9 flat(s) and 6 house(s).			
AH Mix:	70:30 Social Rent/Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	NOT VIABLE	NOT VIABLE
2011	NOT VIABLE	NOT VIABLE	NOT VIABLE
2012	NOT VIABLE	NOT VIABLE	NOT VIABLE
2013	NOT VIABLE	NOT VIABLE	NOT VIABLE
2014	NOT VIABLE	NOT VIABLE	NOT VIABLE
2015	NOT VIABLE	NOT VIABLE	NOT VIABLE
2016	NOT VIABLE	NOT VIABLE	NOT VIABLE
2017	NOT VIABLE	NOT VIABLE	NOT VIABLE
2018	NOT VIABLE	NOT VIABLE	NOT VIABLE
2019	NOT VIABLE	NOT VIABLE	NOT VIABLE
2020	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2021	NOT VIABLE	NOT VIABLE	VIABLE
2022	NOT VIABLE	NOT VIABLE	VIABLE
2023	NOT VIABLE	NOT VIABLE	VIABLE
2024	NOT VIABLE	NOT VIABLE	VIABLE
2025	NOT VIABLE	NOT VIABLE	VIABLE
2026	NOT VIABLE	NOT VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure UXXVI



Uttlesford CM23			
50 units on a 0.746 hectare site (67 units per hectare density) - 24 flat(s) and 26 house(s).			
AH Mix:	70:30 Social Rent/Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Yellow
2017	Red	Red	Yellow
2018	Red	Red	Yellow
2019	Red	Red	Yellow
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Red	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure UXXVII

- 9.67 Against previously developed residential land values delivery of up to 10% affordable housing may only be possible on larger sites and/or in upside market conditions.
- 9.68 In the short term in order to improve the position on greenfield/industrial values in middle market conditions, public subsidy at normal levels will be required in order to achieve up to 35% affordable housing although at this level viability remains only marginal. Figure UXXVIII illustrates the 50 unit scheme with grant.

SCHEME TYPE 2 (50/50)		Uttlesford CM23	
50 units on a 0.746 hectare site (67 units per hectare density) - 24 flat(s) and 26 house(s).			
AH Mix:	70:30 Social Rent/Intermediate		
35% Affordable Housing			
100% S106 allowance			
Normal Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Red	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Yellow	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure UXXVIII



Notional Site - 6-14 unit development at 30 dph

9.69 Delivery of 30% affordable housing (and iterations below this where necessary) on schemes of this size have been assessed with a 100% social rent and a 100% intermediate tenure mix, with and without public subsidy at normal levels. Generally these sites are very sensitive to changes in tenure and to grant coming forward.

Value Areas: CB10 and CB11

9.70 In these higher value areas 30% affordable housing may be achievable without grant in middle market conditions against industrial/greenfield land values, assuming all units are intermediate and S106 costs do not exceed 100% of the baseline level assessed. Figure UXXIX. Provision of 100% social rented accommodation with normal grant produces a marginally viable outcome in the first half of the Plan, and a viable outcome in the latter half, again assuming middle market conditions are achieved.

10 units on a 0.333 hectare site (30 units per hectare density) - 0 flat(s) and 10 house(s).			
Uttlesford CB11			
AH Mix:	100% Intermediate		
30% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	DOWNSIDE	VIABILITY	
		MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
		=NOT VIABLE	
		=MARGINALLY VIABLE	
		=VIABLE	

Figure UXXIX

9.71 Against previously developed residential land values a marginally viable position can be achieved only in upside market conditions with 10% affordable housing.

Value Area: CM22

9.72 In this value area grant at normal levels is likely to be required to achieve 30% affordable housing against industrial/greenfield land values, again assuming middle market conditions. Delivery at this percentage would also only be achievable should all units be intermediate.

9.73 It is unlikely that schemes of this nature, coming forward on previously developed residential land would be able to deliver any affordable housing.



Value Areas: CM23 and CM6

- 9.74 In these lower value areas, delivery of 30% affordable housing, even with grant against industrial/greenfield land values is unlikely to be viable thus 10% affordable housing has been assessed and found to be marginally viable, even with the addition of public subsidy at normal levels.
- 9.75 It is unlikely that schemes of this nature, coming forward on previously developed residential land would be able to deliver any affordable housing.

Notional Site - 6-14 unit development at 50 dph

Value Areas: CB10 and CB11

- 9.76 Again, in these higher value areas 30% affordable housing may be achievable against industrial/greenfield land values without grant in middle market conditions, assuming all units are intermediate and S106 costs do not exceed 100% of the baseline level assessed. This is shown in Figure UXXX. Figure UXXXI shows the same position assuming developer profit at the higher rate (25% gross profit).

10 units on a 0.2 hectare site (50 units per hectare density) - 4 flat(s) and 6 house(s).			
Uttlesford CB10			
AH Mix:	100% Intermediate		
30% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Green	Green
2011	Red	Green	Green
2012	Red	Green	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Yellow	Green	Green
2020	Yellow	Green	Green
2021	Yellow	Green	Green
2022	Yellow	Green	Green
2023	Green	Green	Green
2024	Green	Green	Green
2025	Green	Green	Green
2026	Green	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure UXXX



10 units on a 0.2 hectare site (50 units per hectare density) - 4 flat(s) and 6 house(s).			
Uttlesford CB10			
30% Affordable Housing			
AH Mix:	100% Intermediate		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	25% Gross Profit sensitivity.		
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Yellow	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
Red	=NOT VIABLE		
Yellow	=Marginally VIABLE		
Green	=VIABLE		

Figure UXXXI

9.77 10% affordable housing against previously developed residential land values (intermediate tenure only) may be achievable against the upside scenario only. See Figure UXXXII.

Uttlesford CB10			
10 units on a 0.2 hectare site (50 units per hectare density) - 4 flat(s) and 6 house(s).			
10% Affordable Housing			
AH Mix:	100% Intermediate		
	100% S106 allowance		
	Nil Grant Higher EUV sensitivity.		
	19% Gross Profit sensitivity.		
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Red
2011	Red	Red	Yellow
2012	Red	Red	Green
2013	Red	Red	Green
2014	Red	Red	Green
2015	Red	Red	Green
2016	Red	Red	Yellow
2017	Red	Red	Green
2018	Red	Red	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Yellow	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Green
Red	=NOT VIABLE		
Yellow	=Marginally VIABLE		
Green	=VIABLE		

Figure UXXXII

Value Area: CM22

9.78 10% affordable housing (intermediate tenure only) is the likely maximum that may be achievable without grant in middle market conditions against industrial/greenfield land values. It is unlikely that any percentage of affordable housing could be achieved on sites with an existing residential land use.



Value Areas: CM23 and CM6

- 9.79 10% affordable housing has been assessed and found to be marginally viable against industrial/greenfield land values in middle market conditions, even with the addition of public subsidy at normal levels. It is unlikely that any percentage of affordable housing could be achieved on sites with an existing residential land use.

Notional Site - 6-14 unit development at 67 dph

Value Areas: CB10 and CB11

- 9.80 Delivery of 10% affordable housing (intermediate tenure) is marginally viable against industrial/greenfield land values in middle market conditions in the higher value area of CB10 and CB11. Should upside conditions be achieved it is likely delivery at this percentage will be viable without grant throughout the life of the Plan.
- 9.81 It is unlikely that any schemes of this nature coming forward on previously developed residential land would be able to deliver any affordable housing.

Value Areas: CM22, CM23 and CM6

- 9.82 It is unlikely that schemes of this nature would be able to viably deliver any affordable housing regardless of existing land use.



10.0 Results Analysis – East Hertfordshire

Introduction

- 10.1 The general parameters and assumptions set out in Section 3 of this report have been applied to our assessment of notional sites in East Hertfordshire District. We have used these basic assumptions and then made them specific to the East Hertfordshire situation by looking at a range of housing developments across the District using a residual valuation appraisal tool of the kind recommended in the Government's Delivering Affordable Housing statement. This is then used as the base for testing future cost and value scenarios using upside, middle and downside housing market growth scenarios during the Local Development Framework period. These future assessments take account of changes to property values, inflation, construction, rent and land values over the same timescale. Our assessment is based on the viability of delivering affordable housing across a range of notional sites. These notional sites were selected in consultation with the Council.

East Hertfordshire Summary

- 10.2 In East Hertfordshire, the post code areas used for modelling purposes were as follows:
- CM23
 - SG9
 - SG11
 - SG12
 - SG13
 - SG14
- 10.3 For ease of analysis post code areas SG13 and SG14 have been considered as one as values in these areas are similar. In some cases, postcode areas cross local authority boundaries. The post code area CM21 has not been included as it covers a very small area of the District and the value profile is similar to other postcode areas that have been used.
- 10.4 In all of these areas, the notional sites confirmed as appropriate in consultation with the Council were tested. These notional sites were as follows:
- 15 unit site (at 30 dph, 50 dph, 70 dph);
 - 50 unit site (at 30 dph, 50 dph, 70 dph, 100 dph);
 - 150 unit site (at 30 dph, 50 dph, 70 dph)
- 10.5 In addition sites below the 15 unit level were also tested.
- 10.6 In consultation with Council officers, it was agreed to test the following large strategic sites in East Hertfordshire:



- 1500 unit scheme (at 40 dph)
- 3000 unit scheme (at 40 dph)

- 10.7 In East Hertfordshire it is essential to establish a baseline to determine at which point land will come forward for development. In order for this to happen residual land values must exceed existing or alternative uses of the site. We have utilised the services of an independent qualified valuer to help us assess values in the sub region partly because of the lack of transparent information on land values. In particular, the level of transactions in the District, indeed in the sub-region as a whole, has been very low. Therefore it is very difficult to make any firm assessments about the absolute value at which land will come forward. A letter from the valuer³⁸ confirms this situation and confirms the relationship of land value to Gross development Value which has been used to influence our viability testing. We are also aware of the differences between developing on previously developed land and Greenfield or other land where competing uses may be commercial or industrial. Other viability studies undertake their assessments using only the industrial land value as a test against which sites may come forward. In our view this type of assessment may be limited and therefore we have tested against three key areas.
- 10.8 The first is Valuation Office Agency (VOA) data regarding industrial land values in the areas as at July 2009, and takes into account an uplift of 20%. Secondly, we have used residential values from VOA (July 2009) in order to test what we have termed previously developed land. Finally, we are aware that VOA data does have a number of limitations. Therefore, in order to 'future proof' this assessment, and to reflect land owners differing expectations we have instead looked at the relationship between residual land values and gross development value.
- 10.9 In line with the rest of this study and as explained in detail in section 3 Levvel's methodology enables the effect of a range of delivery timescales, thus all development scenarios selected are tested assuming development start dates of the date of modelling, date of modelling plus 1 year, plus 2 years, plus 3 years, and so on until 2026.
- 10.10 The use of the Levvel methodology allows for variations in land value over time to be accounted for, again ensuring 'future proofing' of the viability study. We know that there is a minimum land value which schemes need to achieve in order to be brought forward, otherwise it becomes more economic for the site to continue in its existing (or alternative) use.
- 10.11 The Valuation Office Agency (VOA) provided data on agricultural land and property values. It is unrealistic however to assume that Greenfield development land would be traded for residential use at these rates. For example the average value of unequipped arable land with vacant possession in the East of England as at July 2009 was £14,924 while in the South East it was £19,671. It is likely that landowners on agricultural land will be looking for a considerable uplift on these values. Stakeholder engagement (see Appendix 9) has confirmed this view.

³⁸ See letter date 9th February 2010 from Thornes (Appendix 8)



- 10.12 Thus in respect of development occurring on Greenfield or industrial sites, VOA data on industrial land values in the district³⁹ will be used as a check. In East Hertfordshire, this level has been assessed at £1,900,000 per hectare plus 20% uplift.
- 10.13 In respect of development occurring on previously developed residential land, (VOA) data on residential land prices have been used as the check and inflated by 20% in the same manner as for industrial land £3,700,000 per hectare plus 20% uplift.
- 10.14 Both of these values will be linked to the future growth assessments as outlined in Appendix 3 to this report to reflect the relationship between land and property values and ensure effective 'future proofing' of the assessment.
- 10.15 Whilst we will use VOA data as outlined above as one test of viability, we recognise that VOA data can be as much as six months out of date and not available at a sufficiently local level to enable local variations in land values to be assessed. Furthermore, the imposition of affordable housing planning policy will necessarily reduce land values in certain schemes. Therefore it is not enough to assess the viability of a particular scheme purely against a fixed value. We have therefore developed a methodology that assesses how much landowners have been willing to accept for their land in the past, and expressed it in terms of the ratio between Gross Development Value and Residual Land Value (GDV:RLV). That is to say how much of the revenue from a scheme can be used to pay for the land. This allows for variations due to locality to be accounted for. It is our belief that this more readily accounts for local variations in land values and represents a more robust and credible evidence base.
- 10.16 The ratio between RLV and GDV has thus been assessed over the period 2001 to 2009 using VOA data. The effect can be seen that in a rising and somewhat overheated market, landowner expectations rise and the price that developers are willing to pay also increases (often based on future expectations of property values). However, in a falling and "normal" market landowner expectations fall to more "reasonable" levels. Thus the relationship between GDV and RLV as a check provides a further degree of future proofing as if housing market values increase, the land value will also increase. Conversely, if values fall, then land value can also be expected to fall.
- 10.17 We have also taken the advice of a valuer who has confirmed that our approach is a reasonable one. The levels of RLV to GDV have been set in accordance with the valuers assessment⁴⁰. In respect of sites of 10 units and less, a figure of 28% to 35% of Gross Development Value depending on density (see paragraph 3.20 -3.24) has been used as a test for the level at which the Residual Land Value may need to reach in order to incentivise the landowner sufficiently to bring forward his parcel of land. This reflects our assessment of the relative value of small sites. For lower density sites in general, a level of 30% RLV to GDV has been used, for mid density schemes 28% has been used and for high density developments the 25% level of RLV to GDV has been used. In respect of large scale strategic sites (1500 units and

³⁹ See Paragraph 3.21

⁴⁰ See Thornes letter dated 9th February 2010 (Appendix 8)



above) a figure of 20% of Gross Development Value (GDV) as the level at which the Residual Land Value may need to reach has been used as a test.

- 10.18 Our assessment for viability involves a cross reference of the absolute land value against alternative use value (PDL or industrial) and the RLV to GDV position. Within each test we have assumed a level of 'tolerance' so that a scheme that falls within 10% either way of the industrial or PDL land value is deemed to be marginally viable and a scheme that falls within 20% plus or minus of the RLV to GDV test is also deemed to be marginally viable against that test. The two tests are then assessed in parallel rather than sequentially so that a scheme that is not viable against the absolute land value will be deemed not viable even if it achieves viability on the RLV to GDV test.
- 10.19 Using these tests of viability, it is possible to inform a policy position that has flexibility and is relevant for the life of the plan to ensure deliverability.
- 10.20 Where shown the results tables set out the three market scenarios, downside, middle and upside and then record whether the notional schemes assessed are likely to be viable, marginal or not viable. The dates in the left hand column refer to the start dates for development.

General Development Sites (15 to 150 units)

- 10.21 This section summarises the results for each value area in East Hertfordshire. We look at the baseline position for each density tested and then we look at sensitivities and their effect on viability. For East Hertfordshire, we report on a baseline affordable housing target of 35% and then for each value area we report on the realistic target above or below that baseline. The baseline position assumes nil public subsidy, 19% gross profit and a 75:25 split of social rented to intermediate affordable housing. Section 106 contributions are in line with 100% of the baseline level as set out in Appendix 6 and section 3 of this main report.
- 10.22 More detailed sensitivity testing regarding East Hertfordshire is contained in the Appendices.

Value Area: CM23

Density 30 dph

- 10.23 Testing at the baseline position (35% affordable housing) showed that affordable housing was unlikely to come forward even in the most favourable economic conditions in this post code area at a density of 30 dwellings per hectare. For example, the 50 unit development achieves a residual land value of circa £1.13million per hectare. This value is not sufficient to clear either the previously developed residential value or against industrial/greenfield. For these reasons we have tested a target below 35% for previously developed residential land values.
- 10.24 Figure EHI shows the position for 15 units with 35% affordable housing (all other parameters in line with the baseline position). Figure EHII shows the position on the 50 unit scheme and the same assumptions. Both of these assume industrial/greenfield alternative land values.



East Herts CM23			
15 units on a 0.5 hectare site (30 units per hectare density) - 0 flat(s) and 15 house(s).			
AH Mix:	75:25 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Red
2011	Red	Red	Red
2012	Red	Red	Red
2013	Red	Red	Red
2014	Red	Red	Red
2015	Red	Red	Red
2016	Red	Red	Red
2017	Red	Red	Red
2018	Red	Red	Red
2019	Red	Red	Red
2020	Red	Red	Red
2021	Red	Red	Red
2022	Red	Red	Red
2023	Red	Red	Red
2024	Red	Red	Red
2025	Red	Red	Red
2026	Red	Red	Red
	Red		
	Yellow		
	Green		

Figure EHI

East Herts CM23			
50 units on a 1.666 hectare site (30 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix:	75:25 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Red
2011	Red	Red	Red
2012	Red	Red	Red
2013	Red	Red	Red
2014	Red	Red	Red
2015	Red	Red	Red
2016	Red	Red	Red
2017	Red	Red	Red
2018	Red	Red	Red
2019	Red	Red	Red
2020	Red	Red	Red
2021	Red	Red	Red
2022	Red	Red	Red
2023	Red	Red	Red
2024	Red	Red	Red
2025	Red	Red	Red
2026	Red	Red	Red
	Red		
	Yellow		
	Green		

Figure EHII

10.25 Against previously developed residential land values we have tested with baseline assumptions down to 10% affordable housing and this level will be viable in upside economic conditions and later in the Core Strategy period, in middle market conditions and with grant at normal levels. This is shown in Figure EHIII.



SCHEME TYPE 3			
50 units on a 1.666 hectare site (30 units per hectare density) - 0 flat(s) and 50 house(s).			
East Herts CM23			
10% Affordable Housing			
AH Mix:	50:50 Social Rent:Intermediate		
	100% S106 allowance		
	Normal Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2011	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2012	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2013	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2014	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2015	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2016	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2017	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2018	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2019	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2020	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2021	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2022	MARGINALLY VIABLE	VIABLE	VIABLE
2023	MARGINALLY VIABLE	VIABLE	VIABLE
2024	MARGINALLY VIABLE	VIABLE	VIABLE
2025	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2026	NOT VIABLE	MARGINALLY VIABLE	VIABLE
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EHIII

- 10.26 Among our sensitivity testing we have looked at the effect of affordable housing tenure mix and this has shown that increasing the proportion of social rented units at the expense of intermediate reduces viability. See appendix 14 for more detailed information on sensitivities that we have tested.

Value Area: CM23

Density 50 dph

- 10.27 At this density testing at the baseline position (35% affordable housing) demonstrated that schemes are not currently viable outcome against industrial/greenfield land values. For example, the 50 unit development achieves a residual land value of circa £1.79 million per hectare. Again, this value is not sufficient to clear the previously developed residential value and for these reasons we have tested below 35% for previously developed residential land values.
- 10.28 Figure EHIV shows the position for 50 units with 35% affordable housing (all other parameters in line with the baseline position). This assumes industrial/greenfield alternative land values. Figure EHV shows the position for 15 units with 35% affordable housing (again, all other parameters in line with the baseline position) and demonstrates it may be more challenging to achieve this percentage in the shorter terms on schemes of this size and grant and/or a consideration of tenure mix and percentage may be required unless market conditions achieve the upside. Later in the period in upside conditions, 35% affordable housing may be achievable although the imposition of Code for Sustainable Homes requirements is likely to have a detrimental effect on viability.



East Herts CM23			
50 units on a 1 hectare site (50 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix:	75:25 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Green
2013	Red	Red	Yellow
2014	Red	Red	Green
2015	Red	Red	Yellow
2016	Red	Red	Yellow
2017	Red	Red	Yellow
2018	Red	Red	Green
2019	Red	Red	Green
2020	Red	Red	Green
2021	Red	Yellow	Green
2022	Red	Yellow	Green
2023	Red	Yellow	Green
2024	Red	Yellow	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EHIV

15 units on a 0.3 hectare site (50 units per hectare density) - 0 flat(s) and 15 house(s).			
AH Mix:	75:25 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Red
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Red
2017	Red	Red	Yellow
2018	Red	Red	Yellow
2019	Red	Red	Yellow
2020	Red	Red	Green
2021	Red	Red	Green
2022	Red	Yellow	Green
2023	Red	Yellow	Green
2024	Red	Yellow	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EHV

10.29 See appendix 14 for more detailed information on sensitivities that we have tested.



10.32 Additional grant is likely to be necessary at this density if affordable housing targets up to 35% are to be achieved. Figure EHVIII shows that 20% affordable housing is currently marginally viable and may be viable in middle economic conditions later in the Core Strategy period or at any period if upside market conditions apply.

East Herts CM23			
50 units on a 0.714 hectare site (70 units per hectare density) - 24 flat(s) and 26 house(s).			
10% Affordable Housing			
AH Mix:	75:25:00		
	100% S106 allowance		
	Nil Grant		
	Industrial		
YEAR	DOWNSIDE	VIABILITY MIDDLE	UPSIDE
2010	Red	Red	Green
2011	Red	Red	Green
2012	Red	Red	Green
2013	Red	Red	Green
2014	Red	Red	Green
2015	Red	Red	Green
2016	Red	Red	Green
2017	Red	Red	Green
2018	Red	Red	Green
2019	Red	Yellow	Green
2020	Red	Green	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Red	Green	Green
	Red	Yellow	Green
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EHVII

SCHEME TYPE 5			
50 units on a 1.666 hectare site (30 units per hectare density) - 0 flat(s) and 50 house(s).			
East Herts CM23			
20% Affordable Housing			
AH Mix:	70:25 Social Rent to Intermediate		
	100% S106 allowance		
	Normal Grant sensitivity.		
YEAR	DOWNSIDE	VIABILITY MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Red	Green
2016	Red	Red	Green
2017	Red	Red	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Green
	Red	Yellow	Green
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EHVIII

10.33 See appendix 14 for more detailed information on sensitivities that we have tested.



Value Area: CM23

Density 100 dph

10.34 We have found that it is very difficult to achieve a viable position on even an unencumbered scheme at densities as high as 100 dwellings per hectare. We have tested down to 10% affordable housing in this value area and even at this level viability will remain a challenge in this value area.

Value Area: SG9

Density 30 dph

10.35 Testing at the baseline position (35% affordable housing) showed that affordable housing was unlikely to come forward even in the most favourable economic conditions in this post code area at a density of 30 dwellings per hectare. For example, the 50 unit development achieves a residual land value of only circa £1.44million per hectare. This value is not sufficient to clear either the previously developed residential value or against industrial/greenfield. For these reasons we have tested a target below 35% for previously developed residential land values.

10.36 Figure EHIX shows the position for 15 units with 35% affordable housing (all other parameters in line with the baseline position). Figure EHX shows the position on the 50 unit scheme and the same assumptions. Both of these assume industrial/greenfield alternative land values.

East Herts SG9			
15 units on a 0.5 hectare site (30 units per hectare density) - 0 flat(s) and 15 house(s).			
AH Mix:	75:25 Social Rent/Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Higher EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Red
2011	Red	Red	Red
2012	Red	Red	Red
2013	Red	Red	Red
2014	Red	Red	Red
2015	Red	Red	Red
2016	Red	Red	Red
2017	Red	Red	Red
2018	Red	Red	Red
2019	Red	Red	Red
2020	Red	Red	Red
2021	Red	Red	Green
2022	Red	Yellow	Green
2023	Red	Yellow	Green
2024	Red	Yellow	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Green
	Red		=NOT VIABLE
	Yellow		=MARGINALLY VIABLE
	Green		=VIABLE

Figure EHIX



East Herts SG9			
50 units on a 1.666 hectare site (30 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix:	75:25 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Red
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Yellow
2017	Red	Red	Yellow
2018	Red	Red	Yellow
2019	Red	Red	Yellow
2020	Red	Red	Yellow
2021	Red	Red	Yellow
2022	Red	Yellow	Yellow
2023	Red	Red	Yellow
2024	Red	Red	Yellow
2025	Red	Red	Yellow
2026	Red	Red	Yellow
Red = NOT VIABLE Yellow = marginally VIABLE Green = VIABLE			

Figure EHX

10.37 Against previously developed residential land values we have tested with baseline assumptions down to 20% affordable housing and this level will be viable in upside economic conditions and later in the Core Strategy period, in middle market conditions and with grant at normal levels. The position with an assumed tenure split of 50% social rent and 50% intermediate is shown in Figure EHXI.

SCHEME TYPE 2 (50/50)			
East Herts SG9			
50 units on a 1.666 hectare site (30 units per hectare density) - 0 flat(s) and 50 house(s).			
20% Affordable Housing			
AH Mix:	50:50 Social Rent:Intermediate		
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Green	Green
2020	Red	Green	Green
2021	Red	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
Red = NOT VIABLE Yellow = marginally VIABLE Green = VIABLE			

Figure EHXI



10.38 Among our sensitivity testing we have looked at the effect of other mixes of affordable housing and at reduced levels of planning and infrastructure contributions. See appendix 14 for more detailed information on sensitivities that we have tested.

Value Area: SG9

Density 50 dph

10.39 At this density testing at the baseline position (35% affordable housing) demonstrated that schemes are not currently viable outcome against industrial/greenfield land values. However, the position at baseline is that schemes are likely to become viable later in the Core Strategy period possibly by 2020. If economic conditions perform to the upside assumptions then 35% affordable is achievable even in the short term.

10.40 Figure EHXII shows the position for 50 units with 35% affordable housing (all other parameters in line with the baseline position). This assumes industrial/greenfield alternative land values. Figure EHXIII shows the position for 15 units with 35% affordable housing (again, all other parameters in line with the baseline position) and demonstrates it may be less challenging to achieve this percentage in the shorter terms on schemes of this size. However, it must be borne in mind that schemes of less than about 20 units will be much more sensitive to marginal changes to the mix in terms of type or size of unit.

East Herts SG9			
50 units on a 1 hectare site (50 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix:	75:25 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	NOT VIABLE	VIABLE
2011	NOT VIABLE	NOT VIABLE	VIABLE
2012	NOT VIABLE	NOT VIABLE	VIABLE
2013	NOT VIABLE	NOT VIABLE	VIABLE
2014	NOT VIABLE	NOT VIABLE	VIABLE
2015	NOT VIABLE	NOT VIABLE	VIABLE
2016	NOT VIABLE	NOT VIABLE	VIABLE
2017	NOT VIABLE	NOT VIABLE	VIABLE
2018	NOT VIABLE	NOT VIABLE	VIABLE
2019	NOT VIABLE	NOT VIABLE	VIABLE
2020	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2021	NOT VIABLE	VIABLE	VIABLE
2022	NOT VIABLE	VIABLE	VIABLE
2023	NOT VIABLE	VIABLE	VIABLE
2024	NOT VIABLE	VIABLE	VIABLE
2025	NOT VIABLE	VIABLE	VIABLE
2026	NOT VIABLE	VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure EHXII



East Herts SG9			
15 units on a 0.3 hectare site (50 units per hectare density) - 0 flat(s) and 15 house(s).			
AH Mix:	75:25 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	VIABLE	VIABLE	VIABLE
2011	NOT VIABLE	VIABLE	VIABLE
2012	NOT VIABLE	VIABLE	VIABLE
2013	NOT VIABLE	VIABLE	VIABLE
2014	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2015	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2016	NOT VIABLE	NOT VIABLE	VIABLE
2017	NOT VIABLE	NOT VIABLE	VIABLE
2018	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2019	NOT VIABLE	VIABLE	VIABLE
2020	NOT VIABLE	VIABLE	VIABLE
2021	NOT VIABLE	VIABLE	VIABLE
2022	NOT VIABLE	VIABLE	VIABLE
2023	MARGINALLY VIABLE	VIABLE	VIABLE
2024	MARGINALLY VIABLE	VIABLE	VIABLE
2025	MARGINALLY VIABLE	VIABLE	VIABLE
2026	VIABLE	VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure EHXIII

10.41 See appendix 14 for more detailed information on sensitivities that we have tested.

Value Area: SG9

Density 70 dph

10.42 At this density testing at the baseline position (35% affordable housing) demonstrated an unviable outcome against industrial/greenfield land values and previously developed residential land values. For these reasons we have tested a target below 35%. Figure EHXIV shows the position on the 50 unit scheme where viability may only be achieved later in the Core Strategy period in upside market conditions only.



East Herts SG9			
50 units on a 0.714 hectare site (70 units per hectare density) - 24 flat(s) and 26 house(s).			
AH Mix:	75:25 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
	VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Red
2011	Red	Red	Red
2012	Red	Red	Green
2013	Red	Red	Green
2014	Red	Red	Yellow
2015	Red	Red	Red
2016	Red	Red	Red
2017	Red	Red	Red
2018	Red	Red	Yellow
2019	Red	Red	Green
2020	Red	Red	Green
2021	Red	Red	Green
2022	Red	Yellow	Green
2023	Red	Yellow	Green
2024	Red	Yellow	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=Marginally VIABLE		
	=VIABLE		

Figure EHXIV

10.43 Figure EHXV shows the position of 20% affordable housing on a 50 unit development (all other parameters in line with the baseline position) and demonstrates that in the longer term, and/or in upside market conditions, this percentage may be achievable against industrial/greenfield land values.

East Herts SG9			
50 units on a 0.714 hectare site (70 units per hectare density) - 24 flat(s) and 26 house(s).			
AH Mix:	75:25 Social Rent:Intermediate		
20% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
	VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Green
2011	Red	Red	Green
2012	Red	Red	Green
2013	Red	Red	Green
2014	Red	Red	Green
2015	Red	Red	Green
2016	Red	Red	Green
2017	Red	Red	Green
2018	Red	Red	Green
2019	Red	Yellow	Green
2020	Red	Green	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Red	Green	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=Marginally VIABLE		
	=VIABLE		

Figure EHXV



10.44 Additional grant is likely to be necessary at this density if affordable housing targets up to 35% are to be achieved. Figure EHXVI shows that the position at 20% affordable housing and no grant is similar to the position of 35% with an allowance for grant.

SCHEME TYPE 2 (50/50)		East Herts SG9	
50 units on a 0.714 hectare site (70 units per hectare density) - 24 flat(s) and 26 house(s).			
AH Mix:		75:25 Social Rent:Intermediate	
35% Affordable Housing			
100% S106 allowance			
Normal Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Green
2011	Red	Red	Green
2012	Red	Red	Green
2013	Red	Red	Green
2014	Red	Red	Green
2015	Red	Red	Green
2016	Red	Red	Green
2017	Red	Red	Green
2018	Red	Red	Green
2019	Red	Red	Green
2020	Red	Yellow	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Red	Green	Green
	Red	=NOT VIABLE	
	Yellow	=Marginally VIABLE	
	Green	=VIABLE	

Figure EHXVI

10.45 See appendix 14 for more detailed information on sensitivities that we have tested.

Value Area: SG9

Density 100 dph

10.46 We have found that it is very difficult to achieve a viable position on even an unencumbered scheme at densities as high as 100 dwellings per hectare. We have tested down to 10% affordable housing in this value area and against industrial/greenfield land values viability may be achievable later in the middle economic scenario but with the assumption that grant will be available at historic levels.

Value Area: SG11

Density 30 dph

10.47 Testing at the baseline position (35% affordable housing) showed that affordable housing was achievable throughout the period of the Core Strategy in middle economic conditions and above against industrial/greenfield land values. Figure EHXVII shows this position. Against previously developed residential land values the 35% target is likely to be more difficult to achieve.



East Herts SG11			
50 units on a 1.666 hectare site (30 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix:	75:25 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	DOWNSIDE	VIABILITY	
		MIDDLE	UPSIDE
2010	Red	Green	Green
2011	Red	Green	Green
2012	Red	Green	Green
2013	Red	Green	Green
2014	Red	Green	Green
2015	Red	Green	Green
2016	Red	Green	Green
2017	Red	Green	Green
2018	Red	Green	Green
2019	Red	Green	Green
2020	Red	Green	Green
2021	Yellow	Green	Green
2022	Green	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
Red	=NOT VIABLE		
Yellow	=MARGINALLY VIABLE		
Green	=VIABLE		

Figure EHXVII

10.48 We have therefore tested at 40% targets for affordable housing against industrial/greenfield land values and while this is currently marginally viable, long term viability may be achievable as can be seen in Figure EHXVIII. This shows the position for 50 units with 40% affordable housing (all other parameters in line with the baseline position).

East Herts SG11			
50 units on a 1.666 hectare site (30 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix:	75:25 Social Rent:Intermediate		
40% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	DOWNSIDE	VIABILITY	
		MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Red	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Green	Green
2021	Red	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Red	Green	Green
Red	=NOT VIABLE		
Yellow	=MARGINALLY VIABLE		
Green	=VIABLE		

Figure EHXVIII

10.49 Against previously developed residential land values we have tested with baseline assumptions down to 10% affordable housing and this level will be viable in upside



economic conditions and later in the Core Strategy period in middle market conditions assuming nil grant. With normal levels of grant, the amount of affordable housing is likely to be achievable in current economic conditions.

- 10.50 Among our sensitivity testing we have looked at the effect of other mixes of affordable housing and at reduced levels of planning and infrastructure contributions. See appendix 14 for more detailed information on sensitivities that we have tested.

Value Area: SG11

Density 50 dph

- 10.51 Testing at the baseline position (35% affordable housing) showed that affordable housing was achievable throughout the period of the Core Strategy in middle economic conditions and above against industrial/greenfield land values. Figure EHXIX shows this position. Against previously developed residential land values the 35% target is likely to be more difficult to achieve as can be seen in Figure EHXX. Marginal viability is only achievable in the most favourable conditions.

East Herts SG11			
50 units on a 1 hectare site (50 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix:	75:25 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	VIABLE	VIABLE
2011	NOT VIABLE	VIABLE	VIABLE
2012	NOT VIABLE	VIABLE	VIABLE
2013	NOT VIABLE	VIABLE	VIABLE
2014	NOT VIABLE	VIABLE	VIABLE
2015	NOT VIABLE	VIABLE	VIABLE
2016	NOT VIABLE	VIABLE	VIABLE
2017	NOT VIABLE	VIABLE	VIABLE
2018	NOT VIABLE	VIABLE	VIABLE
2019	NOT VIABLE	VIABLE	VIABLE
2020	MARGINALLY VIABLE	VIABLE	VIABLE
2021	VIABLE	VIABLE	VIABLE
2022	VIABLE	VIABLE	VIABLE
2023	VIABLE	VIABLE	VIABLE
2024	VIABLE	VIABLE	VIABLE
2025	VIABLE	VIABLE	VIABLE
2026	VIABLE	VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure EHXIX



East Herts SG11			
50 units on a 1 hectare site (50 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix:	75:25 Social Rent/Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Higher EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Yellow
2017	Red	Red	Yellow
2018	Red	Red	Yellow
2019	Red	Red	Yellow
2020	Red	Red	Yellow
2021	Red	Red	Yellow
2022	Red	Yellow	Yellow
2023	Red	Yellow	Yellow
2024	Red	Red	Yellow
2025	Red	Red	Yellow
2026	Red	Red	Yellow
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EHXX

10.52 We have therefore looked at 40% targets on industrial/greenfield land and the position with all other parameters remaining the same is shown in Figure EHXXI. This shows viable or marginal viability positions for the life of the Core Strategy in middle economic conditions.

SCHEME TYPE 4			
50 units on a 1 hectare site (50 units per hectare density) - 0 flat(s) and 50 house(s).			
East Herts SG11			
40% Affordable Housing			
AH Mix:	25:75 Social Rent:Intermediate		
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Green	Green	Green
2011	Green	Green	Green
2012	Yellow	Green	Green
2013	Red	Green	Green
2014	Yellow	Green	Green
2015	Red	Green	Green
2016	Red	Green	Green
2017	Red	Green	Green
2018	Red	Green	Green
2019	Yellow	Green	Green
2020	Yellow	Green	Green
2021	Green	Green	Green
2022	Green	Green	Green
2023	Green	Green	Green
2024	Green	Green	Green
2025	Green	Green	Green
2026	Green	Green	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EHXXI

10.53 Against previously developed residential land, 35% affordable housing may be marginally viable currently and viable in upside conditions or later in the Core



Strategy period but assuming a change of affordable housing mix. This position can be seen in Figure EHXXII.

SCHEME TYPE 5			
50 units on a 1 hectare site (50 units per hectare density) - 0 flat(s) and 50 house(s).			
East Herts SG11			
AH Mix:	25:75 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Normal Grant Higher EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Yellow	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Red	Yellow	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure EHXXII

10.54 See appendix 14 for more detailed information on sensitivities that we have tested.

Value Area: SG11

Density 70 dph

10.55 At this density testing at the baseline position (35% affordable housing) demonstrated an unviable outcome against industrial/greenfield land values and previously developed residential land values. However, later in the Core strategy period or in upside economic conditions viability is achieved. This can be seen in Figure EHXXIII. For these reasons we have tested a target below 35%. Figure EHXXIV shows the position on the 50 unit scheme with 20% affordable housing and nil grant against industrial/greenfield land values.



East Herts SG11			
50 units on a 0.714 hectare site (70 units per hectare density) - 24 flat(s) and 26 house(s).			
AH Mix:	75:25 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	DOWNSIDE	VIABILITY	
		MIDDLE	UPSIDE
2010	Red	Red	Green
2011	Red	Red	Green
2012	Red	Red	Green
2013	Red	Red	Green
2014	Red	Red	Green
2015	Red	Red	Green
2016	Red	Red	Green
2017	Red	Red	Green
2018	Red	Red	Green
2019	Red	Red	Green
2020	Red	Yellow	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Red	Green	Green
Red		=NOT VIABLE	
Yellow		=MARGINALLY VIABLE	
Green		=VIABLE	

Figure EHXXIII

SCHEME TYPE 5			
50 units on a 0.714 hectare site (70 units per hectare density) - 24 flat(s) and 26 house(s).			
East Herts SG11			
20% Affordable Housing			
AH Mix:	75:25 Social Rent:Intermediate		
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	DOWNSIDE	VIABILITY	
		MIDDLE	UPSIDE
2010	Red	Green	Green
2011	Red	Green	Green
2012	Red	Green	Green
2013	Red	Green	Green
2014	Red	Green	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Green	Green
2018	Red	Green	Green
2019	Red	Green	Green
2020	Red	Green	Green
2021	Yellow	Green	Green
2022	Green	Green	Green
2023	Green	Green	Green
2024	Green	Green	Green
2025	Green	Green	Green
2026	Green	Green	Green
Red		=NOT VIABLE	
Yellow		=MARGINALLY VIABLE	
Green		=VIABLE	

Figure EHXXIV

10.56 As far as development against land values equivalent to previously developed residential land values is concerned it is not possible to achieve viability with 35% affordable housing. We have tested at levels down to 10% affordable housing and it is likely that this level of affordable housing could be achieved in favourable conditions as can be seen in Figure EHXXV.



SCHEME TYPE 5			
50 units on a 0.714 hectare site (70 units per hectare density) - 24 flat(s) and 26 house(s).			
East Herts SG11			
10% Affordable Housing			
AH Mix:	25:75 Social Rent:Intermediate		
	100% S106 allowance		
	Normal Grant Higher EUV sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Green	Green
2020	Red	Green	Green
2021	Yellow	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure EHXXV

10.57 See appendix 14 for more detailed information on sensitivities that we have tested.

Value Area: SG11

Density 100 dph

10.58 We have found that it is very difficult to achieve a viable position on even an unencumbered scheme at densities as high as 100 dwellings per hectare. However, marginal viability may be achieved if grant is made available and there is a consideration of the affordable housing mix so that intermediate housing is more predominant.

Value Area: SG13/14

Density 30 dph

10.59 Testing at the baseline position (35% affordable housing) showed that affordable housing was achievable throughout the period of the Core Strategy in middle economic conditions and above against industrial/greenfield land values in Value Areas SG13/14. Figure EHXXVI shows this position. Against previously developed residential land values the 35% target is likely to be much more difficult to achieve.



East Herts SG13/14			
50 units on a 1.666 hectare site (30 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix:	75:25 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	VIABLE	VIABLE
2011	NOT VIABLE	VIABLE	VIABLE
2012	NOT VIABLE	VIABLE	VIABLE
2013	NOT VIABLE	VIABLE	VIABLE
2014	NOT VIABLE	VIABLE	VIABLE
2015	NOT VIABLE	VIABLE	VIABLE
2016	NOT VIABLE	VIABLE	VIABLE
2017	NOT VIABLE	VIABLE	VIABLE
2018	NOT VIABLE	VIABLE	VIABLE
2019	NOT VIABLE	VIABLE	VIABLE
2020	VIABLE	VIABLE	VIABLE
2021	VIABLE	VIABLE	VIABLE
2022	VIABLE	VIABLE	VIABLE
2023	VIABLE	VIABLE	VIABLE
2024	VIABLE	VIABLE	VIABLE
2025	VIABLE	VIABLE	VIABLE
2026	VIABLE	VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure EHXXVI

10.60 We have therefore tested at 40% targets for affordable housing against industrial/greenfield land values and while this is currently marginally viable, long term viability may be achievable as can be seen in Figure EHXXVII. This shows the position for 50 units with 40% affordable housing (all other parameters in line with the baseline position).

East Herts SG13/14			
50 units on a 1.666 hectare site (30 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix:	75:25 Social Rent:Intermediate		
40% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2011	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2012	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2013	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2014	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2015	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2016	NOT VIABLE	NOT VIABLE	VIABLE
2017	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2018	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2019	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2020	NOT VIABLE	VIABLE	VIABLE
2021	NOT VIABLE	VIABLE	VIABLE
2022	MARGINALLY VIABLE	VIABLE	VIABLE
2023	MARGINALLY VIABLE	VIABLE	VIABLE
2024	MARGINALLY VIABLE	VIABLE	VIABLE
2025	NOT VIABLE	VIABLE	VIABLE
2026	NOT VIABLE	VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure EHXXVII



- 10.61 Against previously developed residential land values we have tested with baseline assumptions down to 10% affordable housing and this level will be viable in upside economic conditions and later in the Core Strategy period in middle market conditions assuming some grant and a compromise on affordable housing mix.
- 10.62 Among our sensitivity testing we have looked at the effect of other mixes of affordable housing and at reduced levels of planning and infrastructure contributions. See appendix 14 for more detailed information on sensitivities that we have tested.

Value Area: SG13/14

Density 50 dph

- 10.63 Testing at the baseline position (35% affordable housing) showed that affordable housing was achievable throughout the period of the Core Strategy in middle economic conditions and above against industrial/greenfield land values. Figure EHXXVIII shows this position. Against previously developed residential land values the 35% target is likely to be more difficult to achieve as can be seen in Figure EHXXIX. Marginal viability may be achievable in middle market conditions later in the Core Strategy period.

East Herts SG13/14			
50 units on a 1 hectare site (50 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix: 75:25 Social Rent:Intermediate			
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	DOWNSIDE	VIABILITY	
		MIDDLE	UPSIDE
2010	Red	Green	Green
2011	Yellow	Green	Green
2012	Yellow	Green	Green
2013	Red	Green	Green
2014	Yellow	Green	Green
2015	Red	Green	Green
2016	Red	Green	Green
2017	Red	Green	Green
2018	Red	Green	Green
2019	Yellow	Green	Green
2020	Yellow	Green	Green
2021	Green	Green	Green
2022	Green	Green	Green
2023	Green	Green	Green
2024	Green	Green	Green
2025	Green	Green	Green
2026	Green	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure EHXXVIII



East Herts SG13/14			
50 units on a 1 hectare site (50 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix:	75:25 Social Rent/Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Higher EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	DOWNSIDE	VIABILITY	
		MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Yellow
2017	Red	Red	Yellow
2018	Red	Red	Yellow
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Red	Yellow	Green
2023	Red	Yellow	Green
2024	Red	Yellow	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure EHXXIX

10.64 We have therefore looked at higher than baseline targets on industrial/greenfield land. Even at 45% affordable housing, viability may be achievable in middle market conditions although it is more favourable later in the Core Strategy period. Figure EHXXX shows the position against industrial/greenfield land values at 45% affordable housing targets.

East Herts SG13 SG14			
150 units on a 3 hectare site (50 units per hectare density) - 0 flat(s) and 150 house(s).			
AH Mix:	75:25 Social Rent:Intermediate		
45% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	DOWNSIDE	VIABILITY	
		MIDDLE	UPSIDE
2010	Red	Green	Green
2011	Red	Green	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Green	Green
2019	Red	Green	Green
2020	Red	Green	Green
2021	Yellow	Green	Green
2022	Yellow	Green	Green
2023	Red	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Green	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure EHXXX



10.65 Against previously developed residential land, 35% affordable housing may be marginally viable currently and viable in upside conditions or later in the Core Strategy period against the baseline position but with a change of affordable housing mix (25:35 mix of social rent to intermediate). This position can be seen in Figure EHXXXI.

SCHEME TYPE 4			
50 units on a 1 hectare site (50 units per hectare density) - 0 flat(s) and 50 house(s).			
East Herts SG13/14			
AH Mix:	25:75 Social rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Higher EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Yellow	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Red	Yellow	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure EHXXXI

10.66 See appendix 14 for more detailed information on sensitivities that we have tested.

Value Area: SG13/14

Density 70 dph

10.67 At this density testing at the baseline position (35% affordable housing) demonstrates a currently viable outcome against industrial/greenfield land values and previously developed residential land values. Figure EHXXXII shows that there may be a period in the middle of the Core Strategy when viability is only marginal due to the imposition of higher Code for Sustainable Homes requirements. However, later in the Core strategy period or in upside economic conditions viability is maintained.



East Herts SG13.14			
50 units on a 0.714 hectare site (70 units per hectare density) - 24 flat(s) and 26 house(s).			
AH Mix:	75:25 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Green	Green
2011	Red	Green	Green
2012	Red	Green	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Green	Green
2020	Red	Green	Green
2021	Red	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Green	Green	Green
Red	=NOT VIABLE		
Yellow	=MARGINALLY VIABLE		
Green	=VIABLE		

Figure EHXXXII

10.68 As far as development against land values equivalent to previously developed residential land values is concerned it is not possible to achieve viability with 35% affordable housing. This can be seen in Figure EHXXXIII which shows that marginal viability can be achieved in upside economic conditions only.

East Herts SG13.14			
50 units on a 0.714 hectare site (70 units per hectare density) - 24 flat(s) and 26 house(s).			
AH Mix:	75:25 Social Rent/Intermediate		
35% Affordable Housing			
100% S106 allowance			
Nil Grant Higher EUV sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Yellow
2017	Red	Red	Yellow
2018	Red	Red	Yellow
2019	Red	Red	Yellow
2020	Red	Red	Yellow
2021	Red	Yellow	Green
2022	Red	Yellow	Green
2023	Red	Yellow	Green
2024	Red	Yellow	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Green
Red	=NOT VIABLE		
Yellow	=MARGINALLY VIABLE		
Green	=VIABLE		

Figure EHXXXIII

10.69 Bearing in mind the results of the baseline tests we have sensitivity tested against both greenfield/industrial values and previously developed residential values.

10.70 On land at values equivalent to industrial/greenfield we have tested at 40% affordable housing and this shows that this level of affordable housing is marginally



viable in current conditions but more viable in upside market conditions and later in the Core Strategy period. This can be seen in Figure EHXXXIV.

SCHEME TYPE 5			
50 units on a 0.714 hectare site (70 units per hectare density) - 24 flat(s) and 26 house(s).			
East Herts SG13.14			
40% Affordable Housing			
AH Mix:	75:25 Social Rent:Intermediate		
	100% S106 allowance		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Green	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Red	Green	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=Marginally VIABLE		
	=VIABLE		

Figure EHXXXIV

10.71 On land at values equivalent to previously developed residential values we have tested with an affordable housing mix of 25:75 social rent to intermediate. The results of this are in Figure EHXXXV which shows that this would make the scheme marginally viable in current conditions but viable at some point in the Core Strategy period should conditions be sufficiently favourable.

SCHEME TYPE 5			
50 units on a 0.714 hectare site (70 units per hectare density) - 24 flat(s) and 26 house(s).			
East Herts SG13.14			
35% Affordable Housing			
AH Mix:	25:75 Social Rent:Intermediate		
	100% S106 allowance		
	Normal Grant Higher EUV sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Green	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Red	Green	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=Marginally VIABLE		
	=VIABLE		

Figure EHXXXV



10.72 See appendix 14 for more detailed information on sensitivities that we have tested.

Value Area: SG13/14

Density 100 dph

10.73 Although it is unlikely that affordable housing could be achieved with our baseline assumptions of nil grant and a 75:25 split of social rented to intermediate housing in current conditions it may be possible to achieve a viable position later in the Core Strategy at 35% affordable housing and certainly in upside market conditions.

Notional Site - 6-14 unit development at 30 dph

10.74 Delivery of 30% affordable housing (and iterations below this where necessary) on schemes of this size have been assessed with a 100% social rent and a 100% intermediate tenure mix, with and without public subsidy at normal levels. Generally these sites are very sensitive to changes in tenure and to grant coming forward.

Value Areas: SG11, SG12 and SG13/14

10.75 20% affordable housing is viable throughout the middle and upside market scenarios at each test/ sensitivity covered against industrial/greenfield land values. This includes the implementation of the Community Infrastructure Levy and 100% social rented schemes, see Figure EHXXXVI. There is potential that some schemes may be able to deliver up to 30% affordable housing or off site equivalent.

10 units on a 0.333333 hectare site (30 units per hectare density) - 0 flat(s) and 10 house(s).			
20% Affordable Housing			
AH Mix:	100% Shared Ownership		
	CIL		
	Nil Grant Lower EUV sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	VIABLE	VIABLE	VIABLE
2011	VIABLE	VIABLE	VIABLE
2012	VIABLE	VIABLE	VIABLE
2013	VIABLE	VIABLE	VIABLE
2014	VIABLE	VIABLE	VIABLE
2015	VIABLE	VIABLE	VIABLE
2016	NOT VIABLE	VIABLE	VIABLE
2017	VIABLE	VIABLE	VIABLE
2018	VIABLE	VIABLE	VIABLE
2019	VIABLE	VIABLE	VIABLE
2020	VIABLE	VIABLE	VIABLE
2021	VIABLE	VIABLE	VIABLE
2022	VIABLE	VIABLE	VIABLE
2023	VIABLE	VIABLE	VIABLE
2024	VIABLE	VIABLE	VIABLE
2025	VIABLE	VIABLE	VIABLE
2026	VIABLE	VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure EHXXXVI

10.76 Against previously developed residential land values, 10% affordable housing may be achieved assuming at least middle market conditions are achieved.



Value Areas: CM23 and SG9

- 10.77 Development is likely to be more challenging in the lower value areas of CM23 and SG9 and circa 10% affordable housing is more likely unless favourable upside market conditions are achieved whereupon 20% affordable housing may be possible.
- 10.78 Even when the affordable housing requirement is reduced to 10%, development is unviable against previously developed residential land values in value areas SG9 and CM23.

Notional Site - 6-14 unit development at 50 dph

Value Areas: SG11 and SG13/14

- 10.79 Areas SG11 and SG13/14 are likely to be able to deliver up to 20% affordable housing against industrial/greenfield land values.
- 10.80 Figure EHXXXVII illustrates that 10% affordable housing in CM13/14 was found to be mostly marginally viable throughout the middle scenario and viable at the upside against previously developed residential land values.

East Herts SG13 SG14			
10 units on a 0.2 hectare site (50 units per hectare density) - 4 flat(s) and 6 house(s).			
10% Affordable Housing			
AH Mix:	100% Shared Ownership		
	50% S.106 Requirements		
	Nil Grant Higher EUV sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Red	Yellow	Green
2023	Red	Yellow	Green
2024	Red	Yellow	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure EHXXXVII

Value Areas: SG9 and SG12

- 10.81 10% affordable housing may be achievable in these value areas assuming industrial/greenfield land values. Against previously developed residential land values, it is unlikely any amount of affordable housing could be viably delivered.

Value Area: CM23

- 10.82 It is unlikely developments of this nature in CM23 will be able to support any affordable housing contribution regardless current land use.



Notional Site - 6-14 unit development at 70 dph

Value Area: SG14/14

- 10.83 10% affordable housing or equivalent off site contribution may be achievable in this value area from 2010 to 2015 assuming industrial/greenfield land values.
- 10.84 It is unlikely that schemes of this nature, coming forward on sites with an existing residential use would be able to support any level of affordable housing on sites with an existing residential use. It is worthy to note however that the flatted values used in the higher density developments are average and there may be executive style apartment schemes that come forward with values significantly in excess of those assumed for the purposes of this study. There may therefore be potential for schemes of this nature to deliver affordable housing contributions in excess of the levels found within this study.

Value Areas: SG11, SG12, CM23 and SG9

- 10.85 It is unlikely delivery of any affordable housing will be achievable against either industrial/greenfield or previously developed residential land values.



11.0 Strategic Site Results and Analysis

- 11.1 In addition to our “notional” site assessment, we have also undertaken assessments of larger strategic sites. These represent development schemes that will come forward during the Core Strategy and delivering significant numbers of housing and infrastructure. They are typified by being over one thousand units with a blend of different development densities. We do not, at present, know where strategic sites will be specifically located and therefore we have assessed them against every value area within each local authority.
- 11.2 After discussions with officers representing the local authorities we have considered viability based on a number of different tenure breakdowns, with and without Social Housing Grant, and in light of the impact of a range of different infrastructure contributions – ranging from £20,000/unit to £35,000/unit. We have assumed this contribution is timetabled during the early parts of the construction period. If there is potential to spread these payments during the whole of the development period then the effect on viability may be mitigated somewhat enabling more affordable housing to be achieved.
- 11.3 We have assessed the resulting residual value for the whole development against Gross Development Value (the RLV:GDV test). This allows us to consider the relative land value rather than an absolute one. Rather than assessing what particular land value might be acceptable to a landowner this assesses the true value of the development and whether the land value generated may be reasonable for both the developer and the landowner.
- 11.4 It is clear from our stakeholder consultation that assessing large schemes of this nature on a generic basis (as we must here) is fraught with issues as there are likely to be many factors that will affect land coming forward. These will include land assembly issues (land is unlikely to be in one ownership and may come forward on a phased basis) as well as infrastructure issues. Also, there may be other uses on the site that will affect overall viability. It has not been possible to incorporate all of these variables in what must be seen as a generic study to inform general policy positions. Rather, our assessment of strategic sites must be seen as a preliminary part of the process that establishes the general starting point for negotiations and that establishes the likely potential for these sites.
- 11.5 Further care must be taken when assessing large scale developments of this sort as the site assembly issues, large infrastructure requirements and timing of development can all have a significant effect on development economics. Developer appraisals on these large sites are unlikely to take the form of a policy assessment model such as this as different factors and their timing will have to be carefully considered. However, in our experience the long term sales profiles of these sites can help viability somewhat especially in a rising market and where short term losses to pay for infrastructure requirements can be offset later in the development period by rising sales values. The assessment we have done of these large sites must be seen in this light; it is not a case of extrapolating the results of a small site (up to 150 units for example) and using these to assess the viability of large strategic sites.



HARLOW STRATEGIC SITES

- 11.6 As stated above, all strategic sites have been assessed against each value area within each local authority. In Harlow, however, where there is recognition that development may occur outside the local authority area, and thus not within any of the value areas identified for the purposes of this study, we have additionally assessed development viability against a 'generic value area'. This value area, (the values for which are outlined in Appendix 5 to this report as Harlow Strategic Site Additional Value Area), and the values assessed within it, have been informed by the current sales values of new build developments in Harlow. It should also be remembered that new value areas may be created over the long term by the development of large strategic schemes. This may mean that these strategic sites will have their own unique 'value area' and may not necessarily reflect the value areas assessed here. We feel that the inclusion of this additional value area is the most appropriate method to assess the potential range of sales values that Harlow Strategic Sites may generate within the Core Strategy Period.

1,500 Units at Average 40 DPH

- 11.7 This strategic site is assumed to have an overall net residential density of 40 dwellings per hectare. We have assumed a gross land take that takes account of other sites uses and the gross site density equates to 20 dph. We have also assumed that there will be a blend of densities across the site from low density executive style development to more dense flatted development. This must be borne in mind when viewing the descriptions associated with each Figure in relation to density. The overall scheme mix has been set out in Appendix 4.
- 11.8 For the purposes of this assessment it was also assumed that the development will be a single phase. The site was assessed against values in the four postcode areas in Harlow and the additional value area referred to above.

Value Area: CM17

- 11.9 The possibility of achieving 30% affordable housing is likely to be achievable in the later periods of the core strategy but only marginally and care must be taken if high levels of infrastructure are needed. Even at 10% affordable housing with CM17 values, marginal viability is achieved in the middle economic position in 2015. We have shown the position with 30% affordable housing and 10% affordable housing in figures SS1 and SS2 below. In a downside economic position it may be possible to achieve 10% affordable but not until later in the Core Strategy period.



Harlow CM17			
1500 units on a 75 hectare site (20 units per hectare density) - 338 flat(s) and 1162 house(s).			
AH Mix:	70:30 Social Rent:Intermediate		
30% Affordable Housing			
20000 infrastructure S106 allowance			
Normal Grant sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Yellow
2017	Red	Yellow	Yellow
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Red	Yellow	Green
2023	Red	Yellow	Green
2024	Red	Yellow	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
	Red	=NOT VIABLE	
	Yellow	=Marginally VIABLE	
	Green	=VIABLE	

Figure SS1

Harlow CM17			
1500 units on a 75 hectare site (20 units per hectare density) - 338 flat(s) and 1162 house(s).			
10% Affordable Housing			
AH Mix:	70:30 Social Rent:Intermediate		
20000 Infrastructure Allowance			
Normal Grant sensitivity.			
19% Gross profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Yellow	Yellow
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Yellow	Yellow	Green
2021	Yellow	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
	Red	=NOT VIABLE	
	Yellow	=Marginally VIABLE	
	Green	=VIABLE	

Figure SS2

Value Area: CM18

11.10 It is clear that with values at levels equivalent to CM18 it is unlikely that high proportions of affordable housing can be achieved even in benign economic conditions at any sensitivity. We have tested at 10% affordable housing and this may be achievable later in the Core Strategy period or potentially throughout in upside economic conditions as can be seen in Figure SS3.



1500 units on a 75 hectare site (20 units per hectare density) - 338 flat(s) and 1162 house(s).			
Harlow CM18			
10% Affordable Housing			
AH Mix:	25:75 Social Rent to Intermediate		
	£20000 S106 allowance		
	Higher Grant sensitivity.		
	19% Gross Profit sensitivity.		
	VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Yellow
2017	Red	Red	Yellow
2018	Red	Red	Yellow
2019	Red	Yellow	Yellow
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Red	Yellow	Green
2023	Red	Yellow	Green
2024	Red	Yellow	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure SS3

Value Areas: CM19 and CM20

- 11.11 The positions in value areas CM19 and CM20 are broadly similar although viability has been found to be slightly improved in CM19 over CM20. This may mean that if values on this type of site are more in line with CM19 then marginally higher proportions of affordable housing (or less grant per unit) can be achieved.
- 11.12 Unless upside economic conditions prevail it is likely that some grant may be needed to support a level of 30% affordable housing. It may be necessary, in that case, to reduce the amount of affordable housing early in the plan period (perhaps by phasing development) and then to increase that later in the plan period and/or when economic conditions improve. This position can be seen clearly in the two figures (SS4 and SS5) below. Higher levels of grant will also improve the situation.



Harlow CM19			
1500 units on a 75 hectare site (20 units per hectare density) - 338 flat(s) and 1162 house(s).			
AH Mix:	70:30 Social Rent:Intermediate		
30% Affordable Housing			
20000 infrastructure \$106 allowance			
Normal Grant sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Yellow
2017	Red	Yellow	Yellow
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Red	Yellow	Green
2023	Red	Yellow	Green
2024	Red	Yellow	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure SS4

Harlow CM19			
1500 units on a 75 hectare site (20 units per hectare density) - 338 flat(s) and 1162 house(s).			
AH Mix:	70:30 Social rent:Intermediate		
10% Affordable Housing			
20,000 per unit Infrastrucutre Allowance			
Normal Grant sensitivity.			
19% Gross profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Yellow
2017	Red	Yellow	Yellow
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Yellow	Yellow	Green
2021	Yellow	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure SS5

Harlow Strategic Site Additional Value Area

11.13 The viability position of 30% affordable housing with nil grant and infrastructure contributions of £20,000 per unit and £30,000 per unit are shown in Figures SS6 and SS7 below. As there are significant periods in middle and upside market conditions where a viable position can be achieved on this basis, 35% affordable housing has been assessed. Figure SS8 shows the viability position of this affordable housing percentage assuming nil grant and infrastructure costs of £25,000 per unit.



Harlow Additional Value Area			
1500 units on a 75 hectare site (20 units per hectare density) - 338 flat(s) and 1162 house(s).			
AH Mix:	70:30 Social Rent:Intermediate		
30% Affordable Housing			
20000 infrastructure allowance			
Nil Grant sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Yellow
2012	Red	Yellow	Yellow
2013	Red	Yellow	Yellow
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Yellow	Green	Green
2020	Yellow	Green	Green
2021	Yellow	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
Red	=NOT VIABLE		
Yellow	=MARGINALLY VIABLE		
Green	=VIABLE		

Figure SS6

Harlow Additional Value Area			
1500 units on a 75 hectare site (20 units per hectare density) - 338 flat(s) and 1162 house(s).			
AH Mix:	70:30 Social Rent:Intermediate		
30% Affordable Housing			
30000 infrastructure allowance			
Nil Grant sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Yellow	Yellow
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Yellow	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
Red	=NOT VIABLE		
Yellow	=MARGINALLY VIABLE		
Green	=VIABLE		

Figure SS7



Harlow Additional Value Area			
1500 units on a 75 hectare site (20 units per hectare density) - 338 flat(s) and 1162 house(s).			
35% Affordable Housing			
AH Mix:	70:30 Social Rent:Intermediate		
	25000 Infrastructure Allowance		
	Nil Grant sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Yellow	Yellow	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure SS8

Conclusions 1,500 Unit Scheme in Harlow

- 11.14 If developments of 1,500 units are to come forward with values equivalent to those of CM17, CM18, CM18 and CM20 in Harlow then it is likely that high levels of grant will be necessary to support schemes especially in the early part of the Core Strategy period unless economic conditions return to an upside position. However, if developments come forward at values equivalent to the additional value area tested, there is potential that 30-35% affordable housing could be achieved without grant, although the affordable housing percentage will be dependent upon the levels of infrastructure sought.
- 11.15 It is also clear in all cases that should economic conditions fall to the downside between now and 2026 then development with any significant levels of affordable housing is likely to be very challenging at those times.

3,000 Units and 5,000 Unit Schemes

- 11.16 We have assessed these schemes on the assumption that they will be developed in smaller phases. For the purposes of this assessment we have assumed phases of the equivalent of 1,000 units. The overall scheme mixes are set out in Appendix 4.
- 11.17 The results within each value area have been found to be broadly similar for both the 3,000 unit scheme and the 5,000 unit scheme. This is to be expected where infrastructure is assessed on a per unit basis. We have tested three different densities; 30 dph, 40 dph and 50 dph and we have assumed that, the overall gross site area will be the same for each scheme (50 hectares per 1,000 unit phase). This must be borne in mind when viewing the descriptions associated with each Figure in relation density. Generally, we have found that the higher the density, the less viable the schemes become although the effect is marginal.



Value Areas: CM17, CM19 and CM20

- 11.18 The viability position in these three areas is broadly similar and the following conclusion applies to all three value areas. Value area CM19 is marginally the better area followed by CM20 and then CM17.
- 11.19 As can be seen in Figures SS9, SS10 and SS11 viability becomes increasingly more challenging as density increases. These figures show the position with a 50:50 tenure split and additional costs per unit for infrastructure/planning gain of £20,000 and no grant. All of these confirm that it will be challenging to achieve 30% in the early years of the Core Strategy especially in times of downside economic conditions. We have therefore tested at 10% affordable housing and this would suggest that at that level it may be possible to achieve a marginal position currently and for the life of the Core Strategy. This can be seen in Figure SS12. This would suggest that consideration should be given on larger sites to phasing of development so that affordable requirements can be maximised. Clearly, additional grant funding will ease the situation.

1000 units on a 50 hectare site (20 units per hectare density) - 166 flat(s) and 834 house(s).			
Harlow CM17			
AH Mix:	50:50 Social Rent:Intermediate		
30% Affordable Housing			
20000 infrastructure allowance			
Nil Grant sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Yellow
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Red	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure SS9



1000 units on a 50 hectare site (20 units per hectare density) - 226 flat(s) and 774 house(s).			
Harlow CM17			
AH Mix:	50:50 Social Rent:Intermediate		
30% Affordable Housing			
20000 infrastructure allowance			
Nil Grant sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Yellow
2017	Red	Red	Yellow
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Red	Yellow	Green
2023	Red	Yellow	Green
2024	Red	Yellow	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure SS10

1000 units on a 50 hectare site (20 units per hectare density) - 288 flat(s) and 712 house(s).			
Harlow CM17			
AH Mix:	50:50 Social Rent:Intermediate		
30% Affordable Housing			
20000 infrastructure allowance			
Nil Grant sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Yellow
2017	Red	Red	Yellow
2018	Red	Red	Yellow
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Red	Yellow	Green
2023	Red	Yellow	Green
2024	Red	Yellow	Green
2025	Red	Yellow	Green
2026	Red	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure SS11



1000 units on a 50 hectare site (20 units per hectare density) - 166 flat(s) and 834 house(s).			
Harlow CM17			
10% Affordable Housing			
AH Mix:	50:50 Social Rent:Intermediate		
	#VALUE!		
	Normal Grant sensitivity.		
	19% Gross profit sensitivity.		
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Yellow	Green	Green
2020	Yellow	Green	Green
2021	Yellow	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Green	Green	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=Marginally VIABLE		
	=VIABLE		

Figure SS12

Value Area: CM18

11.20 Development at values equivalent to our CM18 assumptions proves to be more challenging in than the other value areas. Indeed even at 30% affordable housing we have found that for most of the Core Strategy period, viability is compromised. 10% affordable housing is likely to be more achievable especially later in the Core Strategy period as can be seen in Figure SS13. As with the other value areas the higher density schemes with less higher value detached and semi detached units face more challenges to viability than lower density schemes.

1000 units on a 50 hectare site (20 units per hectare density) - 166 flat(s) and 834 house(s).			
Harlow CM18			
10% Affordable Housing			
AH Mix:	50:50 Social Rent:Intermediate		
	20,000 per unit S106 allowance		
	Normal Grant sensitivity.		
	19% Gross Profit sensitivity.		
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Yellow
2017	Red	Red	Yellow
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Red	Yellow	Green
2023	Red	Yellow	Green
2024	Red	Yellow	Green
2025	Red	Yellow	Green
2026	Yellow	Green	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=Marginally VIABLE		
	=VIABLE		

Figure SS13



Harlow Strategic Site Additional Value Area

- 11.21 Assessment of development at these values demonstrates that delivery of 30% affordable housing is less challenging than in the other value areas. Again, development density and the level of infrastructure requirements impact upon the amount of affordable housing that may be achieved.
- 11.22 Figures SS14 and SS15 show the viability position of 30% affordable housing with nil grant at development densities of 30dph and 50 dph with infrastructure costs of £30,000 per unit.

Harlow Additional Value Area			
1000 units on a 50 hectare site (20 units per hectare density) - 166 flat(s) and 834 house(s).			
30% Affordable Housing			
AH Mix:	70:30 Social Rent:Intermediate		
	30000 infrastructure allowance		
	Nil Grant sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Yellow	Green	Green
2020	Yellow	Green	Green
2021	Yellow	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Green	Green	Green
Red	=NOT VIABLE		
Yellow	=MARGINALLY VIABLE		
Green	=VIABLE		

Figure SS14

Harlow Additional Value Area			
1000 units on a 50 hectare site (20 units per hectare density) - 288 flat(s) and 712 house(s).			
30% Affordable Housing			
AH Mix:	70:30 Social Rent:Intermediate		
	30000 infrastructure allowance		
	Nil Grant sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Yellow
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Green	Green
2020	Red	Green	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Green	Green	Green
Red	=NOT VIABLE		
Yellow	=MARGINALLY VIABLE		
Green	=VIABLE		

Figure SS15



Conclusions 3,000 and 5,000 Unit Scheme in Harlow

- 11.23 In all value areas the higher density schemes with less higher value detached and semi detached units face more challenges to viability than lower density schemes. It is also clear that achieving 30% affordable housing in the early years of the Core Strategy on schemes coming forward with values equivalent to those of CM17, CM18, CM18 and CM20 is likely to be challenging and consideration should be given on larger sites to phasing of development so that affordable housing requirements can be maximised. The availability of public subsidy will also ease viability in these early periods.
- 11.24 On schemes coming forward with values equivalent to the additional value area, at lower density development particularly, (30dph), there is potential to achieve 30% affordable housing without grant, rising to 35% affordable housing later in the period assessed and/or in upside market conditions. Of course the level of infrastructure contributions sought will impact upon the amount of affordable housing that may be achieved.
- 11.25 Again, should economic conditions fall to the downside between now and 2026 then development with any significant levels of affordable housing is likely to be very challenging at those times.

Effect of Higher Infrastructure/Planning Requirements

- 11.26 Because of the challenging nature of achieving high levels of affordable housing in any conditions, it is likely that views will need to be taken about the level of infrastructure that can be supported in any of the value areas in Harlow. Our testing would suggest that there is likely to be a “trade off” between the level of affordable housing and the amount of infrastructure that can be provided. That is to say, the levels of affordable housing that can be viably delivered will be dependent upon a number of factors, not least the amount and timing of any infrastructure that is required to be delivered. In general terms, the higher the value of any infrastructure and the earlier in the development programme that it is required to be delivered, the greater the impact upon the levels of affordable housing that may be achieved.

UTTLESFORD STRATEGIC SITES

3,000 Units and 5,000 Unit Schemes

- 11.27 We have assessed these schemes on the assumption that they will be developed in smaller phased developments. For the purposes of this assessment we have assumed phases of the equivalent of 1,000 units. The overall scheme mixes we tested at 30 dph and 50 dph are to be found in Appendix 4.
- 11.28 The results within each value area have been found to be broadly similar for both the 3,000 unit scheme and the 5,000 unit scheme which is to be expected where infrastructure is assessed on a per unit basis. However, this has enabled us to consider distinct differences between the timing of the phasing and we have assumed a gross land take for each density that we tested (30 dph and 50 dph) and we have assumed that, the overall gross site area will be the same for each scheme (50 hectares per 1,000 unit phase).



Value Areas: CB10 and CB11

11.29 While the results were not identical (CB11 values produced marginally more viable results) for these two value areas, the conclusions that can be drawn are similar.

30 dph

11.30 At 30 dph we tested the target for affordable housing at 35%. While this is currently marginally viable without grant it is likely that initially some grant may be needed to support this level of affordable housing. This position is likely to continue for much of the Core Strategy period in middle scenario economic conditions. The position at 35% is shown in Figure SS16 with a 50:50 social rent to intermediate tenure split. The position with a 70:30 split and no grant is more challenging and would appear to be currently not viable. This can be seen at Figure SS17.

1000 units on a 50 hectare site (20 units per hectare density) - 166 flat(s) and 834 house(s).			
Uttlesford CB 1 1			
AH Mix:	50:50 Social Rent:Intermediate		
35% Affordable Housing			
20000 infrastructure allowance			
Nil Grant sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Yellow	Green	Green
2021	Yellow	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure SS16



Uttlesford CB11			
1000 units on a 50 hectare site (20 units per hectare density) - 166 flat(s) and 834 house(s).			
AH Mix:	70:30 Social Rent:Intermediate		
35% Affordable Housing			
20000 infrastructure allowance			
Nil Grant sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Yellow	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure SS17

11.31 The effect of the imposition of higher levels of planning/infrastructure can be seen in figures SS18 and SS19 which show the nil grant position with £30,000 and £35,000 per unit requirements. This shows that these higher levels affect the ability of schemes to come forward and that a compromise may be needed regarding a trade off between affordable housing and other infrastructure requirements.

Uttlesford CB11			
1000 units on a 50 hectare site (20 units per hectare density) - 166 flat(s) and 834 house(s).			
AH Mix:	70:30 Social Rent:Intermediate		
35% Affordable Housing			
25000 infrastructure allowance			
Nil Grant sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Yellow
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Red	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure SS18



Uttlesford CB 11			
1000 units on a 50 hectare site (20 units per hectare density) - 166 flat(s) and 834 house(s).			
35% Affordable Housing			
AH Mix:	70:30 Social Rent:Intermediate		
	35000 infrastructure allowance		
	Nil Grant sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Yellow
2017	Red	Red	Yellow
2018	Red	Red	Yellow
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Red	Yellow	Green
2023	Red	Yellow	Green
2024	Red	Yellow	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
Red	=NOT VIABLE		
Yellow	=Marginally VIABLE		
Green	=VIABLE		

Figure SS19

50 dph

11.32 The target of 35% affordable appears to be more of a challenge for viability at the higher density that we tested in Uttlesford. This target looks to be achievable later in the Core Strategy period assuming middle or upside economic conditions. Figure SS20 shows the position with no grant, £20,000 per unit infrastructure and a tenure split of 70:30 social rent to intermediate. This position can be improved if less affordable housing is sought and we have tested at 20% affordable. The position is shown in Figure SS21 which suggests that the current and short term position improves assuming middle or upside economic conditions although marginal viability is still not achieved until 2015 or thereabouts.

Uttlesford CB 11			
1000 units on a 50 hectare site (20 units per hectare density) - 288 flat(s) and 712 house(s).			
35% Affordable Housing			
AH Mix:	70:30 Social Rent:Intermediate		
	20000 infrastructure allowance		
	Nil Grant sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Yellow
2017	Red	Red	Yellow
2018	Red	Red	Yellow
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Red	Yellow	Green
2023	Red	Yellow	Green
2024	Red	Yellow	Green
2025	Red	Yellow	Green
2026	Red	Yellow	Green
Red	=NOT VIABLE		
Yellow	=Marginally VIABLE		
Green	=VIABLE		

Figure SS20



Uttlesford CB11			
1000 units on a 50 hectare site (20 units per hectare density) - 288 flat(s) and 712 house(s).			
20% Affordable Housing			
AH Mix:	70:30 Socialrent:Intermediate		
	20,000 per unit Infrastructure Allowance		
	Nil Grant sensitivity.		
	19% Gross profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Yellow	Yellow
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Yellow	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure SS21

Value Area: CM22

30 dph

11.33 Currently, to achieve 35% affordable on site it is likely that grant will be needed and a tenure mix of 50:50 intermediate to social rent. This can be seen in Figure SS22 which also assumes infrastructure of £20,000 per unit. The effect of the imposition of Code for Sustainable Homes requirements during the period 2012 to 2016 can also be seen. Viability during this period (based on current projections about the effect on construction costs) appears to be compromised.

1000 units on a 50 hectare site (20 units per hectare density) - 166 flat(s) and 834 house(s).			
Uttlesford CM22			
35% Affordable Housing			
AH Mix:	50:50 Social Rent:Intermediate		
	20000 infrastructure allowance		
	Normal Grant sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Yellow	Yellow
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Green	Green
2021	Yellow	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure SS22



50 dph

11.34 Higher density schemes appear to present more challenges for achieving a viable position. Figure SS23 shows the position with a 50:50 tenure split with grant and it would appear that viability is still compromised until after 2018 when the scheme becomes marginally viable in the middle economic scenario. Therefore, it may be necessary to consider reducing the affordable housing requirements during the early phases of schemes to enable these to proceed.

1000 units on a 50 hectare site (20 units per hectare density) - 288 flat(s) and 712 house(s).			
Uttlesford CM22			
35% Affordable Housing			
AH Mix:	50:50 Social Rent:Intermediate		
	20000 infrastructure allowance		
	Normal Grant sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2011	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2012	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2013	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2014	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2015	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2016	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2017	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2018	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2019	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2020	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2021	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2022	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2023	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2024	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2025	MARGINALLY VIABLE	VIABLE	VIABLE
2026	MARGINALLY VIABLE	VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure SS23

Value Areas: CM23 and CM6

11.35 While the results were not identical (CM23 values produced more viable results) for these two value areas, the conclusions that can be drawn are similar. There appeared to be a more marked differential between the two areas on higher density (50 dph) schemes and CM23 values produced more viable results.

30 dph

11.36 Current economic conditions would suggest that, even at a 30:70 split, 35% affordable housing is currently unviable. Initially and in earlier phasing of schemes it may be necessary to consider a reduction in the overall percentage of affordable housing sought. Figure SS24 shows the position with 35% affordable housing while the position with 20% affordable housing is shown in Figure SS25.



1000 units on a 50 hectare site (20 units per hectare density) - 166 flat(s) and 834 house(s).			
Uttlesford CM23			
35% Affordable Housing			
AH Mix:	30:70 Social Rent:Intermediate		
	20000 infrastructure allowance		
	Normal Grant sensitivity.		
	19% Gross Profit sensitivity.		
NV			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Yellow
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Red	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
Red	=NOT VIABLE		
Yellow	=Marginally VIABLE		
Green	=VIABLE		

Figure SS24

1000 units on a 50 hectare site (20 units per hectare density) - 166 flat(s) and 834 house(s).			
Uttlesford CM23			
20% Affordable Housing			
AH Mix:	30:70 Social Rent:Intermediate		
	20000 per unit S106 allowance		
	Normal Grant sensitivity.		
	19% Gross profit sensitivity.		
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Green
2012	Red	Yellow	Green
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Yellow	Green	Green
2021	Yellow	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
Red	=NOT VIABLE		
Yellow	=Marginally VIABLE		
Green	=VIABLE		

Figure SS25



50 dph

11.37 The increase in density has an adverse effect on viability due to the decrease in the proportions of higher value semi detached and detached properties. The positions at 35% and 20% are shown in Figures SS26 and SS27.

1000 units on a 50 hectare site (20 units per hectare density) - 288 flat(s) and 712 house(s).			
Uttlesford CM23			
35% Affordable Housing			
AH Mix:	30:70 Social Rent:Intermediate		
	20000 infrastructure allowance		
	Normal Grant sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	NV		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Yellow
2017	Red	Red	Yellow
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Red	Yellow	Green
2023	Red	Yellow	Green
2024	Red	Yellow	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure SS26

1000 units on a 50 hectare site (20 units per hectare density) - 288 flat(s) and 712 house(s).			
Uttlesford CM23			
20% Affordable Housing			
AH Mix:	30:70 Social rent to Intermediate		
	20000 per unit S106 allowance		
	Normal Grant sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Yellow	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure SS27



EAST HERTFORDSHIRE STRATEGIC SITES

1,500 Units at Average 40 dph

- 11.38 This strategic site is assumed to have an overall net residential density of 40 dwellings per hectare. However, it is likely that there will be a blend of densities across the site from low density executive style development to more dense flatted development. The overall scheme mix is the same as the 1,500 unit scheme for Harlow (see Appendix 4).
- 11.39 For the purposes of this assessment it was also assumed that the development would be a single phase. The site was assessed against values in the six postcode areas in East Herts although it should be remembered that value areas may be created over the long term by the development of large strategic schemes. This may mean that these strategic sites will have their own 'value area' which will affect viability compared to the value areas we have assessed here.

Value Areas: CM23 and SG9

- 11.40 While the results were not identical (SG9 values produced marginally more viable results) for these two value areas, the conclusions that can be drawn are similar.
- 11.41 At 35% affordable housing, even with grant, schemes were unlikely to be viable taking into account the middle economic scenario. Therefore, we have assessed the position with a reduced amount of affordable housing and this would suggest that 10% affordable may be viable. This is shown in Figure SS28. It is likely that 35% affordable housing can be achieved later in the Core Strategy period as can be seen at Figure SS29.

1500 units on a 75 hectare site (20 units per hectare density) - 338 flat(s) and 1162 house(s).			
East Herts SG9			
35% Affordable Housing			
AH Mix:	25:75 Social Rent:Intermediate		
	20000 infrastructure allowance		
	Normal Grant sensitivity.		
	19% Gross Profit sensitivity.		
NV			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Red	Yellow
2017	Red	Yellow	Yellow
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Red	Yellow	Green
2023	Red	Yellow	Green
2024	Red	Yellow	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
	Red		
	Yellow		
	Green		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure SS28



East Herts SG13/14			
1500 units on a 75 hectare site (20 units per hectare density) - 338 flat(s) and 1162 house(s).			
35% Affordable Housing			
AH Mix:	75:25 Social Rent:Intermediate		
	25000 infrastructure allowance		
	Nil Grant sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	DOWNSIDE	VIABILITY	
		MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Yellow	Yellow
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Yellow	Green	Green
2021	Yellow	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure SS31

East Herts SG13/14			
1500 units on a 75 hectare site (20 units per hectare density) - 338 flat(s) and 1162 house(s).			
35% Affordable Housing			
AH Mix:	75:25 Social Rent:Intermediate		
	35000 infrastructure allowance		
	Nil Grant sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	DOWNSIDE	VIABILITY	
		MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Red	Yellow
2016	Red	Yellow	Yellow
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Red	Yellow	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure SS32



3,000 Unit Scheme

11.44 We have assessed these schemes on the assumption that they will be developed in smaller phased developments. For the purposes of this assessment we have assumed phases of the equivalent of 1,000 units. The overall scheme mixes are set out in Appendix 4.

Value Areas: CM23 and SG9

11.45 While the results were not identical (SG9 values produced marginally more viable results) for these two value areas, the conclusions that can be drawn are similar.

11.46 At 35% affordable housing, even with grant, schemes were unlikely to be viable taking into account the middle economic scenario. Therefore, we have assessed the position with a reduced amount of affordable housing and this would suggest that 10% affordable may be viable. This is shown in Figure SS33. It is likely that 35% affordable housing can be achieved later in the Core Strategy period as can be seen at Figure SS34.

1000 units on a 50 hectare site (20 units per hectare density) - 226 flat(s) and 774 house(s).			
East Herts SG9			
10% Affordable Housing			
AH Mix:	50:50 Social rent to Intermediate		
	20,000 per unit \$106 allowance		
	Normal Grant sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Green
2011	Red	Yellow	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Yellow	Green
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Yellow	Green	Green
2021	Yellow	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure SS33



1000 units on a 50 hectare site (20 units per hectare density) - 226 flat(s) and 774 house(s).			
East Herts SG9			
35% Affordable Housing			
AH Mix:	50:50 Social Rent:Intermediate		
	20000 infrastructure allowance		
	Normal Grant sensitivity.		
	19% Gross Profit sensitivity.		
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2011	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2012	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2013	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2014	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2015	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2016	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2017	NOT VIABLE	NOT VIABLE	MARGINALLY VIABLE
2018	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2019	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2020	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2021	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2022	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2023	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2024	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2025	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2026	MARGINALLY VIABLE	VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure SS34

Value Areas: SG11, SG12, SG13 and SG14

- 11.47 These areas have similar results and therefore the conclusions here relate to these four value areas.
- 11.48 The position on this 3,000 unit scheme is similar to the 1,500 scheme. In most sensitivities against values in these areas, schemes are mostly marginally viable currently when set against a requirement for 35% affordable housing. Even at nil grant the position is positive throughout the Core Strategy period assuming middle economic conditions or better. The position with a 50:50 affordable housing split is shown in Figure SS35.

1000 units on a 50 hectare site (20 units per hectare density) - 226 flat(s) and 774 house(s).			
East Herts SG13/14			
35% Affordable Housing			
AH Mix:	50:50 Social Rent:Intermediate		
	30000 infrastructure allowance		
	Nil Grant sensitivity.		
	19% Gross Profit sensitivity.		
VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2011	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2012	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2013	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2014	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2015	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2016	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2017	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2018	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2019	MARGINALLY VIABLE	VIABLE	VIABLE
2020	MARGINALLY VIABLE	VIABLE	VIABLE
2021	MARGINALLY VIABLE	VIABLE	VIABLE
2022	MARGINALLY VIABLE	VIABLE	VIABLE
2023	MARGINALLY VIABLE	VIABLE	VIABLE
2024	MARGINALLY VIABLE	VIABLE	VIABLE
2025	MARGINALLY VIABLE	VIABLE	VIABLE
2026	MARGINALLY VIABLE	VIABLE	VIABLE
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure SS35



EPPING FOREST STRATEGIC SITES

1,500 Units at Average 40 dph

- 11.49 This strategic site is assumed to have an overall net residential density of 40 dwellings per hectare. However, it is likely that there will be a blend of densities across the site from low density executive style development to more dense flatted development. The overall scheme mix is the same as the 1,500 unit scheme for Harlow (see above).
- 11.50 For the purposes of this assessment it was also assumed that the development would be a single phase. The site was assessed against values in the six postcode areas in Epping Forest although it should be remembered that value areas may be created over the long term by the development of large strategic schemes. This may mean that these strategic sites will have their own 'value area' which will affect viability compared to the value areas we have assessed here.

Value Areas: RM4, CM16, IG10 and IG7

- 11.51 These areas have similar results and therefore the conclusions here relate to these four value areas.
- 11.52 The high values in these areas appear to support a 35% affordable housing target in the majority of sensitivities undertaken. Assessing the scheme with a 70:30 split of affordable housing and with £30,000 per unit infrastructure shows that marginal viability is achieved currently and in the long term assuming middle market conditions. It is possible that an increase in the infrastructure requirements would tip the scheme into an unviable position. This can be seen by comparing the position with £30,000 per unit (Figure SS36) and £35,000 per unit (Figure SS37).

Epping Forest CM16			
1500 units on a 75 hectare site (20 units per hectare density) - 338 flat(s) and 1162 house(s).			
35% Affordable Housing			
AH Mix:	70:30 Social Rent:Intermediate		
	30000 infrastructure allowance		
	Nil Grant sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2011	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2012	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2013	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2014	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2015	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2016	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2017	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2018	NOT VIABLE	MARGINALLY VIABLE	VIABLE
2019	MARGINALLY VIABLE	VIABLE	VIABLE
2020	MARGINALLY VIABLE	VIABLE	VIABLE
2021	MARGINALLY VIABLE	VIABLE	VIABLE
2022	MARGINALLY VIABLE	VIABLE	VIABLE
2023	MARGINALLY VIABLE	VIABLE	VIABLE
2024	MARGINALLY VIABLE	VIABLE	VIABLE
2025	MARGINALLY VIABLE	VIABLE	VIABLE
2026	MARGINALLY VIABLE	VIABLE	VIABLE
	NOT VIABLE	MARGINALLY VIABLE	VIABLE

Figure SS36



Epping Forest CM16			
1500 units on a 75 hectare site (20 units per hectare density) - 338 flat(s) and 1162 house(s).			
35% Affordable Housing			
AH Mix:	70:30 Social Rent:Intermediate		
	35000 infrastructure allowance		
	Nil Grant sensitivity.		
	19% Gross Profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Yellow	Yellow
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Yellow	Green	Green
2021	Yellow	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
Red	=NOT VIABLE		
Yellow	=MARGINALLY VIABLE		
Green	=VIABLE		

Figure SS37

Value Area: CM17

11.53 Achieving 35% affordable housing in this value area is challenging in the early period of the Core Strategy. Indeed, this scheme is likely to require a commitment to grant for the majority of the period to 2026 even under middle economic conditions. The position with 15% affordable housing is shown in Figure SS38.

Epping Forest CM17			
1500 units on a 75 hectare site (20 units per hectare density) - 338 flat(s) and 1162 house(s).			
15% Affordable Housing			
AH Mix:	50:50 Social Rent to Intermediate		
	20,000 per unit S106 allowance		
	Normal Grant sensitivity.		
	19% Gross profit sensitivity.		
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Red	Yellow
2011	Red	Red	Yellow
2012	Red	Red	Yellow
2013	Red	Red	Yellow
2014	Red	Red	Yellow
2015	Red	Yellow	Yellow
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Yellow	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
Red	=NOT VIABLE		
Yellow	=MARGINALLY VIABLE		
Green	=VIABLE		

Figure SS38



Value Areas: CM5 and EN9

11.54 Grant is likely to be needed to support 35% affordable housing and an affordable housing split of 70:30 social rent to intermediate currently in this value area. However, as can be seen from Figure SS39, the situation is likely to improve in middle or upside economic conditions. Therefore, it is possible that 35% affordable housing may be achievable throughout the Core Strategy period.

Epping Forest CM5/EN9			
1500 units on a 75 hectare site (20 units per hectare density) - 338 flat(s) and 1162 house(s).			
AH Mix:	70:30 Social Rent:Intermediate		
35% Affordable Housing			
20000 infrastructure \$106 allowance			
Normal Grant sensitivity.			
19% Gross Profit sensitivity.			
YEAR	VIABILITY		
	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Yellow	Yellow
2011	Red	Yellow	Yellow
2012	Red	Yellow	Yellow
2013	Red	Yellow	Yellow
2014	Red	Yellow	Yellow
2015	Red	Yellow	Yellow
2016	Red	Yellow	Green
2017	Red	Yellow	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Yellow	Green
2021	Yellow	Green	Green
2022	Yellow	Green	Green
2023	Yellow	Green	Green
2024	Yellow	Green	Green
2025	Yellow	Green	Green
2026	Yellow	Green	Green
	Red	=NOT VIABLE	
	Yellow	=MARGINALLY VIABLE	
	Green	=VIABLE	

Figure SS39



12.0 Commuted Sums

Commuted Sum Principles

- 12.1 The principles outlined in ODPM Circular 05/2005 confirm that planning “obligations created run with the land”⁴¹ and that “planning obligations should never be used as a means of securing for the local community a share in the profits of development i.e. as a means of securing a betterment levy.”⁴² The Circular considers that the use of planning obligations may include securing “the inclusion of an element of affordable housing in a residential or mixed use development where there is a residential component.”⁴³ In addition, the Circular confirms that the obligations should be “fairly and reasonably related in scale and kind to the proposed development, as well as being reasonable in other respects.”⁴⁴
- 12.2 Paragraph B14 of Circular 05/2005 states that affordable housing is provided through a presumption of being “in kind and on site”, however “there may be certain circumstances where provision on another site or a financial contribution may represent a more appropriate option”.
- 12.3 PPS3 was published in November 2006 together with the guidance document Delivering Affordable Housing. It sets out the Government’s strategic housing policy objectives, which include achieving a wide choice of high quality homes, widening opportunities for home ownership, improving affordability across the market by increasing supply, and the creation of sustainable, inclusive and mixed communities in all areas. PPS3 confirms the Government’s commitment to the provision of high quality housing for those unable to access or afford market housing and also helping people make the step from social-rented housing to home-ownership.
- 12.4 PPS3 states that where it can be robustly justified, off site provision or a financial contribution in lieu of on-site provision (of a ‘broadly equivalent value’⁴⁵) may be accepted as long as the agreed approach contributes to the creation of mixed communities in the local authority area.
- “Decisions on alternative options should be made with regard to what is economically viable and realistic on that site and local housing needs as well as taking into account the mix of tenures on the site (...) the level of developer contribution should be at least maintained, but it should not be assumed the developer can meet the whole cost of the shortfall”⁴⁶
- 12.5 Thus, although national policy suggests that on site provision of affordable housing is the preferred approach, there may be some instances where an off site contribution is acceptable. National policy is predicated on the basis that some

⁴¹ Paragraph A3 Circular 05/05

⁴² Paragraph B7 Circular 05/05

⁴³ Paragraph B12 Circular 05/05

⁴⁴ Paragraph B5 Circular 05/05

⁴⁵ PPS3 paragraph 29 Department of Communities and Local Government November 2006

⁴⁶ Delivering Affordable Housing paragraph 95 Department of Communities and Local Government November 2006



forms of affordable housing require public subsidy and planning agreements therefore need to maintain flexibility to deal with the eventuality that the subsidy may not be available at the time of delivery. These principles should apply whether the affordable housing is achieved on site or whether it is achieved through a contribution.

Principle of Equivalence – Practical Methodology

- 12.6 This report on the viability of affordable housing has shown that it is important to understand the economics of development when seeking to achieve affordable housing. This involves looking at all costs and values and assessing whether the residual is sufficient, generally, to bring sites forward. There may be instances where it is not possible or desirable to achieve the affordable housing on site and these same principles of applying the economics of development must apply. Therefore, when considering a particular site the principle of “broad equivalence” must apply.
- 12.7 Bearing in mind the complexities of assessing the economic implications of affordable housing, a simple formula for developer subsidy can be derived. However, this simple formula has a number of complex inputs that are used to assess individual sites and which maintain a contribution to affordable housing that is broadly equivalent in amount of affordable housing that is achieved and which has a broadly equivalent contribution from the developer thereby ensuring a neutral effect on the economics of provision. In line with PPS3, the presumption should be that the affordable housing is provided on site, but where an off site contribution is proposed, the developer should be neither advantaged nor disadvantaged by agreeing to or proposing an off site contribution.
- 12.8 Our view is that the economic assessment of a development should be site and scheme specific (it should include all costs and values related to the particular use) but that these costs should be generic (they should be able to be applied to any developer and not be specific to an individual). This will maintain the planning principle that permission runs with the land and not with an individual.
- 12.9 If a scheme is viable the practical methodology of assessing how much a development can afford involves establishing the developer subsidy. When this is an on site contribution this will be an exercise to establish how much and what type of affordable housing can be achieved on site. When an off site contribution is to be applied it is establishing the amount of developer “subsidy” which is involved to meet the Council’s objectives.
- 12.10 We have pointed out that the developer subsidy relates to the implications for the land use of a particular site. The developer subsidy is established by looking at the difference in residual land value between the development without an encumbrance (in this case the encumbrance is the imposition of affordable housing) and the residual land value with the encumbrance. The simple formula for developer subsidy is thus:



DEVELOPER SUBSIDY FOR AFFORDABLE HOUSING

=

RESIDUAL VALUE OF DEVELOPMENT UNENCUMBERED BY AFFORDABLE HOUSING

LESS

RESIDUAL VALUE OF DEVELOPMENT ENCUMBERED BY AFFORDABLE HOUSING

12.11 Thus the formula involves two discrete calculations and we would suggest a simple matrix that enables these two calculations to be assessed. This is as follows with example figures input⁴⁷

Scheme	A 100% Market	B Mixed Scheme (Affordable & Market)
Gross Development Value (GDV)	£10,000,000	£6,500,000
Values/ Receipts		£2,000,000
Grant Provided		NIL
Total Build Costs	£4,750,000	£4,750,000
Total On Costs	£475,000	£475,000
Total other s106 Costs	£100,000	£100,000
Total Sales Costs	£650,000	£450,000
Total Finance Costs	£1,000,000	£700,000
Total Acquisition Costs	£100,000	£70,000
Developer Profit @17% GDV	£1,700,000	£1,225,000
Residual (Values/Receipts Less costs)	£1,225,000	£730,000
Developer Subsidy Required (A-B)	£495,000	

12.12 In this example we have assumed the following:

Gross Development Value = Current market value of units proposed on site;

Values/Receipts = receipts from affordable housing provider and/or for any intermediate dwellings;

Grant provided = if policy assumes a certain level of public subsidy;

⁴⁷ Please note that these figures are for illustrative purposes only



Total build Costs = generic assessment of construction costs (BCIS or QS assessed);

On costs = usually at a set percentage;

Other S106 costs = where known;

Sales costs = marketing and legals on market sales and LCHO;

Finance costs = net interest charged/earned during the development period;

Acquisition costs = costs associated with acquisition of the site (Stamp Duty, legal fees etc.);

Developer Profit = at an agreed percentage⁴⁸.

Alternative and Existing Use Values

- 12.13 In the example above it can be seen that the residual site value of the scheme unencumbered by affordable housing would be £495,000 higher than the site value with affordable housing assuming that the Council's target percentage and tenure split is being met. Different tenure splits and target percentages will have different effects on site residuals and, therefore, on developer subsidy.
- 12.14 The next stage in the assessment is to ensure that this level of developer subsidy would be sufficient to ensure that this site comes forward. We would need to assess both the alternative or existing uses of the site. If, for example, an existing use on the site generates a value of £900,000 then the residual value of the site with affordable housing is insufficient to bring this site forward and the developer subsidy would have to decrease in order to ensure that the residual site value is greater than the alternative use value. In this case the developer subsidy would have to decrease by at least £170,000 in order to bring this site forward.
- 12.15 The same principle applies to alternative uses of the site. In this example, it may be possible to provide a different mix of residential use that establishes an alternative use perhaps without having to provide affordable housing (the number of units would be below the threshold for affordable housing, for example). A similar exercise should be undertaken in order to establish residual values. This will use comparable assumptions as in the main assessment.

⁴⁸ It must be remembered that developer profit (at whatever the agreed rate) should be considered as a fixed cost of development and not as a variable to be increased or decreased in order to ensure a scheme "works".



12.16 Therefore the simple formula can be further modified thus:

$$\begin{aligned} & \text{DEVELOPER SUBSIDY} \\ & = \\ & \text{RESIDUAL VALUE OF DEVELOPMENT UNENCUMBERED BY AFFORDABLE} \\ & \quad \text{HOUSING} \\ & \quad \text{LESS} \\ & \quad \text{RESIDUAL VALUE OF DEVELOPMENT ENCUMBERED BY AFFORDABLE} \\ & \quad \text{HOUSING (TAKING INTO ACCOUNT ANY REALISTICALLY ACHIEVABLE} \\ & \quad \text{ESTABLISHED ALTERNATIVE OR EXISTING USE)} \end{aligned}$$

Practical Assessment

12.17 It is important that individual site and scheme assessments are undertaken using a set of agreed principles between developers and planning authority. It is for this reason that we propose using generic values and percentages wherever possible and for these to be agreed and audited by one or more third parties to ensure impartiality and legitimacy. Our experience has shown that agreeing these parameters should not be a difficult process and the Local Authority should make it clear and consult upon the parameters to be used. It is also incumbent upon the developer to provide the necessary information to undertake the assessment outlined above but this is not the same as proposing an “open book” approach. If an agreement can be arrived at using generic figures (and we have experience of agreeing developer subsidy where this has been achieved) then it is incumbent on the developer to ensure that the necessary information is provided as soon as possible. However, it may be that the principal input from the developer is for exceptional and abnormal costs associated with the development to be provided.

12.18 Using generic methods to generate the other inputs into the assessment will ensure that two important principles are maintained;

- the planning permission does not become personal to a particular developer (it can be transferred to another developer without having to undergo a complete re-assessment of the site); and
- the planning permission does not rely upon commercially sensitive information that would benefit a developer’s competitors.

Recommendations

12.19 We therefore recommend that any commutation for affordable housing should be based on the equivalence principle supported through Circular 05/05, PPS3 and associated documents. The developer subsidy for this off site contribution should equate to the developer subsidy that would have been provided had the affordable housing been achieved on site. The developer subsidy equates to the difference in residual values between an unencumbered scheme and the scheme encumbered by affordable housing to meet the Council’s target percentage and tenure mix. This will need to take into account any established alternative or existing use value supported by evidence if necessary. This methodology can be used without recourse to cost and value tables and is able to be used for the lifetime of the



affordable housing policy without further amendment to take into account revised tables or cost yardsticks of any sort.



13.0 Conclusions and Recommendations

13.1 Prior to examining the results for each area and development type we have undertaken analysis which demonstrates the effect of certain criteria upon overall development viability. These are specifically, Code for Sustainable Homes requirements and developer profit. We have undertaken analysis of these factors within the modelling parameters however the effect is general across all schemes.

Effect of Code for Sustainable Homes Requirements

13.2 The current timetable for the introduction of increased Code Levels for the Code for sustainable homes was incorporated into our future scenario testing. Effectively this took the form of additional uplifts to construction cost requirements based upon studies of the potential impact of these requirements. The base requirement set market housing requirements at Code Level 3 and affordable housing based on the need to achieve Code Level 4. Uplift in construction cost inflation were modelled to take effect in 2014 (uplift to Code Level 6 for affordable housing) and 2016 (uplift to code level 6 for market housing).

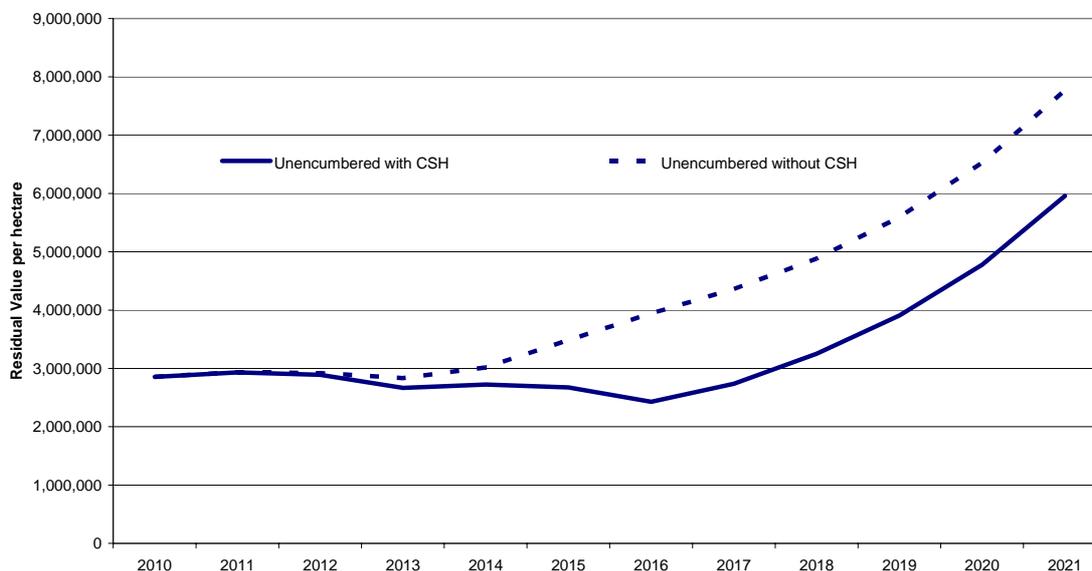
13.3 It is clear that the imposition of the forecast increase in construction costs has generally had an effect on the viability of schemes during the period 2012 to 2017 or thereabouts. This is especially clear where schemes are marginally viable in the first one or two years. In some cases, the desired level of contribution to affordable housing may not be achievable during period. This can be seen in the following diagram which shows the impact on a marginal scheme with and without the additional requirement for Code for Sustainable Homes.

SCHEME TYPE 2 (50/50)		East Herts SG12	
50 units on a 0.714 hectare site (70 units per hectare density) - 24 flat(s) and 26 house(s).			
AH Mix:	75:25 Social Rent:Intermediate		
35% Affordable Housing			
100% S106 allowance			
Normal Grant Lower EUV sensitivity.			
19% Gross Profit sensitivity.			
	VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	Red	Green	Green
2011	Red	Green	Green
2012	Red	Yellow	Green
2013	Red	Yellow	Green
2014	Red	Yellow	Green
2015	Red	Yellow	Green
2016	Red	Red	Green
2017	Red	Red	Green
2018	Red	Yellow	Green
2019	Red	Yellow	Green
2020	Red	Green	Green
2021	Red	Green	Green
2022	Red	Green	Green
2023	Red	Green	Green
2024	Red	Green	Green
2025	Red	Green	Green
2026	Red	Green	Green

13.4 In the example above the middle scenario shows that development viability becomes more challenging during the period 2012 to 2019. The situation without the imposition of additional Code for Sustainable Homes requirements is set out more clearly in the graph below which shows the same scheme. The solid line in the graph shows the increase in residual value per hectare over time for this scheme. The broken line assumes that construction costs do not inflate in line with our assumptions.



EFFECT OF CODE FOR SUSTAINABLE HOMES ON RESIDUAL VALUE



13.5 These have been based upon estimates current at the time of preparing our report. Technological advances in building techniques and general acquaintance with the requirements may bring these costs down and reduce the overall impact. At this stage, these are conjectures and it may be that the allowance we have made for code level costs is a “worst case” position. In that case it may ease the pressure at the time that the higher code levels come into force especially if we are still in a challenging economic position.

Effect of Different Profit Assumptions

13.6 We have undertaken our testing on the basis of two levels of gross profit following feedback from the Stakeholder exercise early in 2010. It was clear from our consultation that gross profit was a matter for contention and while many similar studies to this have taken lower levels of profit, we have undertaken assessments using a gross profit. Our levels used 15% profit on GDV and 4% internal overheads as one test and 21% profit on GDV plus 4% overheads.

13.7 Our reporting has mainly been on the basis of the lower level of profit. This is because of the level of profit that has been accepted by custom both in many affordable housing viability studies of this type and in negotiations on sites (and supported at appeal). Indeed, in many studies profit levels of between 15% and 17% of GDV have been used and therefore drawing our main conclusions based on gross profit of 19% is acceptable.

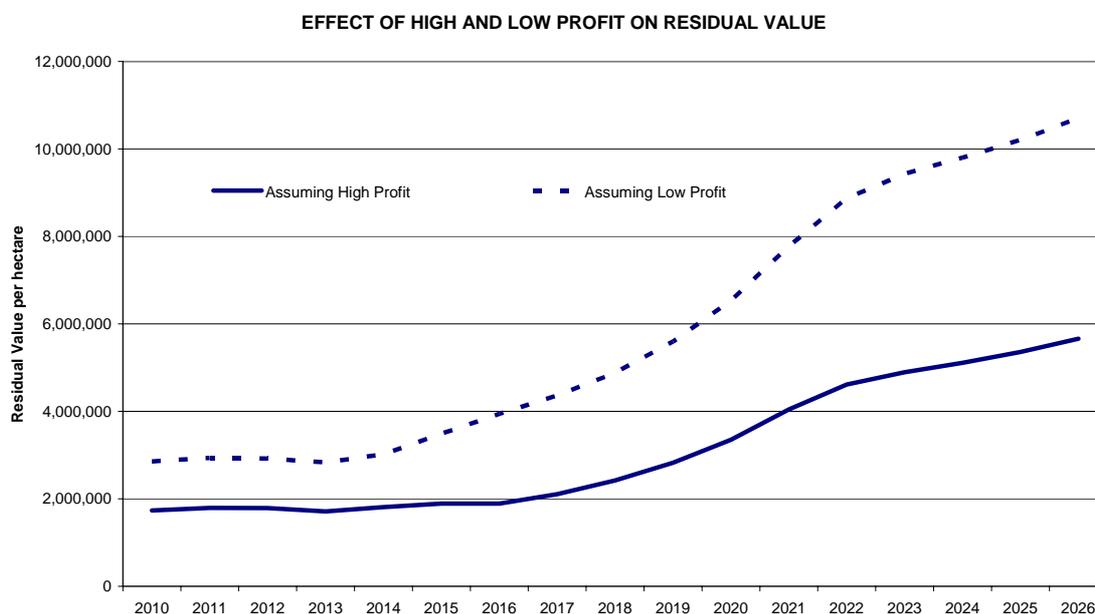
13.8 We should also be mindful that current pressures to increase the allowance for profit are in response to the specific market conditions that we are currently experiencing. This is in response to the perceived risk of development in an uncertain market and reflects, also, the difficulties many developers are finding accessing finance at reasonable rates. Therefore, basing our assessment on higher



levels of profit for a policy that must last the life of the Core Strategy might not be appropriate.

13.9 However, it should be noted that the results of our testing at 25% gross profit against GDV has a significant effect on the viability of schemes. In this case, where specific site constraints and market conditions dictate, the Council may consider the case for higher profit levels to be taken into account. It is our view that, where development viability is a particular issue, the applicant must make a reasonable case for taking into account a higher than normal profit level.

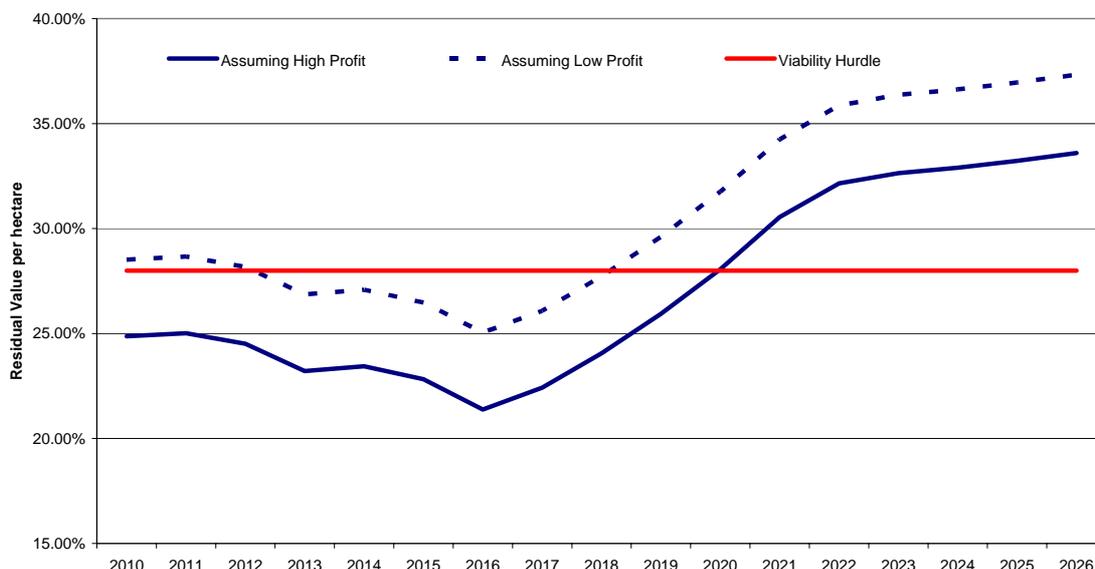
13.10 As an example the consideration of higher profit levels can be seen in the following graph which shows the effect on residual value of a higher profit level over the period to 2026. It can be seen that profit affects the residual value by some considerable extent especially towards the end of the period.



13.11 This is not the entire story, however. To understand the effect that this has on the viability of schemes, we have used the same scheme to show how higher and lower profit levels relate to the hurdle for assessing viability. The graph below shows the position to 2026.



EFFECT OF HIGH AND LOW PROFIT ON RESIDUAL VALUE



13.12 This shows that during challenging economic periods when there is increased development risk and pressure for higher levels of profit is the time when there is a need for a consideration of development costs. Conversely, later in the period there is likely to be less pressure on development but it is during this period when there is less development risk. In other words, at times of less risk, it is likely that schemes will be able to support higher levels of affordable housing even at higher profit levels.

Sub Regional Comparisons

13.13 A comparison between the different local authorities viability position within the sub region has been undertaken using a 50 unit 50 dph notional site as an example. Median residual values across all Postcode Areas within each local authority have been used for the purposes of this comparison.

13.14 Initially we have assessed the effect of a range of affordable housing requirements against a scheme unencumbered by social housing. The residual land value that may be achieved on a site unencumbered by affordable housing is then shown as are the indicative residual land values that may be achieved with affordable housing requirements ranging from 10% - 50%. The results are shown in Figure SR1. It can be seen that on this type of development comparatively higher residual land values can be achieved in Epping Forest and East Hertfordshire than in the other three local authority areas.

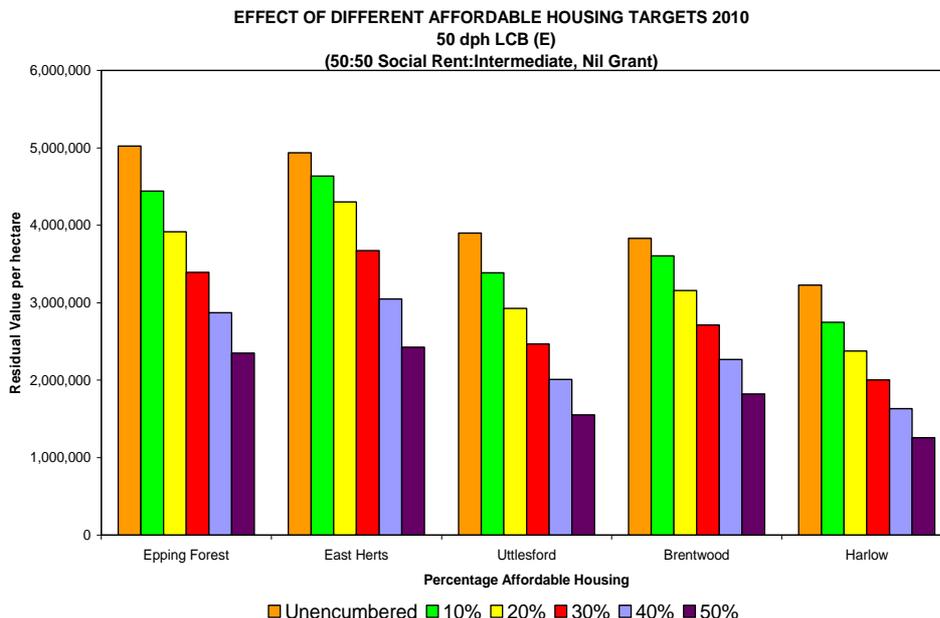


Figure SR1

13.15 Figure SR2 examines the relationship between the residual land values achieved by a scheme unencumbered by affordable housing shows the percentage reduction from this value that is caused by a affordable housing requirements ranging from 10% - 50%. As would be expected, as the amount of affordable housing increases the percentage reduction from the unencumbered residual value increases. It can be seen that areas with higher sales values experience less of a reduction in value due to the imposition of affordable housing. For example, at 40% affordable housing, the scheme in East Hertfordshire experiences a fall in residual value of 38% while in Harlow the reduction is 50%. This puts more pressure on areas where lower sales values are more likely to be achieved when higher proportions of affordable housing are sought particularly in challenging economic conditions.

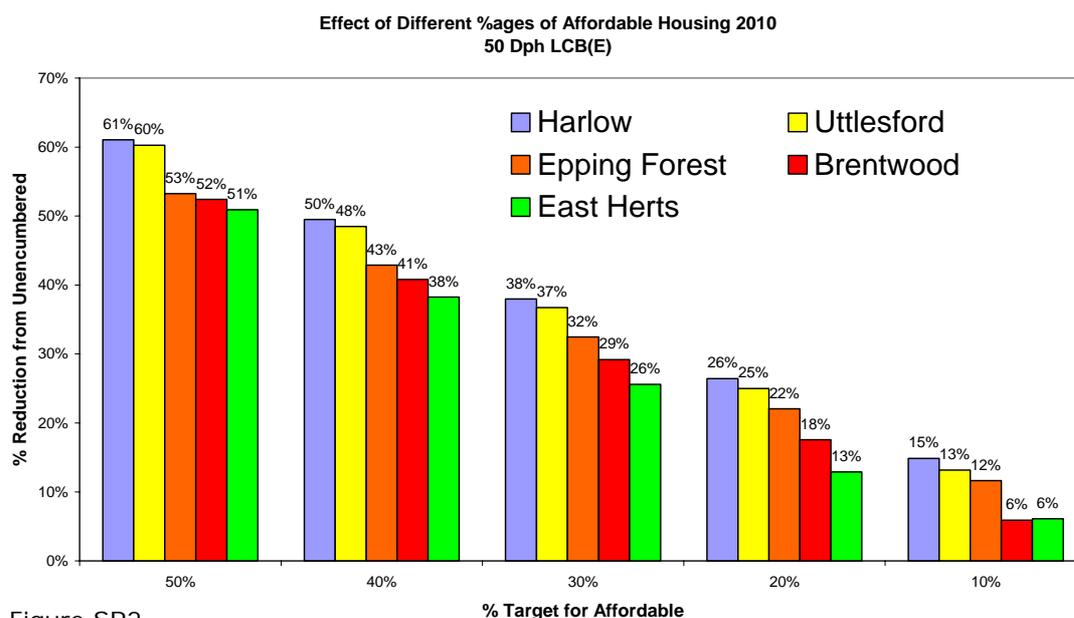


Figure SR2



13.16 Figure SR3 shows the effect of different density developments on the potential amount of affordable housing that may be achieved. It can be seen that the optimum development density ranges between local authority areas from 30 dph in Harlow to 100dph in Epping Forest. For East Hertfordshire and Uttlesford the optimum development density appears to be 50 dph. For Brentwood the optimum development density is from 50 dph to 70 dph.

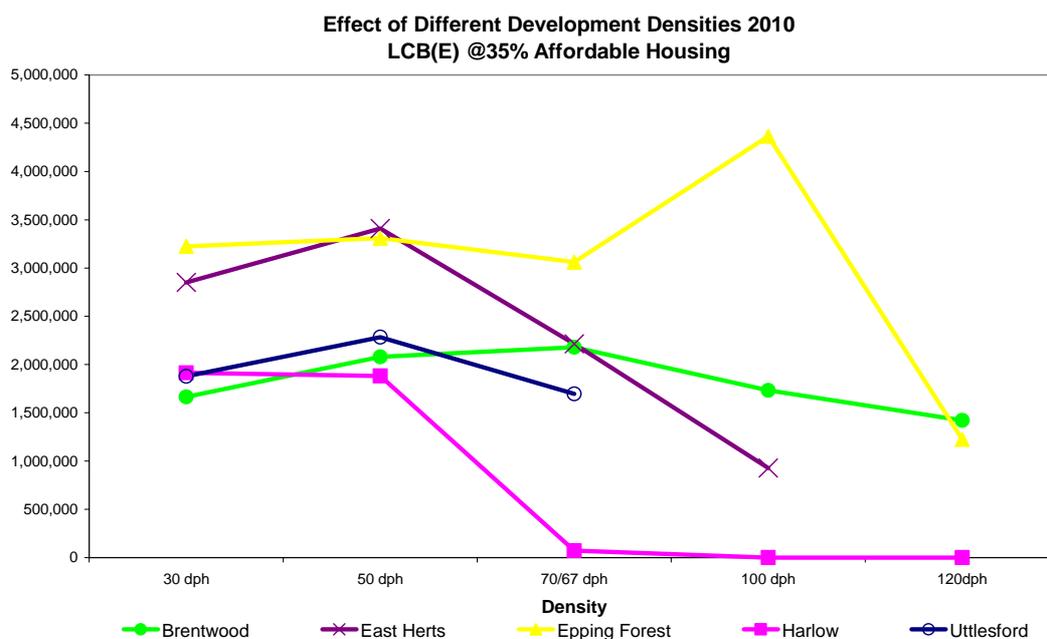


Figure SR3

Small Sites (less than 15 units)

All Areas

13.17 We appreciate that development on small sites in the current economic climate may be more challenging than on larger sites. This is a function of a number of factors including the baseline levels of professional fees, increased risk resulting in higher return, potential higher overheads, and potential increased per unit construction costs and land owners expectations. With regard to this latter point, landowners have not previously had the encumbrance of affordable housing negatively affecting land value on smaller sites. Furthermore, on sites of this size absolute values are as important as relative or proportionate values in bringing those sites forward.

13.18 Whilst there maybe potential to achieve affordable housing on these sites it is important to be aware of the above issues when requiring an affordable housing contribution. Furthermore consideration should be give to the most appropriate mechanism of delivery and include consideration of commutation where appropriate. Of course any contribution should have regard to National Policy and Guidance as set out previously within this report.

13.19 It is worthy to note that that there may be higher density developments (70 dph and above) that come forward across the sub region where values do not reflect those used for the purposes of this study. This may include executive style



apartments which may have sales values significantly in excess of the levels assumed here. In these cases, such developments may be able to support higher affordable housing contributions and therefore the Council's may want to consider this when setting affordable housing policy as it relates to the development of high density schemes.

Brentwood

- 13.20 In no cases would more than a 30% affordable housing requirement be deliverable, particularly as many of these sites could be coming forward on land where the existing use is residential.
- 13.21 At developments of 30 dph, delivery of 10% affordable housing (or off site equivalent) against previously developed residential land values is a likely maximum. Where the existing use is industrial/greenfield, up to 30% affordable housing may be achieved in some areas although it is likely this would be as intermediate affordable housing.
- 13.22 At developments of 50 dph viability is more challenging and in some areas delivery of even 10% affordable housing is likely to be difficult against previously developed residential land values. In upside economic conditions 20% affordable housing may be easier to achieve. Circa 20% affordable housing is the likely maximum that could be delivered on sites with industrial/greenfield land values.
- 13.23 At developments of 70 dph, delivery of even the equivalent of 10% affordable housing is challenging regardless of existing land use.

Epping Forest

- 13.24 Against industrial/greenfield land values up to 30% affordable housing may be deliverable in the higher value areas, in medium value areas 20% and in lower value areas only circa 10% affordable housing. This assumes development density of 30 dph. Against previously developed residential land values it is unlikely that greater than 10% affordable housing or equivalent could be deliverable without the potential of restricting land supply.
- 13.25 At 50 dph, in higher value areas up to 20% affordable housing may be achievable (or off site equivalent), 10% in medium value areas and up to 10% affordable housing in the lower value areas assuming industrial/greenfield land values. Where the existing use is residential it is unlikely more than 10% affordable housing could be achieved in any scenario.
- 13.26 At the higher density of 70 dph it will be challenging to achieve up to 10% affordable housing against industrial/greenfield and values, and on previously developed residential land delivery of any percentage of affordable housing will be difficult to achieve.

Harlow

- 13.27 At 30 dph, 30% affordable housing (or equivalent off site contribution) may be achieved in value areas CM17, CM19 and CM20, this reduces to 20% affordable housing in CM18. This is based on industrial/greenfield land values. On sites with an existing residential use 30% affordable housing is also likely in CM19 however all other value areas are more likely to be able to achieve circa 10%.



- 13.28 On sites at 50 dph, assuming industrial/greenfield land values up to 20% affordable housing may be achieved dependent upon value area. In CM18 10% affordable housing is likely to achieve a marginally viable outcome. Against previously developed residential land values 10% affordable housing is the likely maximum that may be achieved.
- 13.29 Where site density increases to 70dph, delivery of any affordable housing is unlikely although 10% may be marginal on sites coming forward with industrial/greenfield land values.

Uttlesford

- 13.30 On the lower density developments, against industrial/greenfield land values in higher value areas 30% affordable housing may be achieved in middle market conditions, in lower value areas delivery of 30% is unlikely and 10% affordable housing is more likely to be achievable. Against previously developed residential land values 10% affordable housing is only likely to be achievable in upside market conditions.
- 13.31 At 50 dph, in higher value areas 30% affordable housing (all intermediate units) may be achieved against industrial/greenfield land values whilst in lower-medium value areas up to 10% affordable housing is more likely. On sites with an existing residential use, in higher value areas only, up to 10% affordable housing (intermediate tenure) may be achieved.
- 13.32 At 67 dph, 10% affordable housing is marginal against industrial/greenfield land values and it is unlikely a viable position could be achieved with any amount of provision on sites with an existing residential use.

East Hertfordshire

- 13.33 Against industrial/greenfield land values 20-30% affordable housing is likely to be achievable in most value areas with the exception of SG9 and CM23 where circa 10% affordable housing is more likely. Where the sites existing use is residential, the maximum amount that it is likely to be achieved is 10%.
- 13.34 In higher value areas on sites of 50 dph, up to 20% affordable housing, reducing to 10% in lower value areas may be achieved against industrial/greenfield land values. On previously developed residential land, delivery of 10% affordable housing is likely to be marginal even in higher value areas.
- 13.35 At 70 dph, against industrial/greenfield land values only 10% is likely to be achievable in the higher value areas, and delivery of any amount is unlikely on sites with an existing residential use.



CONCLUSIONS

General Development Sites – Brentwood

- 13.36 This section contains specific conclusions in respect of each notional site assessed in Brentwood. In addition analysis has been undertaken regarding development viability across the local authority area as a whole.
- 13.37 Firstly, the effect of a range of affordable housing requirements has been assessed against a scheme unencumbered by social housing. The reduction of value on that base (unencumbered) site due to affordable housing is, evidently, zero. We have then assessed the reduction in value due to the range of affordable housing targets from 50% to 10%. This is shown in Figure BLV which uses a 50 unit 50 dph notional scheme to illustrate this point.

**Effect of Different %ages of Affordable Housing 2010
50 Dph Brentwood**

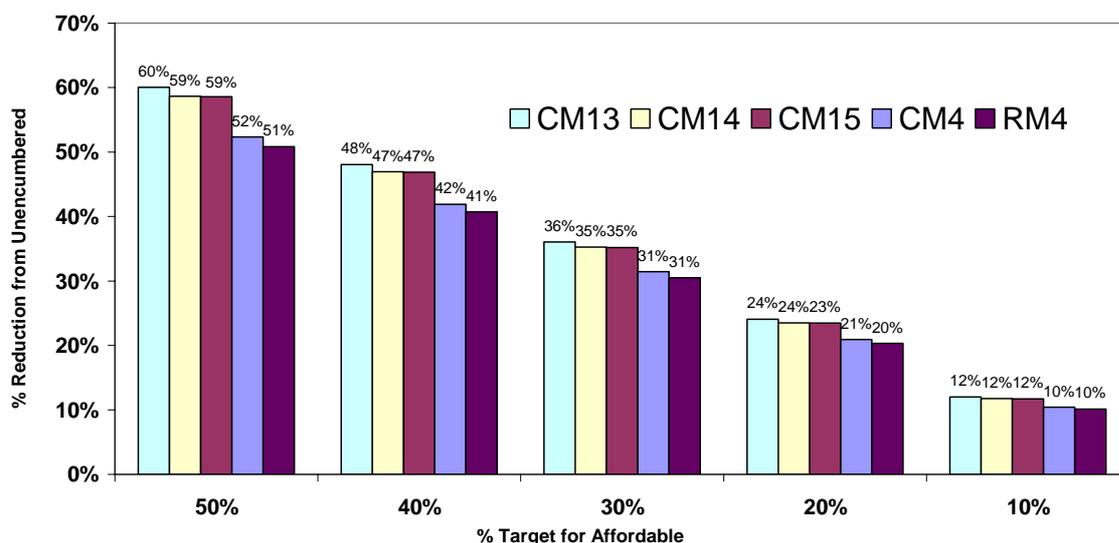


Figure BLV

- 13.38 It can be seen that the higher value areas experience less of a reduction in value due to the imposition of affordable housing. For example, at 40% affordable housing, value areas RM4 and CM4 experience a fall in residual value of 41% and 42% while in the lower value areas the reduction is between 47% and 48%. This puts more pressure on the lower value areas when higher proportions of affordable housing are sought particularly in challenging economic conditions.
- 13.39 Figure BLVI examines the relationship between residual land value per hectare and the percentage of affordable housing, again this analysis is based upon a 50 unit 50 dph notional scheme.

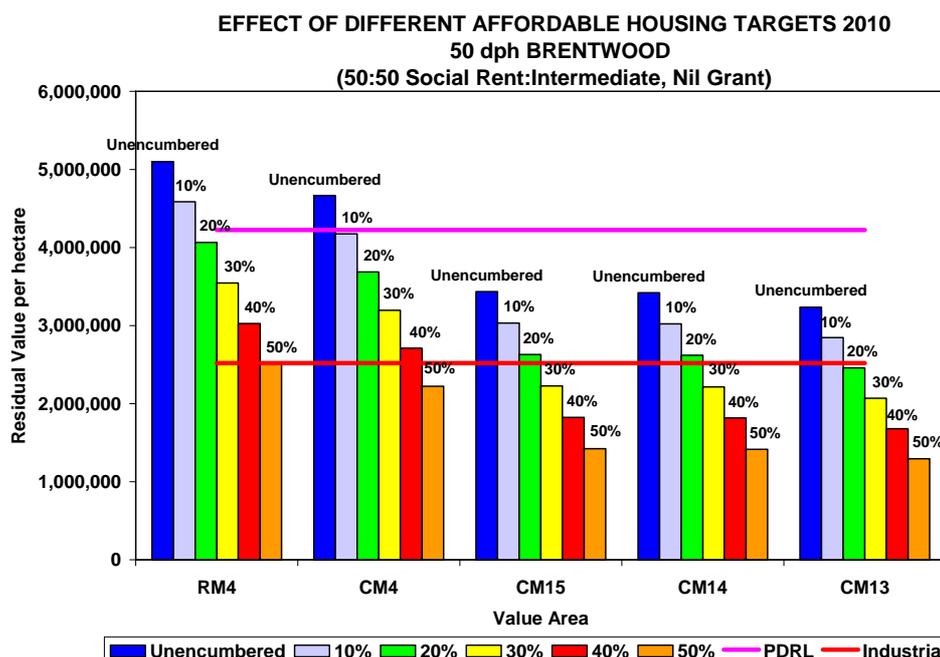


Figure BLVI

- 13.40 A scheme unencumbered by affordable housing is exceeding the industrial/greenfield land values in all value areas and the previously developed residential land values in RM4 and CM4. As would be expected, as the amount of affordable housing increases the residual value per hectare decreases. The relationship between the relative areas is apparent with RM4 and CM4 more likely to achieve higher residual values than the other areas and higher proportions of affordable housing. Where the residual values fall below the industrial/greenfield land value hurdle the difference will have to be made up in grant. For example, in value area CM13 approximately £300,000 per hectare additional subsidy would be needed to achieve 30% affordable housing (in this case equivalent to £20,000 per affordable unit). Figure BLVI shows the shortfall against hurdle alternative use values in each value area at different affordable housing percentages.
- 13.41 Figure BLVII shows the effect of different density developments. It can be seen that in most value areas at 35% affordable housing the optimum development density is in the region of 50 to 70 dwellings per hectare. In all areas in Brentwood residual values are affected at higher densities over 100 dwellings per hectare although values do hold up much better in value area CM4 at these higher densities.



**Effect of Different Development Densities 2010
Brentwood @35% Affordable Housing**

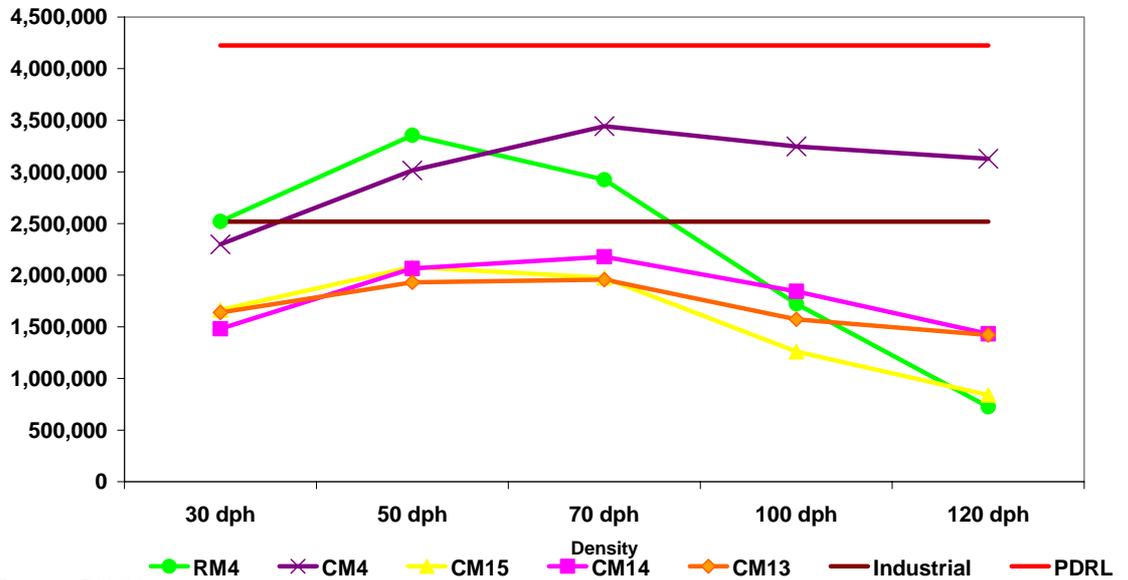


Figure BLVII

13.42 Figure BLVIII shows the impact upon viability of three different affordable housing tenure mixes in Brentwood. Increasing the proportion of intermediate affordable housing is a mechanism that could be employed to ease viability if required on certain schemes.

**EFFECT OF DIFFERENT AFFORDABLE HOUSING MIXES
BRENTWOOD 2010 (Social Rented to Intermediate)**

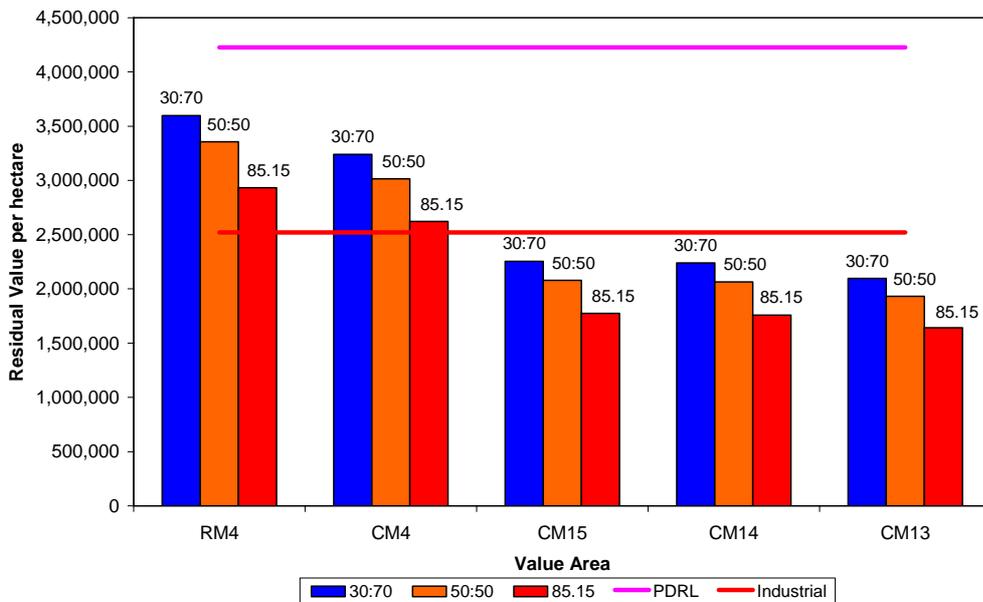


Figure BLVIII



Conclusions Relating to Each General Development Site Assessed

15 Units at 30 dph

- 13.43 In most areas against industrial/greenfield land value tests 35% affordable housing is achievable although the expectation may have to reduce to 20% in CM14 value areas. It is unlikely that any more than 35% could be achieved viably on this type of site. On Previously Developed Residential Land the ability to achieve any more than 20% is extremely challenging and 10% is probably more realistic. Care must be taken when seeking high levels of planning obligation as this has a negative effect on viability in general and the ability to achieve affordable housing more specifically.

15 Units at 50 dph

- 13.44 In most areas against industrial/greenfield land value tests 35% affordable housing is achievable although grant or a change in affordable housing mix could be needed. In RM4 however up to 40% affordable housing may be deliverable. On Previously Developed (residential) Land the ability to achieve any more than 20% is extremely challenging and 10% is probably more realistic except in the case of RM4 where 35% is achievable with grant. Care must be taken when seeking high levels of planning obligations as this has a negative effect on viability in general and the ability to achieve affordable housing more specifically.

15 Units at 70 dph

- 13.45 Although in certain circumstances and in certain areas it may be possible to achieve up to 35% affordable housing it will still be necessary to consider the affordable housing tenure mix as well as a possible relaxation of section 106 planning obligations. Grant will also help to ease viability. In some areas and on higher land value sites, it may only be possible to achieve between 10% and 20% affordable housing. It should also be noted that in postcode area RM4 the position on a 70 unit scheme (predominantly flats) is different to lower density developments in that location.

50 Units at 30 dph

- 13.46 On land at Previously Developed (residential) values it will be necessary in most areas to consider reducing the affordable housing expectation to 10% to 20% in most areas. Even in high value areas such as RM4 it is unlikely that more than 20% affordable housing could be achieved. However, on land at industrial/greenfield values, 35% affordable housing is generally achievable although in areas CM14 and 15 our modelling has shown that only 20% may be achievable and possibly as low as 10%. In higher value areas, however, 35% should remain a viable position.

50 Units at 50 dph

- 13.47 In the long term the maximum percentage in value areas CM4 and RM4 may be as much as 40% and in some cases higher if grant is made available. This assumes land at industrial/greenfield values. In the other value areas, lower percentages may be more appropriate if no grant is available and if high proportions of social rented affordable housing is sought. On Previously Developed (residential) land it



is only possible to reach 35% in value area RM4 while in other areas it is likely that only a maximum of 20% could be achieved.

50 Units at 70 dph, 100 and 120 dph

- 13.48 It will be much more challenging to achieve viability if land values are in line with previously developed residential land values although it may be possible to achieve 35% in value area CM4. In all other areas less than this is likely to be viable; possibly as low as 10%.
- 13.49 Noting that viability decreases as density increases, in most areas in the longer term affordable housing can be achieved at 35% against industrial/greenfield land values but this becomes marginal at 100 dph and 120 dph in most areas. In CM13, 14 and 15 it is likely that only 30% affordable housing is viable if grant is available.

150 Units at 30 dph

- 13.50 Achieving 35% affordable housing on schemes in CM13, CM14, and CM15 is challenging and affordable housing requirements down to 10%-20% may only be achievable in these areas without grant. In other areas 35% affordable housing should be achievable. Indeed, in RM4 affordable housing may still be viable in the long term at 40%.

150 Units at 50 dph

- 13.51 Achieving 35% affordable housing in the long term is possible on previously developed residential land although in some cases it may only be possible to achieve 10% in lower value areas. However, when looking at industrial/greenfield land values 35% affordable housing would appear to be achievable and in some higher value areas up to 50% affordable may be viable assuming downside economic conditions do not prevail.

150 Units at 70 dph

- 13.52 In the longer term it is possible to achieve 35% affordable housing in all areas assuming land at industrial/greenfield values and in CM4 it may be possible to achieve higher than this (up to 50%) especially if grant is available.
- 13.53 On previously developed land (residential) it is likely that a lower percentage of affordable housing (10-25% dependent upon value area) may be achievable.

RECOMMENDATIONS

- 13.54 It is essential that any Borough-wide affordable housing policy is not unduly rigid and can be applied flexibly and pragmatically allowing development to come forward while meeting the needs of the community. It will be necessary to consider sites on an individual basis having due regard to the planning benefits of granting permission. The framework for enabling such decisions to be made including those of viability should be set out within a Supplementary Planning Document.
- 13.55 Policy H9 of the Brentwood Replacement Local Plan 2005 allows for a differential threshold dependent upon a site's location within the Borough. Testing has shown that the ability of a site size threshold of five units to produce developable, deliverable sites with affordable housing varies according to density. Low density



(30 dph) schemes are more able to deliver affordable housing than higher density developments (50 dph and above) and, as density increases above 50 dph delivery of affordable housing becomes more challenging. Our analysis has also shown significant differences in the amount of affordable housing that these sites can deliver depending upon the type of land that is being developed. Sites coming forward with an existing industrial/greenfield use are more likely to be able to support affordable housing than those with an existing residential use.

- 13.56 Schemes coming forward outside of the Brentwood urban area are more likely to be lower density (circa 30 dph) and our testing has shown sites at these densities are likely to be more viable. The existing 5 unit threshold in these areas is thus recommended to be retained however our analysis has shown that a maximum of 30% affordable housing is likely to be achievable on low density (30 dph) schemes, reducing to 20% affordable housing on schemes developed at 50 – 70 dph. As small sites are particularly susceptible to even minor increases in costs or unforeseen development encumbrances, we would suggest that if any policy on sites below 15 units is introduced in the Brentwood urban area, it is flexible enough to ensure that sites of this size continue to come forward for residential development. This is particularly relevant as small sites below 15 units have not previously been expected to provide any affordable housing in this location. It would also be essential to ensure that the exact level of affordable housing that could be supported by these schemes is determined at the point of planning application having due regard to the value area, density, and the potential alternative/existing uses of the site.
- 13.57 On general development sites we would recommend that the Council adopt a single Borough-wide affordable housing target of up to 35% on sites above 15 units on the basis that this is applied flexibly and from a realistic perspective taking into account market conditions, value areas, density and other planning and infrastructure requirements.
- 13.58 In comparison with other local authority areas in the sub region higher density development is relatively more viable in Brentwood. Typically these higher density developments would incorporate a higher number of 1 and 2 bedroom units in line with Policy H6 of the Brentwood Replacement Local Plan 2005⁴⁹ Therefore the requirement of Policy H6 is consistent with the 35% policy target recommended for general development sites.
- 13.59 It is very important that the Council monitors market conditions experienced at any given point to ascertain if they represent best the downside, middle or upside market assumptions used within this study. It is recommended that this monitoring is undertaken on an annual basis and more frequently in times of sharp rises or falls in the property market. This will enable the Council at any given time over the life of the plan to refine their expectations in terms of the nature and extent of affordable housing that is likely to be achievable. The results of this monitoring should be made available on an annual basis perhaps through regularly published reports such as the Annual Monitoring Report.

⁴⁹ 'all sites of 6 units and above (0.2ha) and above to provide at least 50% of total units as 1 and 2 bedroom properties except where it can be demonstrated such a mix will be inconsistent with the character of existing development in the area or such provision cannot be adequately accommodated'



CONCLUSIONS

General Development Sites – East Hertfordshire

- 13.60 This section contains specific conclusions relating to East Hertfordshire. In addition, analysis has been undertaken regarding development viability across the local authority area as a whole. These general themes are discussed initially.
- 13.61 Firstly, the effect of a range of affordable housing requirements has been assessed against a scheme unencumbered by social housing. The reduction of value on that base (unencumbered) site due to affordable housing is, evidently, zero. We have then assessed the reduction in value due to the range of affordable housing targets from 50% to 10%. This is shown in Figure EHXXXVIII which uses a 50 unit 50 dph notional scheme to illustrate this point.

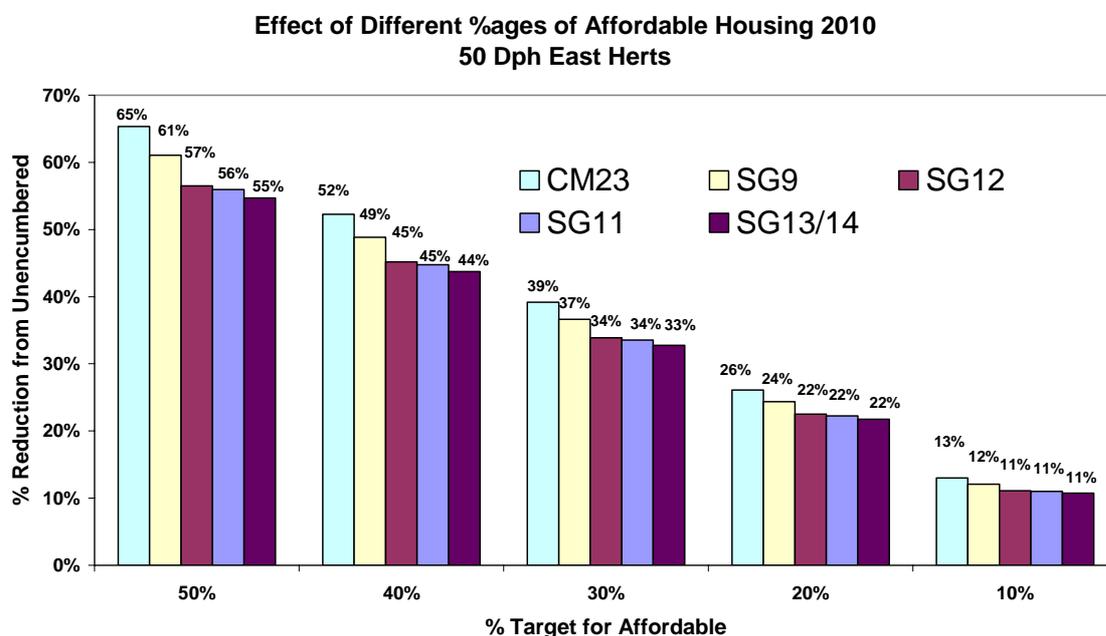


Figure EHXXXVIII

- 13.62 It can be seen that the higher value areas experience less of a reduction in value due to the imposition of affordable housing. For example, at 40% affordable housing, the reductions range from 44% to 52%. The range of reduction between areas is progressive with CM23 (the lowest value area) experiencing the highest fall in values due to affordable housing and SG13/14 (generally the highest value area) experiencing the lowest fall in residual due to affordable housing. While there will be particular pressure on all areas this will particularly affect the ability of low value areas from achieving high proportions of affordable housing.
- 13.63 Figure EHXXXIX examines the relationship between residual land value per hectare and the percentage of affordable housing, again this analysis is based upon a 50 unit 50 dph notional scheme. A scheme unencumbered by affordable housing is exceeding the industrial/greenfield land values in all value areas although it can be seen that previously developed land values can only be achieved in SG13, SG14, SG12, SG11 and perhaps in SG9. Value area CM23 appears to be the least viable area for this type of scheme. As would be expected, as the amount of affordable housing increases the residual value per hectare decreases.



**EFFECT OF DIFFERENT AFFORDABLE HOUSING TARGETS 2010
50 dph EAST HERTS
(50:50 Social Rent:Intermediate, Nil Grant)**

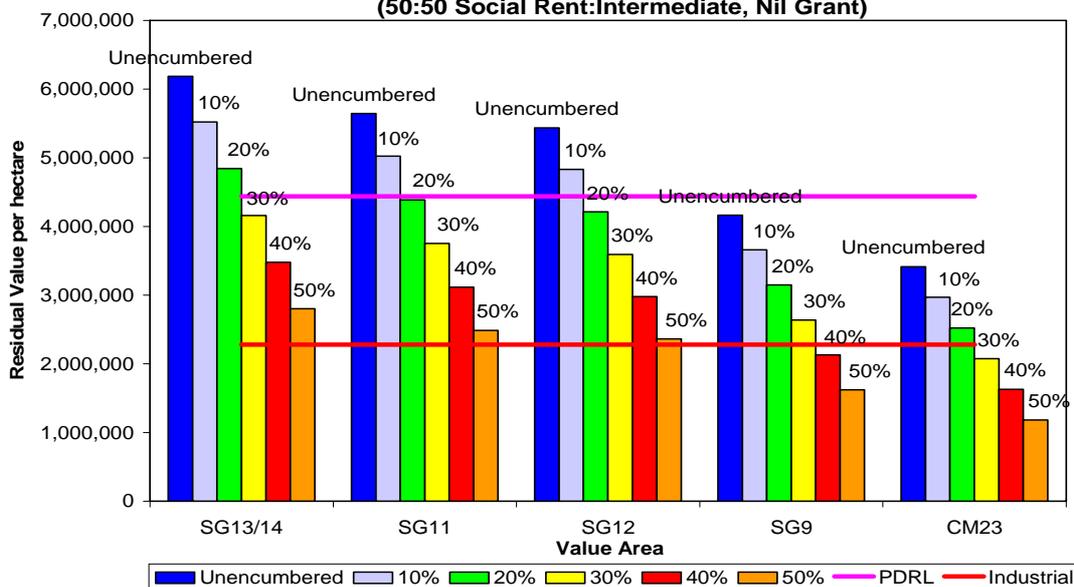


Figure EHXIX

13.64 The relationship between the relative areas is apparent and it is likely that high proportions of affordable housing can be achieved if development is to come forward on land at industrial/greenfield values. It can be seen that in all areas 30% affordable housing can be achieved without grant (although this is marginal in value area CM23).

13.65 Figure EHXL shows the effect of different density developments. It can be seen that in all value areas at 35% affordable housing the optimum development density is probably 50 dwellings per hectare. Although it should be noted that we have only tested at 100 dwellings per hectare on schemes of 50 units. There would appear to be little difference in the profile for the different development value areas across the range of densities that we tested in East Hertfordshire.

**Effect of Different Development Densities 2010
East Herts @35% Affordable Housing**

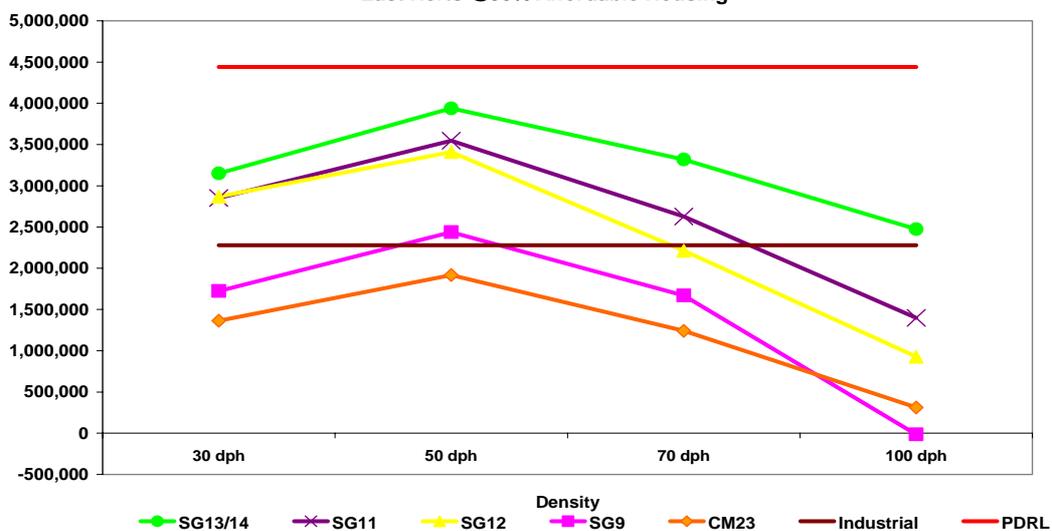


Figure EHXL



13.66 Figure EHXL1 shows the impact upon viability of three different affordable housing tenure mixes in East Hertfordshire. Increasing the proportion of intermediate affordable housing is a mechanism that could be employed to ease viability if required on certain schemes.

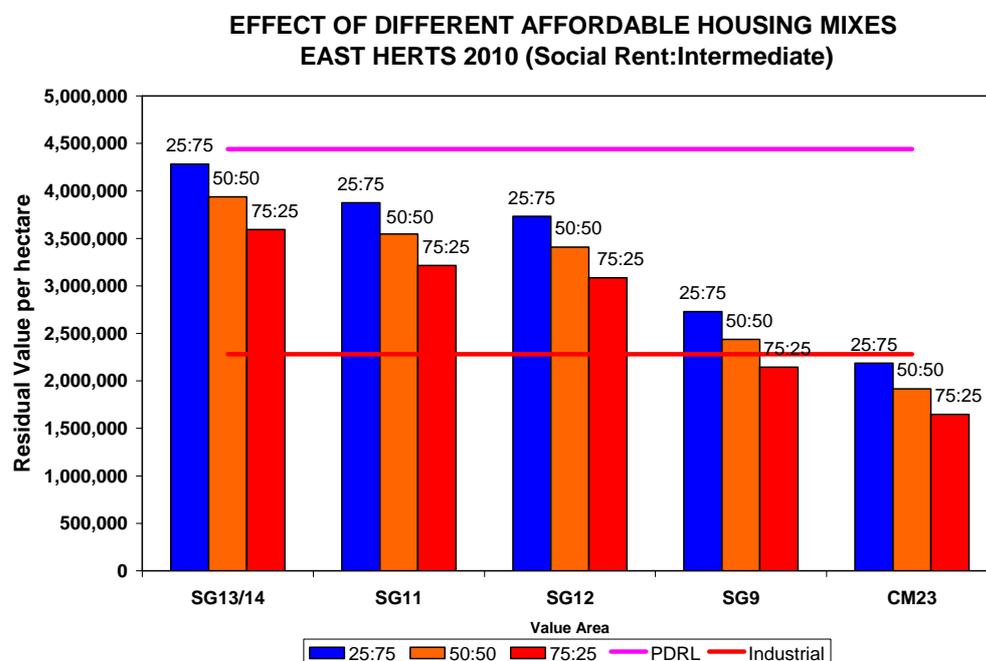


Figure EHXL1

15 Units at 30 dph

13.67 Against industrial/greenfield land values 35-40% affordable housing appears broadly viable against middle market conditions, although value area CM23 is likely to require grant to achieve these levels in the early part of the Plan. Considerations of tenure mix (increasing the proportion of intermediate affordable housing and/or relaxing S106 requirements) is a further mechanism that could be employed to ease viability.

13.68 The viability of sites such as these coming forward on previously developed residential land is challenging. A considerable amount of grant and/or change in tenure mix is likely to be necessary.

15 Units at 50 dph

13.69 35% affordable housing is likely to be broadly viable against middle market conditions over the life of the Core Strategy although in some value areas grant funding and/or a flexible approach to affordable housing tenure is likely to be required to achieve this, particularly in the earlier half of the period assessed. Later in the life of the Plan and/or in upside market conditions 40% affordable housing may be deliverable in some value areas.

13.70 Delivery of affordable housing on sites where the existing use is residential is challenging and even with levels of affordable housing of 7-14% it is likely that in



some areas provision of this amount would be difficult until later in the Plan period should the market achieve only middle conditions.

15 units at 70 dph

- 13.71 With the exception of some of the higher value areas (where 35% affordable housing may be deliverable against industrial/greenfield values) delivery of in excess of 7% affordable housing is unlikely to be viable against industrial/greenfield land values should middle market conditions prevail.
- 13.72 It is unlikely that schemes of this nature brought forward on land where the existing use is residential could sustain any affordable housing requirement in any market scenario assessed.

50 units at 30 dph

- 13.73 In higher value areas, up to 50% affordable housing may be viable over much of the life of the Plan. This reduces to 35% affordable housing (in some cases only achievable with public subsidy at normal levels) in other areas. In both cases these assume middle market conditions and S106 requirements at 100% of the base level.
- 13.74 Delivery of affordable housing on land with an existing residential use is much more challenging with some value areas unable to deliver any affordable housing at all.

50 units at 50 dph

- 13.75 In the higher value areas and assuming industrial/greenfield land values, 35-40% affordable housing may be achievable without grant should the market perform to the middle scenario. In other areas, 35% affordable housing is likely to be viable, albeit requiring grant at normal levels in some circumstances. Furthermore, some flexibility in the affordable housing tenure mix may also be required to achieve delivery of 35% affordable housing in these instances with intermediate tenures forming a minimum of circa 50% of the affordable housing mix.
- 13.76 Against Previously Developed residential land values, 10% affordable housing (with grant at normal levels) is the likely maximum amount that could be delivered in any period assessed unless the market performs to upside conditions. In some areas, where the existing land use is residential, delivery of any affordable housing could be challenging.

50 units at 70 dph

- 13.77 Delivery of affordable housing on these higher density (70 dph) notional sites is comparatively more challenging than on the lower density (30 and 50dph) schemes. Although some value areas are able to achieve 35% affordable housing, in some cases with grant, for large parts of the period assessed (assuming middle market conditions) in the short term 10-20% affordable housing is more likely to be the maximum that can be achieved even with grant.
- 13.78 On notional sites where the existing land use is residential, it is likely that circa 0-10% affordable housing could be delivered. In most cases this would require grant at normal levels, however if the market achieves upside conditions the schemes



have the potential to achieve delivery of circa 10% affordable housing without recourse to public subsidy.

50 Units at 100 dph scheme

- 13.79 35% affordable housing is likely to be broadly viable against middle market conditions over the life of the Core Strategy although in some value areas grant funding and/or a flexible approach to affordable housing tenure is likely to be required to achieve this, particularly in the earlier half of the period assessed. Later in the life of the Plan and/or in upside market conditions 40% affordable housing may be deliverable in some value areas.
- 13.80 Delivery of affordable housing on sites where the existing use is residential is challenging and even with levels of affordable housing of 7-14% it is likely that in some areas provision of this amount would be difficult until later in the Plan period should the market achieve only middle conditions.

150 units at 30 dph

- 13.81 In higher value areas, up to 50% affordable housing may be viable over much of the life of the Plan. This reduces to 35% affordable housing (in some cases only achievable with public subsidy at normal levels) in other areas. In both cases these assume middle market conditions and S106 requirements at 100% of the base level.
- 13.82 Delivery of affordable housing on land with an existing residential use is much more challenging with some value areas unable to deliver any affordable housing at all.

150 units at 50 dph

- 13.83 Against industrial/greenfield land values some areas are likely to be able to deliver 35% affordable housing in middle market conditions without grant in the latter half of the Plan period. Prior to this grant at normal levels will be required to achieve a marginally viable position, and should S106 costs increase above the levels assumed delivery of 35% affordable housing may be challenging in this earlier period.
- 13.84 In areas where relatively higher open market values can be achieved delivery of 35% - 40% affordable housing may be achievable throughout the period assessed, again assuming middle market conditions.
- 13.85 Against previously developed residential land values, although 10-20% affordable housing may be achievable in some areas, in others, delivery of any affordable housing may not be viable.

150 units at 70 dph

- 13.86 In the early half of the period assessed grant funding is likely to be required to achieve 35% affordable housing and even then, a marginally viable outcome only can be achieved assuming middle market conditions.
- 13.87 Grant at higher levels may ease viability in this period, however, the increase of S106 costs in excess of the levels assumed would adversely affect viability, and in



the earlier period in some value areas 25-30% affordable housing may be the maximum amount that could be achieved even with grant.

- 13.88 In the second half of the period assessed (and for the majority of it should upside conditions be achieved) 35% affordable housing may be viable without grant.
- 13.89 Against previously developed residential land values, although 10-20% affordable housing with grant may be achievable in some areas, in others, delivery of any affordable housing may not be viable.

RECOMMENDATIONS

- 13.90 It is essential that any district-wide affordable housing policy is not unduly rigid and can be applied flexibly and pragmatically allowing development to come forward while meeting the needs of the community. It will be necessary to consider sites on an individual basis having due regard to the planning benefits of granting permission. The framework for enabling such decisions to be made including those of viability should be set out within a Supplementary Planning Document.
- 13.91 The limitations of assessing economic viability on strategic sites within the framework of a District-wide viability assessment undertaken to inform policy have been outlined within this study. We would recommend that more detailed analysis of strategic development locations is undertaken in order to clarify the council's requirements on sites of this nature and identify the approach to viability. This is particularly pertinent as development on such sites may account for a large proportion of new development within the District over the life of the Core Strategy. Such work could be set out in a Supplementary Planning Document or Area Action Plan.
- 13.92 A site size threshold of five units can produce developable, deliverable sites with affordable housing. However the exact level will have to be determined at the point of planning application having due regard to the value area, density, and the potential alternative/existing uses of the site. Our analysis has shown significant differences in the amount of affordable housing that these sites can deliver depending upon the type of land that is being developed. Sites coming forward with an existing industrial/greenfield use are more likely to be able to support affordable housing than those with an existing residential use.
- 13.93 On sites of 5-14 units our analysis has shown that a maximum of 30% affordable housing is likely to be achievable. This reduces to 10% affordable housing on higher density schemes. As small sites are particularly susceptible to even minor increases in costs or unforeseen development encumbrances, we would suggest that any policy on sites below 15 units is flexible enough to ensure that sites of this size continue to come forward for residential development. This is particularly relevant as small sites below 15 units have not previously been expected to provide any affordable housing in all locations. Local Plan Policy HSG3 allows for a three unit threshold on sites coming forward in Category 1 and 2 villages. Given the findings of this study it may be advisable to adopt a more straightforward 5 unit threshold in all areas of the District.
- 13.94 On general development sites (15 units and above) we would recommend that the Council adopt a single District-wide affordable housing target of up to 40% on sites above 15 units on the basis that this is applied flexibly and from a realistic



perspective taking into account market conditions, value areas, density and other planning and infrastructure requirements.

- 13.95 It is very important that the Council monitors market conditions experienced at any given point to ascertain if they represent best the downside, middle or upside market assumptions used within this study. It is recommended that this monitoring is undertaken on an annual basis and more frequently in times of sharp rises or falls in the property market. This will enable the Council at any given time over the life of the plan to refine their expectations in terms of the nature and extent of affordable housing that is likely to be achievable. The results of this monitoring should be made available on an annual basis perhaps through regularly published reports such as the Annual Monitoring Report.



CONCLUSIONS

General Development Sites – Epping Forest

- 13.96 This section contains specific conclusions in respect of each notional site assessed in Epping Forest. In addition, analysis has been undertaken regarding development viability across the local authority area as a whole.
- 13.97 Firstly, the effect of a range of affordable housing requirements has been assessed against a scheme unencumbered by social housing. The reduction of value on that base (unencumbered) site due to affordable housing is, evidently, zero. We have then assessed the reduction in value due to the range of affordable housing targets from 50% to 10%. This is shown in Figure EPLVI which uses a 50 unit 50 dph notional scheme to illustrate this point. It can be seen that the higher value areas experience less of a reduction in value due to the imposition of affordable housing. For example, at 40% affordable housing, value area CM16 experiences a 40% reduction while in the more economically challenging value area of CM17 the reduction value at the same affordable housing percentage is in the region of 45%. This puts more pressure on the lower value areas when higher proportions of affordable housing are sought particularly in challenging economic conditions although the results for Epping are less challenging than in other areas within the sub-region.

**Effect of Different %ages of Affordable Housing 2010
50 Dph Epping Forest**

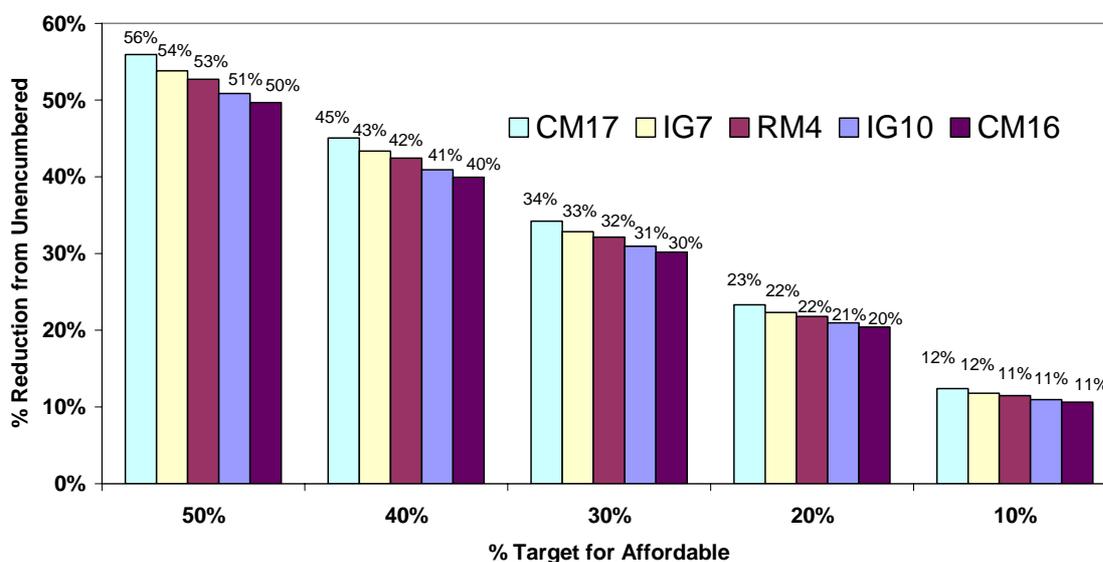


Figure EPLVI



13.98 Figure EPLVII examines the relationship between residual land value per hectare and the percentage of affordable housing, again this analysis is based upon a 50 unit 50 dph notional scheme. A scheme unencumbered by affordable housing is exceeding the industrial land values in all value areas although it is marginal in value area CM16. As would be expected, as the amount of affordable housing increases the residual value per hectare decreases. The relationship between the relative areas is apparent with CM16 and IG10 achieving particularly higher residual values. Where the residual values fall below the industrial/greenfield land value hurdle the difference will have to be made up in grant and in CM17 grant will be necessary in order to achieve any percentage of affordable housing.

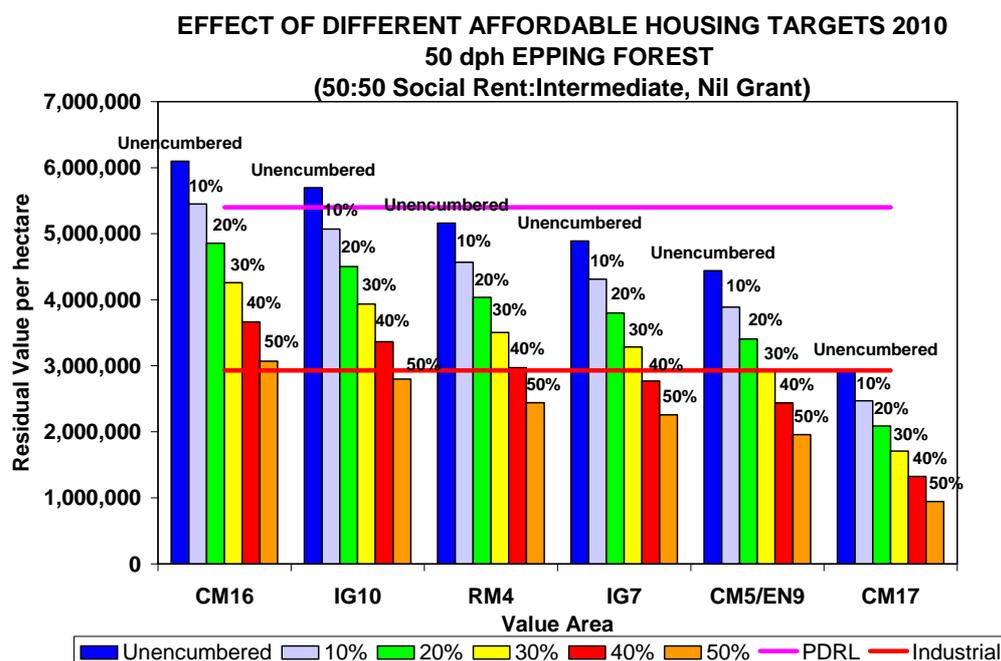


Figure EPLVII

13.99 Figure EPLVIII shows the effect of different density developments. It can be seen that in most value areas at 35% affordable housing the optimum development density is below 100 dwellings per hectare. At densities higher than this, development economics are severely tested although where one-off executive style developments come forward with executive style apartments, for example, scheme may be able to support a higher percentage of affordable housing.



**Effect of Different Development Densities 2010
Epping Forest @35% Affordable Housing**

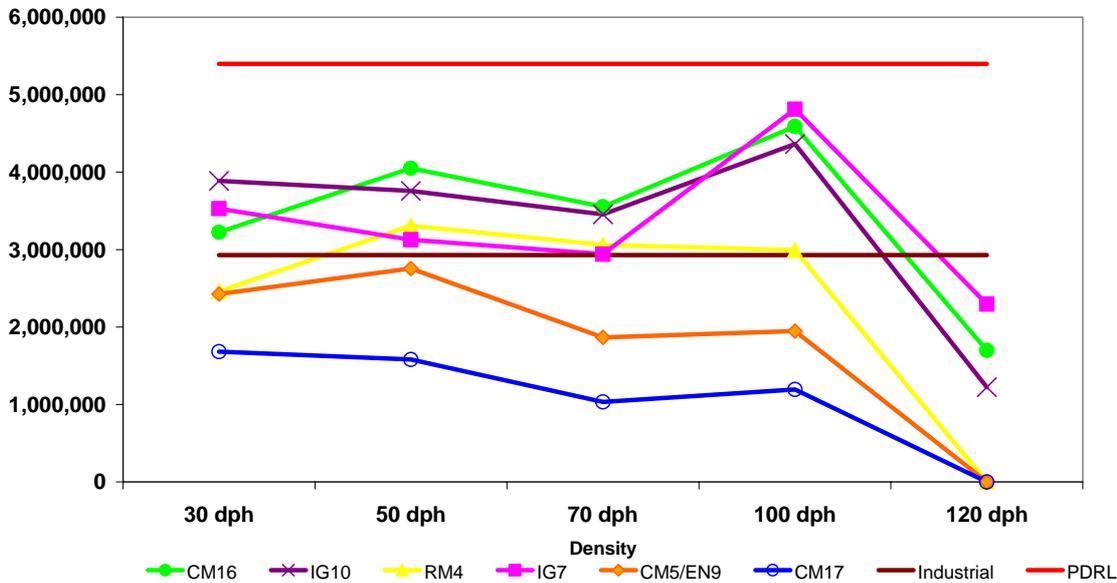


Figure EPLVIII

13.100 Figure EPXLIX shows the impact upon viability of three different affordable housing tenure mixes in Epping Forest. Increasing the proportion of intermediate affordable housing is a mechanism that could be employed to ease viability if required on certain schemes.

**EFFECT OF DIFFERENT AFFORDABLE HOUSING MIXES
EPPING FOREST 2010 (Social Rented to Intermediate)**

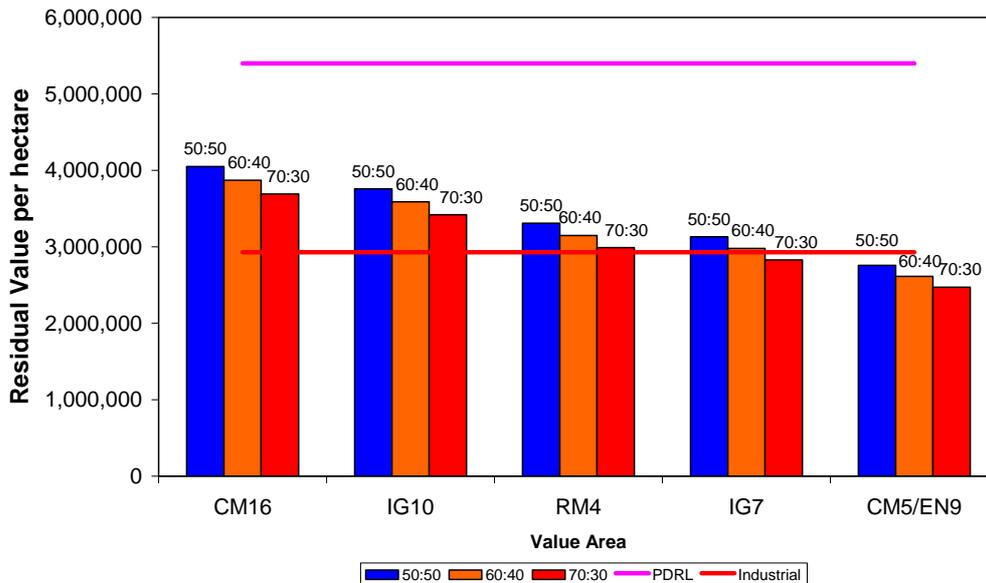


Figure EPLIX



15 units at 30 dph

- 13.101 In most value areas, affordable housing of up to circa 40-47% may be achievable should the market perform to at least middle scenario conditions. However in the area achieving the lowest values (CM17) 20% affordable housing (assuming middle market conditions) is more likely to achieve a viable position.
- 13.102 On sites where the existing use is residential, achieving a viable outcome is more challenging thus affordable housing in the range of 7-20% is more likely to be able to achieve a viable outcome. In some cases, (dependent upon market conditions) grant may be required to achieve affordable housing at this level.

15 Units at 50 dph

- 13.103 In most areas, 40-47% affordable housing may be deliverable over most of the life of the Plan although grant may be required in some areas and at some points in order to achieve this. This assumes middle market conditions, however should an upside position be reached, achieving viability at these percentages without grant is far more likely.
- 13.104 In the lower value area (CM17) circa 20-35% affordable housing is more likely to be achievable in middle market conditions.
- 13.105 On sites coming forward where the existing land use is residential, 7-20% affordable housing is more likely to be achievable.

15 Units at 70 dph

- 13.106 It is comparatively more challenging to achieve a viable position of affordable housing on higher density (70dph) notional sites than on the lower density schemes (30 dph and 50 dph) previously assessed. In respect of sites coming forward where the existing land use is residential, 7-14 % affordable housing, in some cases requiring grant, appears the likely amount that may be achieved. This is based on the market performing to the middle scenario.
- 13.107 Against industrial/greenfield land values, 35-40% is likely to be achievable in some areas however in value area CM17 7-14% affordable housing and in value area EN9/CM5, 20% affordable housing is more likely to be deliverable. Again, this is based on the market performing to the middle scenario.

50 Units at 30 dph

- 13.108 Viable delivery of affordable housing varies quite considerably between the value areas assessed and the availability of public subsidy. Against industrial/greenfield land values, some value areas are likely to be able to achieve circa 35-40% (with grant in some circumstances) in middle market conditions throughout the period assessed. In other areas, 20-25% affordable housing is viable in the short term without grant, increasing to circa 35% later in the Plan period and/or with the addition of grant at normal levels. Only in value area CM17, is it unlikely affordable housing at these levels would be achievable.
- 13.109 Against previously developed residential land values, whilst some value areas may be able to deliver 10% affordable housing in middle market conditions, in other



areas it may be challenging to achieve viable delivery of any amount of affordable housing.

50 Units at 50 dph

- 13.110 Against industrial/greenfield land values, 35-40% affordable housing (and in value area IG7 up to 50% affordable housing) may be achievable over the period assessed assuming at least middle market conditions. Grant may be required in some areas at certain points to achieve delivery of this percentage. As noted in the commentary, flexibility of affordable housing tenure may also be required in some circumstances in order to achieve higher percentages of affordable housing.
- 13.111 Against previously developed residential land values, it is likely that circa 10% affordable housing may be achievable, although in certain value areas delivery of even 10% affordable housing is likely to be a challenge.

50 Units at 70 dph

- 13.112 As was the case with the 15 unit notional sites, delivery of affordable housing is more challenging on higher density schemes. Whilst some areas may be able to viably deliver up to 35% affordable housing (in some cases requiring grant at normal levels) delivery of even 10% affordable housing is likely to be difficult in others. This is the position when assessing viability against industrial/greenfield land values. When assessing the position against previously developed residential land values, delivery of any affordable housing over the life of the Plan may not be achievable in some areas whilst in others circa 10% is more likely.

50 Units at 100 and 120 dph

- 13.113 Delivery of affordable housing is more likely to be challenging on 120 dph schemes than those coming forward at 100 dph. In some value areas and in some circumstances, up to 20% affordable housing may be achieved against industrial/greenfield land values, whilst in others 10% is more likely. Against previously developed residential land values, some areas are unlikely to be able to viably deliver any amount of affordable housing over the Plan period whilst others may achieve up to 10%, dependent upon market conditions.

150 Units at 30 dph

- 13.114 Against industrial/greenfield land values, typically 25-35% or 35-40% (dependent on area) is likely to be achievable over the life of the Plan in middle market conditions. Only in value area CM17 is delivery at these types of levels unlikely to be achievable and circa 10% affordable housing is more likely to be deliverable.
- 13.115 If these sites were to come forward where the existing land use was residential, viability is more challenging and circa 10% affordable housing may be achievable in some value areas only.

150 Units at 50 dph

- 13.116 35-45% affordable housing is achievable against industrial/greenfield land values within a lot of the value areas over the Plan period albeit with grant in some circumstances. In other areas 15-20% affordable housing in middle market conditions in the earlier part of the period assessed is more likely to be achievable



without grant however even in these cases viability eases over time and later in the period assessed delivery of higher percentages is more likely. In value area CM17 achieving a viable outcome is a lot more challenging and delivery of 10% affordable housing may not be viable until the second half of the period assessed.

- 13.117 Against previously developed residential land values circa 10% affordable housing is more likely to be achievable, although in some value areas delivery at this even level may be unlikely.

150 Units at 70 dph

- 13.118 The viability positions in the main, assume S106 requirements at 100% of the baseline level. Should requirements exceed this substantially it should be considered that this will have a negative impact upon development viability of affordable housing.
- 13.119 Again, the percentage of affordable housing that may be viably achieved varies considerably between value areas with some areas able to sustain up to 45% affordable housing (CM16) over the period assessed, whilst others may only be able to achieve circa 10% affordable housing (CM17). This assumes industrial/greenfield land values.
- 13.120 Against previously developed residential land values achieving a viable position is more challenging and whilst 20% affordable housing may be achievable in some value areas, generally circa 10% affordable housing is more likely and this is likely to depend on market conditions and grant availability.

RECOMMENDATIONS

- 13.121 It is essential that any district-wide affordable housing policy is not unduly rigid and can be applied flexibly and pragmatically allowing development to come forward while meeting the needs of the community. It will be necessary to consider sites on an individual basis having due regard to the planning benefits of granting permission. The framework for enabling such decisions to be made including those of viability should be set out within a Supplementary Planning Document.
- 13.122 The limitations of assessing economic viability on strategic sites within the framework of a District-wide viability assessment undertaken to inform policy have been outlined within this study. We would recommend that more detailed analysis of strategic development locations is undertaken in order to clarify the council's requirements on sites of this nature and identify the approach to viability. This is particularly pertinent as development on such sites may account for a large proportion of new development within the District over the life of the Core Strategy. Such work could be set out in a Supplementary Planning Document or Area Action Plan.
- 13.123 Testing has shown that the ability of a site size threshold of five units to produce developable, deliverable sites with affordable housing varies according to density, value area and existing land use. Low density (30 dph) schemes are more able to deliver affordable housing than higher density developments (50 dph and above) and, as density increases above 50 dph it is more challenging to support any affordable housing contribution. Our analysis has also shown significant differences in the amount of affordable housing that these sites can deliver depending upon the location of the scheme (as this relates to the different value areas across the



District) and the type of land that is being developed. Sites coming forward with an existing industrial/greenfield use are more likely to be able to support affordable housing than those with an existing residential use.

- 13.124 The Council's existing policy H6A of the Local Plan 2006 sets out variable thresholds dependent upon location and existing land use of new development in the District. Our analysis has shown that a maximum of 30% affordable housing is likely to be achievable on low density (30 dph) schemes, reducing to 10-20% affordable housing on schemes developed at 50 dph and above. Achieving these levels of affordable housing is much more challenging on schemes coming forward where the existing land use is residential. In order to maintain consistency with other areas in the sub region, and given the results of our analysis, the Council may wish to consider increasing the current threshold to 5 units in settlements with a population of less than 3,000. This will also serve to reduce any unnecessary complexity in the policy.
- 13.125 As small sites are particularly susceptible to even minor increases in costs or unforeseen development encumbrances, we would suggest that if any policy on sites below 15 units is introduced in urban areas it is flexible enough to ensure that sites of this size continue to come forward for residential development. This is particularly relevant as small sites below 15 units in urban locations have not previously been expected to provide any affordable housing. It would also be essential to ensure that the exact level of affordable housing that could be supported by these schemes is determined at the point of planning application having due regard to the value area, density, and the potential alternative/existing uses of the site.
- 13.126 On general development sites we would recommend that the Council adopt a single District-wide affordable housing target of up to 40% on sites of 15 units and above on the basis that this is applied flexibly and from a realistic perspective taking into account market conditions, value areas, density and other planning and infrastructure requirements. It is our view that retaining the current policy position (Policy H7A) where there is a range of targets dependent upon scheme location and existing land use, may be counter productive as we believe it is necessary to have a more consistent and clear approach throughout the District.
- 13.127 It is very important that the Council monitors market conditions experienced at any given point to ascertain if they represent best the downside, middle or upside market assumptions used within this study. It is recommended that this monitoring is undertaken on an annual basis and more frequently in times of sharp rises or falls in the property market. This will enable the Council at any given time over the life of the plan to refine their expectations in terms of the nature and extent of affordable housing that is likely to be achievable. The results of this monitoring should be made available on an annual basis perhaps through regularly published reports such as the Annual Monitoring Report.



CONCLUSIONS

General Development Sites – Harlow

- 13.128 This section contains specific conclusions in respect of each notional site assessed in Harlow. In addition, analysis has been undertaken regarding development viability across the local authority area as a whole.
- 13.129 Firstly, the effect of a range of affordable housing requirements has been assessed against a scheme unencumbered by social housing. The reduction of value on that base (unencumbered) site due to affordable housing is, evidently, zero. We have then assessed the reduction in value due to the range of affordable housing targets from 50% to 10%. This is shown in Figure HXXXVII which uses a 50 unit 50 dph notional scheme to illustrate this point. It can be seen that the higher value areas experience less of a reduction in value due to the imposition of affordable housing. For example, at 40% affordable housing, in all areas except CM18 the reduction in residual value is between 48% and 50%. This is still a higher proportion than in higher value areas elsewhere in this study but it is notable that the reduction in value in area CM18 is as much as 68%. While there will be particular pressure on all areas this will particularly affect the ability of very low value areas from achieving high proportions of affordable housing.

**Effect of Different %ages of Affordable Housing 2010
50 Dph Harlow**

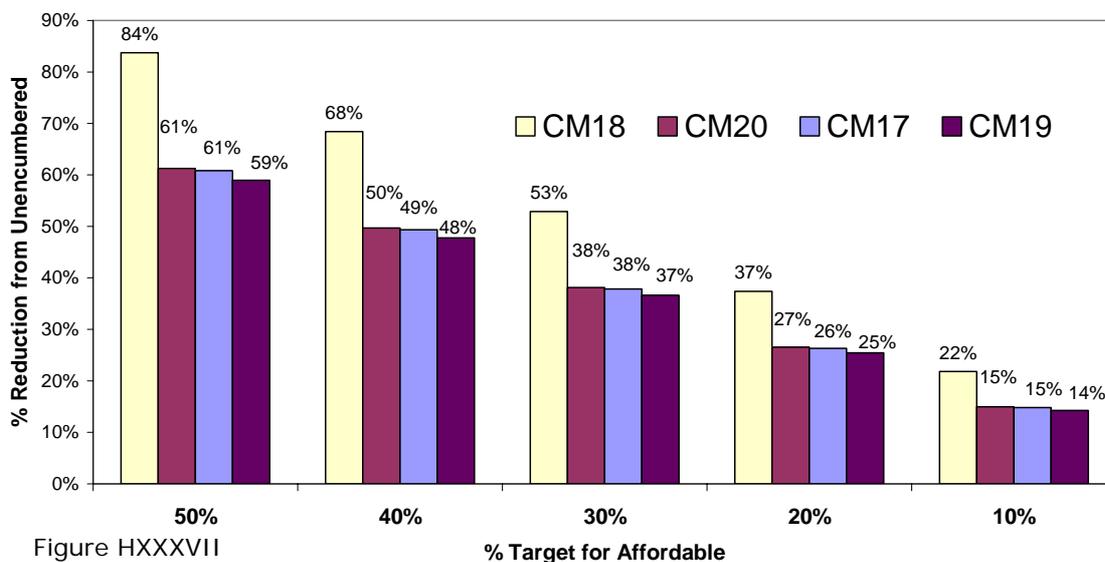


Figure HXXXVII

Figure HXXXVIII examines the relationship between residual land value per hectare and the percentage of affordable housing, again this analysis is based upon a 50 unit 50 dph notional scheme. A scheme unencumbered by affordable housing is exceeding the industrial/greenfield land values in all value areas and the previously developed residential land values in every area except CM18. As would be expected, as the amount of affordable housing increases the residual value per hectare decreases. The relationship between the relative areas is apparent and it is likely that high proportions of affordable housing can be achieved if development is to come forward on land at industrial/greenfield values. The exception, again, is in value area CM18 where grant is necessary to achieve 30% affordable housing. However, the shortfall here is only in the region of around £5,000 per unit.

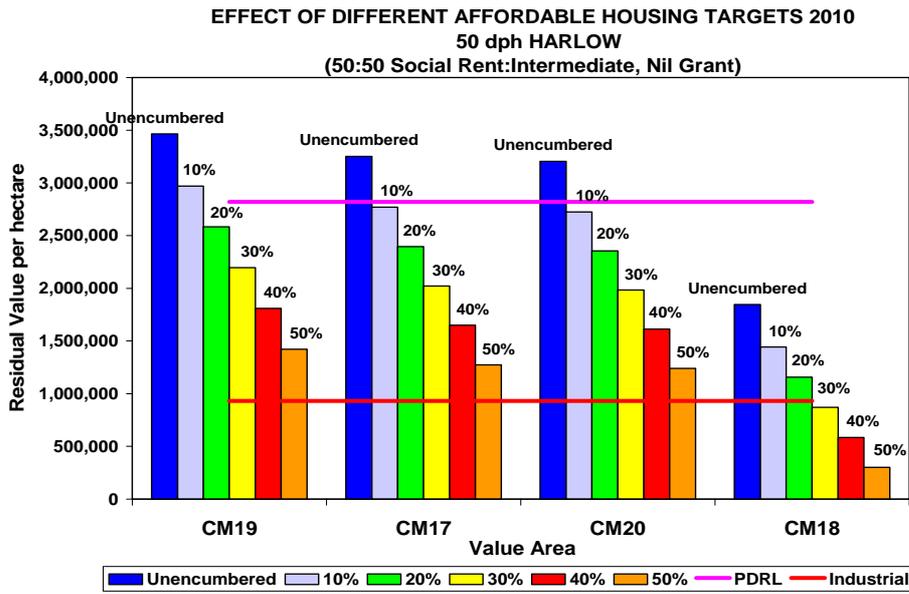


Figure HXXXVIII

13.130 Figure HXXXIX shows the effect of different density developments. It can be seen that in all value areas at 35% affordable housing the optimum development density is lower than 50 dwellings per hectare. At higher densities the fall in development viability is dramatic and schemes with densities over 50 to 70 dwellings per hectare are likely to be severely compromised. The exception, to this, however, is in the case of exclusive flatted developments for executive style apartments where high values might be able to support increased affordable housing.

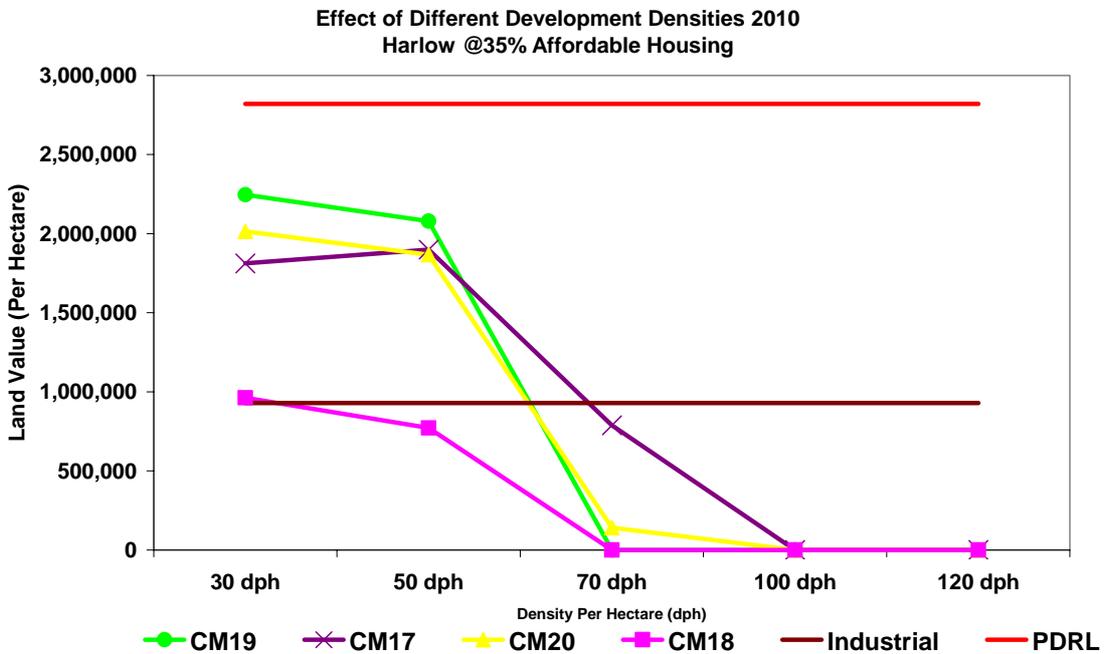


Figure HXXXIX



13.131 Figure HXL shows the impact upon viability of three different affordable housing tenure mixes in Harlow. Increasing the proportion of intermediate affordable housing is a mechanism that could be employed to ease viability if required on certain schemes.

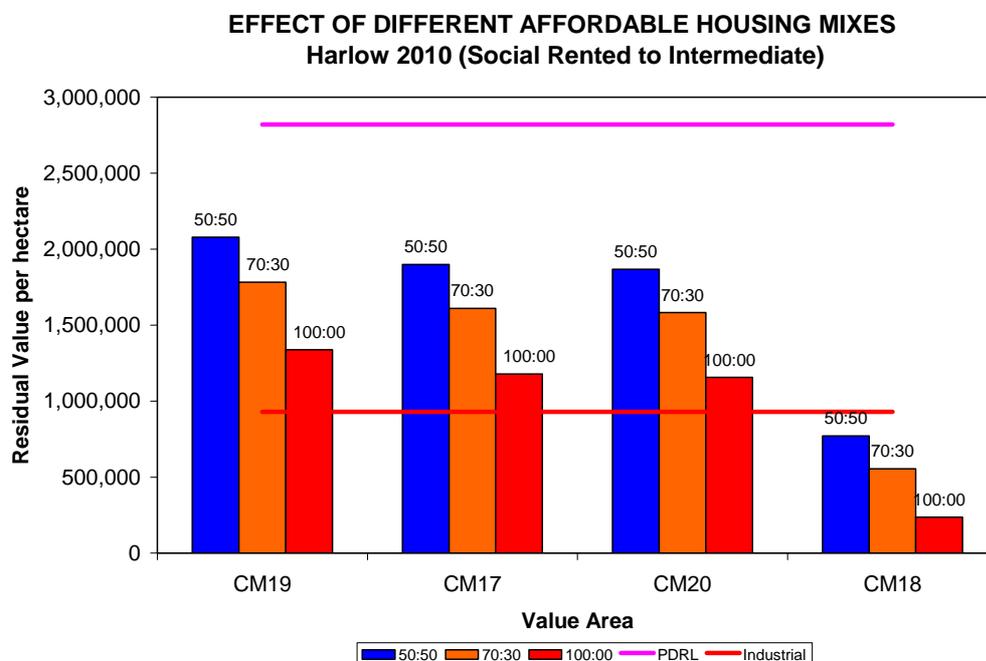


Figure HXL

15 units at 30 dph

13.132 At industrial/greenfield land values the 35% target for affordable housing remains achievable in most areas although grant and/or a relaxation of section 106 planning obligations may be necessary at some points. This position would not apply during periods of economic downturn when 35% affordable housing is unlikely to be achievable. Value area CM18 may be particularly challenging. However, in value areas CM19 and CM20 the position appears more relaxed and up to 45% affordable housing may be achievable.

13.133 The position on previously developed residential land is much more challenging. Around 15-20% may be achievable in area CM20 and CM19 and possibly CM17 but only around 10% may be achievable in CM18. This is likely to be the long term position except in periods of upside economic conditions.

15 units at 50 dph

13.134 At industrial/greenfield land values it is possible to achieve 35% affordable housing in CM17, CM19 and CM20 although this is marginal in some cases. It is unlikely that an increased percentage would be viable unless upside economic conditions apply for much of the Core Strategy period.

13.135 On previously developed residential land the ability to achieve much more than 10% affordable housing is unlikely even in middle economic conditions and will be particularly difficult during the period when code level 6 comes into force.



15 units at 70 dph

- 13.136 Only in value area CM17 is it likely that small flatted developments at 70 dph or more that any affordable housing is likely to be achieved for the lifetime of the plan. Clearly there may be some one-off luxury flatted developments where values are high and these sites may be able, theoretically, to provide some affordable housing in economic terms.

50 units at 30 dph

- 13.137 In some cases at industrial/greenfield land values it may be possible to achieve up to 45% affordable housing but this may involve the need to provide additional grant or relax the planning obligations for the site. Certainly a 35% target is likely to be achievable if the market performs to the middle scenario or better.
- 13.138 On previously developed land the 35% target is more difficult to achieve apart from value area CM19. Affordable housing in other areas would range from below 10% to 25%.

50 units at 50 dph

- 13.139 Affordable housing on land at industrial/greenfield values can support from 25% in CM18 to 40% in CM19 value areas. Care will need to be taken when seeking higher levels of affordable housing in periods of challenging economic conditions and especially during the period when code level 6 requirements come into force.
- 13.140 On previously developed residential land no more than 25% affordable housing is likely to be achievable and in most areas less than this level (down to 15%) is likely to be achievable.

50 units at 70, 100 and 120 dph

- 13.141 Generally, the ability to achieve affordable housing on higher density sites in all areas is extremely challenging. The exception may be CM17 where, at industrial/greenfield land values, up to 25% affordable housing may be possible on sites at 70 dph. Schemes will only be viable against previously developed residential land if our upside economic assumptions are relevant and possible later in the Core Strategy period. In that case 10% affordable housing may be viable in CM17 (or 14% with grant). In areas CM18, CM19 and CM20 it will be extremely difficult to achieve viability with any affordable housing. The exception may be where flatted developments attract higher executive apartments and consequently higher values than we have tested. For example, where flats are sold for up to, say, £300,000 then an element of affordable housing could be afforded. It is unlikely, however, that the average development in Harlow will attract these values.

150 units at 30 dph

- 13.142 On industrial/greenfield land it is generally possible to achieve 35% affordable housing but the tenure mix and planning contribution levels must be considered in order to ensure that this is achievable. On previously developed land it will be much more challenging to achieve this target and in some areas (CM17 and CM18) only 10% affordable housing may be viable even in middle economic conditions. In CM19 this percentage may have to reduce to 20% while in CM20 it would be 20%.



150 units at 50 dph

- 13.143 At industrial/greenfield land values it is unlikely that schemes could be supported at this density that provided 100% social rent and 35% affordable housing without a considerable amount of grant. At other tenure mixes in all areas most schemes are either marginally viable or viable at 35% affordable housing although this may have to be compromised in certain conditions especially in CM19 where we found that 25% - 30% may be a more realistic requirement.
- 13.144 On previously developed residential land it is unlikely that 35% affordable could be achieved and viability maintained if economic conditions remain in the middle and especially in the downside scenarios. Target percentages may have to be reduced to between 10% and 30% in order to maintain viability.

150 units at 70 dph

- 13.145 Overall our modelling has shown that it is extremely unlikely that schemes with 35% affordable housing will come forward on this site type in any area within Harlow both now or during the life of the Core Strategy. Indeed, currently, 25% affordable housing is challenging even on land traded at industrial/greenfield values and value area CM17 is the only area currently likely to achieve up to 25% affordable housing.
- 13.146 In the future period, 25% affordable housing could be achieved in CM17 with circa 10%-15% affordable housing being more realistic in other value areas, even on industrial/greenfield valued land. In CM19 even this level may be challenging. The situation will be eased during periods of economic upturn.
- 13.147 Against previously developed residential land values delivery whilst CM17 may be able to deliver up to 10% affordable housing, it is unlikely that other value areas would be able to support any affordable housing requirement in any of the market conditions assessed.



RECOMMENDATIONS

- 13.148 It is essential that any district-wide affordable housing policy is not unduly rigid and can be applied flexibly and pragmatically allowing development to come forward while meeting the needs of the community. It will be necessary to consider sites on an individual basis having due regard to the planning benefits of granting permission. The framework for enabling such decisions to be made including those of viability should be set out within a Supplementary Planning Document.
- 13.149 The limitations of assessing economic viability on strategic sites within the framework of a District-wide viability assessment undertaken to inform policy have been outlined within this study. We would recommend that more detailed analysis of strategic development locations is undertaken in order to clarify the Council's requirements on sites of this nature and identify the approach to viability. This is particularly pertinent as development on such sites will account for a very significant proportion of new development within the District over the life of the Core Strategy. Detailed consideration of these schemes is also required given their potential location on sites outside of Harlow value areas. Such work could be set out in a Supplementary Planning Document or Area Action Plan.
- 13.150 We would recommend that the Council considers carefully introducing an affordable housing requirement on sites of 5 units and above. Testing has shown that the ability of a site size threshold of five units to produce developable, deliverable sites with affordable housing varies according to density. Low density (30 dph) schemes are more able to deliver affordable housing than higher density developments (50 dph and above) and, as density increases above 50 dph it is more challenging to support any level of affordable housing contribution. Our analysis has also shown significant differences in the amount of affordable housing that these sites can deliver depending upon the type of land that is being developed. Sites coming forward with an existing industrial/greenfield use are more likely to be able to support affordable housing than those with an existing residential use.
- 13.151 On sites below 15 units our analysis has shown that a maximum of 30% affordable housing is likely to be achievable on low density (30 dph) schemes, reducing to 20% affordable housing on schemes developed at 50 dph, and 10% affordable housing on schemes developed at 70 dph. As small sites are particularly susceptible to even minor increases in costs or unforeseen development encumbrances, we would suggest that if any policy on sites below 15 units is introduced it is flexible enough to ensure that sites of this size continue to come forward for residential development. This is particularly relevant as small sites below 15 units have not previously been expected to provide any affordable housing. It would also be essential to ensure that the exact level of affordable housing that could be supported by these schemes is determined at the point of planning application having due regard to the value area, density, and the potential alternative/existing uses of the site.
- 13.152 On general development sites we would recommend that the Council adopt a single District-wide affordable housing target of up to 35% on sites above 15 units on the basis that this is applied flexibly and from a realistic perspective taking into account market conditions, value areas, density and other planning and infrastructure requirements.
- 13.153 It is very important that the Council monitors market conditions experienced at any given point to ascertain if they represent best the downside, middle or upside



market assumptions used within this study. It is recommended that this monitoring is undertaken on an annual basis and more frequently in times of sharp rises or falls in the property market. This will enable the Council at any given time over the life of the plan to refine their expectations in terms of the nature and extent of affordable housing that is likely to be achievable. The results of this monitoring should be made available on an annual basis perhaps through regularly published reports such as the Annual Monitoring Report.

CONCLUSIONS

General Development Sites – Uttlesford

- 13.154 This section contains specific conclusions relating to Uttlesford. In addition, analysis has been undertaken regarding development viability across the local authority area as a whole. These general themes are discussed initially.
- 13.155 Firstly, the effect of a range of affordable housing requirements has been assessed against a scheme unencumbered by social housing. The reduction of value on that base (unencumbered) site due to affordable housing is, evidently, zero. We have then assessed the reduction in value due to the range of affordable housing targets from 50% to 10%. This is shown in Figure UXXXIII which uses a 50 unit 50 dph notional scheme to illustrate this point. It can be seen that the higher value areas experience less of a reduction in value due to the imposition of affordable housing. For example, at 40% affordable housing, the reductions range from 46% to 58%. In particular, the reduction due to affordable housing is particularly marked in value area CM6. While there will be particular pressure on all areas this will particularly affect the ability of very low value areas from achieving high proportions of affordable housing.

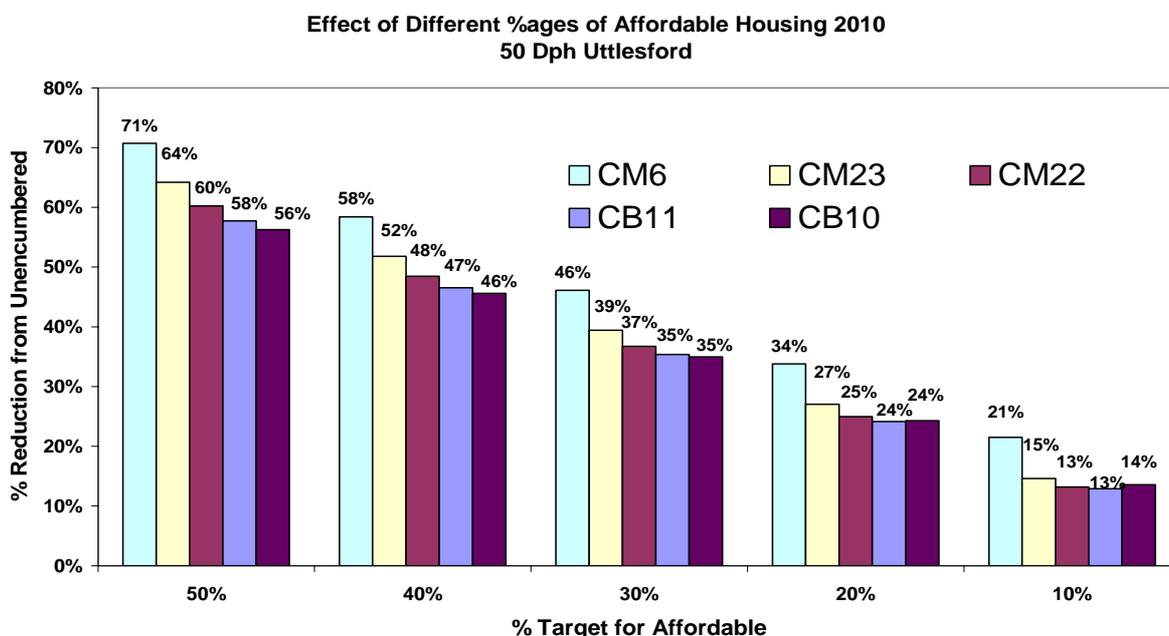


Figure UXXXIII



13.156 Figure UXXXIV examines the relationship between residual land value per hectare and the percentage of affordable housing, again this analysis is based upon a 50 unit 50 dph notional scheme. A scheme unencumbered by affordable housing is exceeding the industrial/greenfield land values in all value areas although it can be seen that previously developed land values can only be achieved in CB10 and marginally, perhaps in CB11. As would be expected, as the amount of affordable housing increases the residual value per hectare decreases. The relationship between the relative areas is apparent and it is likely that high proportions of affordable housing can be achieved if development is to come forward on land at industrial/greenfield values. It can be seen that in all areas 30% affordable housing can be achieved without grant.

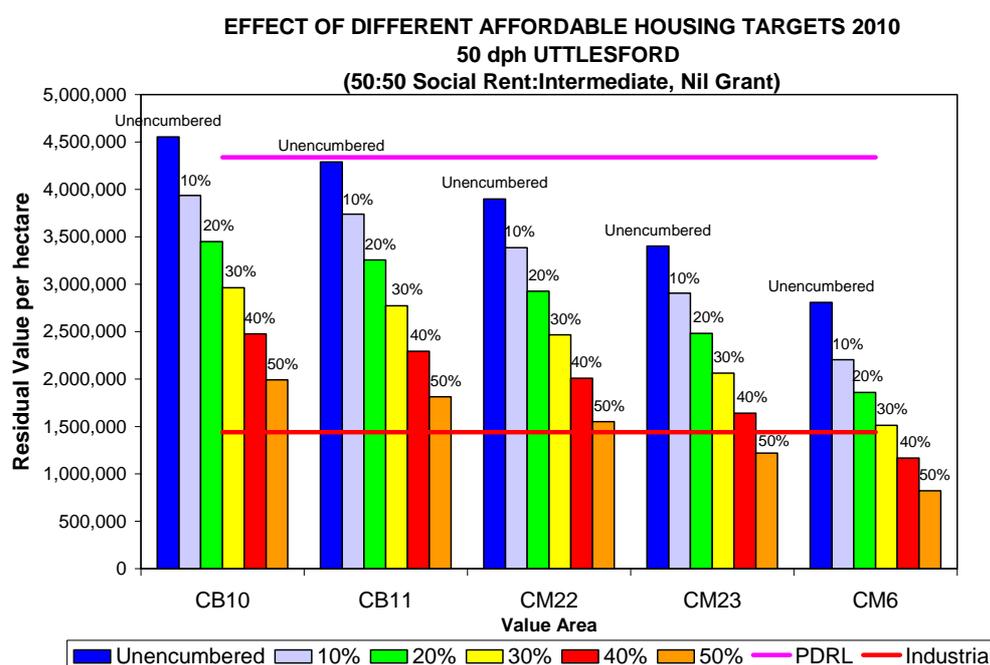


Figure UXXXIV

13.157 Figure UXXXV shows the effect of different density developments. It can be seen that in all value areas at 35% affordable housing the optimum development density is probably 50 dwellings per hectare. Although it should be noted that we have not tested at densities higher than 67 dwellings per hectare. There would appear to be little difference in development values across the range of densities that we tested in Uttlesford.



Effect of Different Development Densities 2010
Uttlesford @35% Affordable Housing

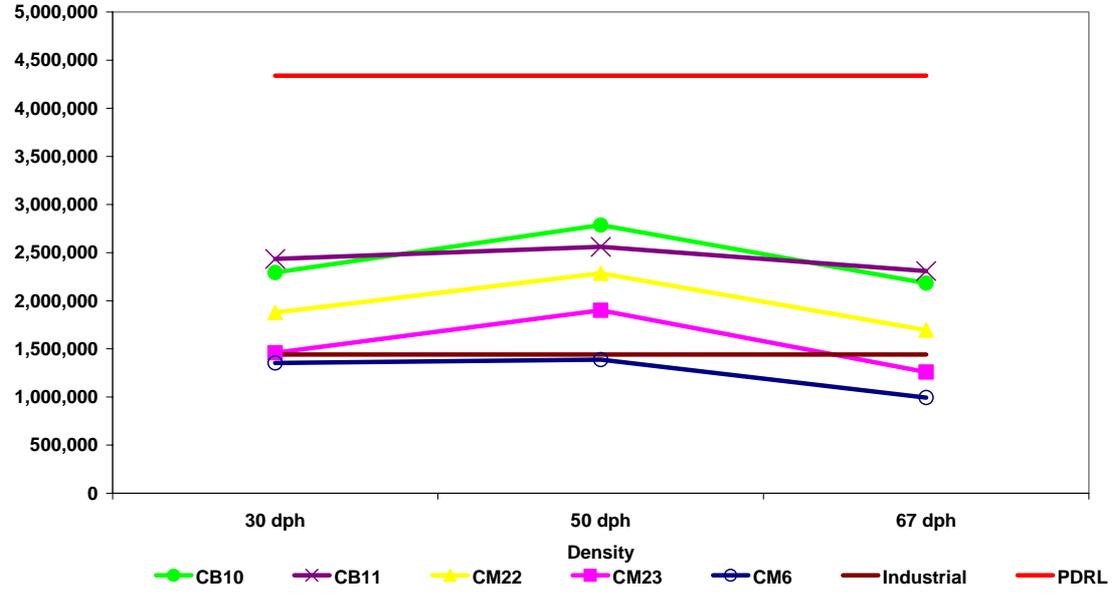


Figure UXXXV

13.158 Figure UXXXVI shows the impact upon viability of three different affordable housing tenure mixes in Uttlesford. Increasing the proportion of intermediate affordable housing is a mechanism that could be employed to ease viability if required on certain schemes.

EFFECT OF DIFFERENT AFFORDABLE HOUSING MIXES
UTTLESFORD 2010

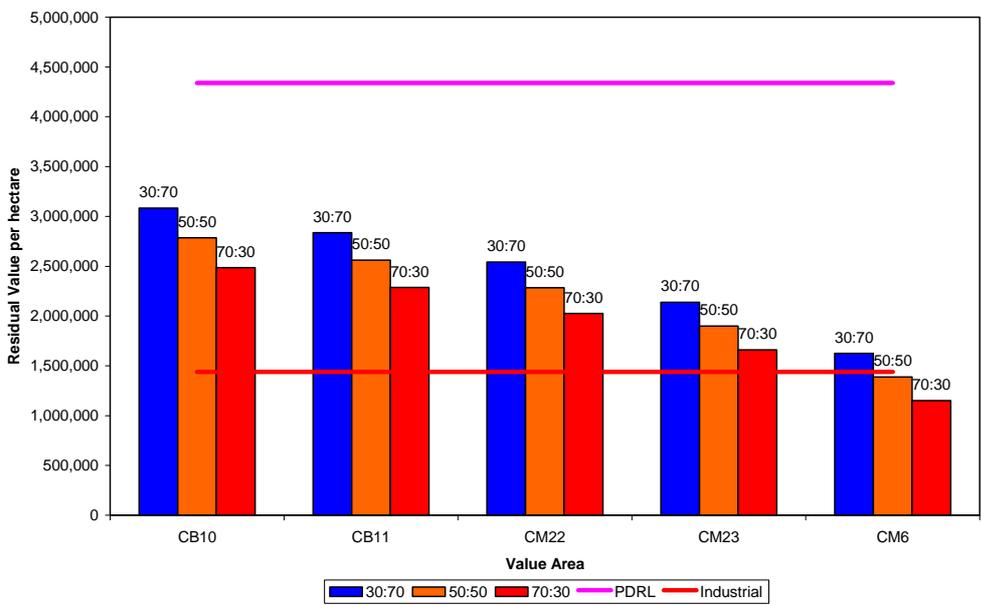


Figure UXXXVI



15 Units at 30 dph

- 13.159 Against industrial/greenfield land values 35-40% affordable housing (dependent upon value area) appears broadly viable against middle market conditions, although some areas are likely to require grant to achieve these levels in the early part of the Plan. Considerations of tenure mix (increasing the proportion of intermediate affordable housing and/or relaxing S106 requirements) is a further mechanism that could be employed to ease viability.
- 13.160 The viability of sites such as these coming forward on previously developed residential land is challenging. Up to 7% - 14% (one or two units of affordable housing) may be deliverable in some value areas with grant towards the latter half of the duration of the Core Strategy should the market achieve the middle scenario. Should the market achieve upside conditions, provision at this level may be achievable earlier.

15 Units at 50 dph

- 13.161 35% affordable housing is likely to be broadly viable against middle market conditions over the life of the Core Strategy although in some value areas grant funding and/or a flexible approach to affordable housing tenure is likely to be required to achieve this, particularly in the earlier half of the period assessed. Later in the life of the Plan and/or in upside market conditions 40% affordable housing may be deliverable in some value areas.
- 13.162 Delivery of affordable housing on sites where the existing use is residential is challenging and even with levels of affordable housing of 7-14% it is likely that in some areas provision of this amount would be difficult until later in the Plan period should the market achieve only middle conditions.

15 units at 67 dph

- 13.163 With the exception of value area CB10 (where 35% affordable housing may be deliverable against industrial/greenfield values) delivery of in excess of 7% affordable housing is unlikely to be viable against industrial/greenfield land values should middle market conditions prevail.
- 13.164 It is unlikely that schemes of this nature brought forward on land where the existing use is residential could sustain any affordable housing requirement in any market scenario assessed.

50 units at 30 dph

- 13.165 In higher value areas, 40-45% affordable housing may be viable over much of the life of the Plan. This reduces to 35% affordable housing (in some cases only achievable with public subsidy at normal levels) in other areas. In both cases these assume middle market conditions and S106 requirements at 100% of the base level.
- 13.166 Delivery of affordable housing on land with an existing residential use is very challenging with some value areas unable to deliver any affordable housing at all. Even in the higher value areas, delivery of as little as 6% affordable housing is marginal even should the market achieve upside conditions.



50 units at 50 dph

- 13.167 In the higher value areas and assuming industrial/greenfield land values, 35-40% affordable housing may be achievable without grant should the market perform to the middle scenario. In other areas, 35% affordable housing is likely to be viable, albeit requiring grant at normal levels in some circumstances. Furthermore, some flexibility in the affordable housing tenure mix may also be required to achieve delivery of 35% affordable housing in these instances with intermediate tenures forming a minimum of circa 50% of the affordable housing mix.
- 13.168 Against Previously Developed residential land values, 10% affordable housing (with grant at normal levels) is the likely maximum amount that could be delivered in any period assessed unless the market performs to upside conditions. In some areas, where the existing land use is residential, delivery of any affordable housing could be challenging.

50 units at 67 dph

- 13.169 Delivery of affordable housing on these higher density (67 dph) notional sites is comparatively more challenging than on the lower density (30 and 50dph) schemes. Although some value areas are able to achieve 35% affordable housing, in some cases with grant, for large parts of the period assessed (assuming middle market conditions) in the short term 10-20% affordable housing is more likely to be the maximum that can be achieved even with grant.
- 13.170 On notional sites where the existing land use is residential, it is likely that circa 0-10% affordable housing could be delivered. In most cases this would require grant at normal levels, however if the market achieves upside conditions the schemes have the potential to achieve delivery of circa 10% affordable housing without recourse to public subsidy.

250 units at 30 dph

- 13.171 Against industrial/greenfield land values, the results demonstrate that some value areas may be able to support 35-40% affordable housing without grant. In other value areas, in the shorter term at least 10-25% affordable housing is more likely to be achievable assuming middle market conditions increasing to 35% affordable housing later in the Plan.
- 13.172 Against previously developed residential land values higher value areas may be able to support up to 10% affordable housing in upside market conditions only. In other areas it is unlikely that any affordable housing could be delivered in the life of the Plan.

250 units at 50 dph

- 13.173 Against industrial/greenfield land values some areas are likely to be able to deliver 35% affordable housing in middle market conditions without grant in the latter half of the Plan period. Prior to this grant at normal levels will be required to achieve a marginally viable position, and should S106 costs increase above the levels assumed delivery of 35% affordable housing may be challenging in this earlier period.



- 13.174 In areas where relatively higher open market values can be achieved delivery of 35% -40% affordable housing may be achievable throughout the period assessed, again assuming middle market conditions.
- 13.175 Against previously developed residential land values, although 10-20% affordable housing may be achievable in some areas, in others, delivery of any affordable housing may not be viable.

250 units at 67 dph

- 13.176 In the early half of the period assessed grant funding is likely to be required to achieve 35% affordable housing and even then, a marginally viable outcome only can be achieved assuming middle market conditions.
- 13.177 Grant at higher levels may ease viability in this period, however, the increase of S106 costs in excess of the levels assumed would adversely affect viability, and in the earlier period in some value areas 25-30% affordable housing may be the maximum amount that could be achieved even with grant.
- 13.178 In the second half of the period assessed (and for the majority of it should upside conditions be achieved) 35% affordable housing may be viable without grant.
- 13.179 Against previously developed residential land values, although 10-20% affordable housing with grant may be achievable in some areas, in others, delivery of any affordable housing may not be viable.

RECOMMENDATIONS

- 13.180 It is essential that any district-wide affordable housing policy is not unduly rigid and can be applied flexibly and pragmatically allowing development to come forward while meeting the needs of the community. It will be necessary to consider sites on an individual basis having due regard to the planning benefits of granting permission. The basic parameters for enabling such decisions to be made including those of viability should be set out within a Supplementary Planning Document.
- 13.181 The limitations of assessing economic viability on strategic sites within the framework of a District-wide viability assessment undertaken to inform policy have been outlined within this study. We would recommend that more detailed analysis of strategic development locations is undertaken in order to clarify the council's requirements on sites of this nature and identify the approach to viability. This is particularly pertinent as development on such sites will account for a very significant proportion of new development within the District over the life of the Core Strategy. Such work could be set out in a Supplementary Planning Document or Area Action Plan.
- 13.182 A site size threshold of five units can produce developable, deliverable sites with affordable housing. However the exact level will have to be determined at the point of planning application having due regard to the value area, density, and the potential alternative/existing uses of the site. Our analysis has shown significant differences in the amount of affordable housing that these sites can deliver depending upon the type of land that is being developed. Sites coming forward with an existing industrial/greenfield use are more likely to be able to support affordable housing than those with an existing residential use.



- 13.183 Our analysis has shown that a maximum of 30% affordable housing is likely to be achievable. This reduces to 10% affordable housing on higher density schemes. As small sites are particularly susceptible to even minor increases in costs or unforeseen development encumbrances, we would suggest that any policy on sites below 15 units is flexible enough to ensure that sites of this size continue to come forward for residential development. This is particularly relevant as small sites below 15 units have not previously been expected to provide any affordable housing.
- 13.184 On general development sites we would recommend that the Council adopt a single District-wide affordable housing target of up to 40% on sites above 15 units on the basis that this is applied flexibly and from a realistic perspective taking into account market conditions, value areas, density and other planning and infrastructure requirements.
- 13.185 It is very important that the Council monitors market conditions experienced at any given point to ascertain if they represent best the downside, middle or upside market assumptions used within this study. It is recommended that this monitoring is undertaken on an annual basis and more frequently in times of sharp rises or falls in the property market. This will enable the Council at any given time over the life of the plan to refine their expectations in terms of the nature and extent of affordable housing that is likely to be achievable. The results of this monitoring should be made available on an annual basis perhaps through regularly published reports such as the Annual Monitoring Report.



14.0 Housing Market Areas

14.1 The London Commuter Belt (East)/M11 Sub Region Strategic Housing Market Assessment 2008 identified three main Housing Market Areas (HMA) that cover the areas assessed within this study. These are:

- Cheshunt/A10 to the west of the area;
- Harlow/M11 to the east of the area;
- Brentwood as a separate and independent sub market.

14.2 It has not been possible to establish an overall position in respect of affordable housing viability for each HMA due to the differing requirements from each local authority in terms of tenure mix, S106 and other planning gain requirements (outlined previously within this report) and the fact that two of the three identified HMAs are made up of at least two local authority areas.

14.3 This report has examined viability using a value area approach within each Local Authority area based upon Postcode Areas. There may be some merit therefore in outlining which value areas (Postcode Areas) form part of each HMA. The limitations of this exercise as outlined in paragraph 14.2 plus the differing land value assumptions between local authority boundaries should however be considered. A Postcode Area map for each Local Authority is shown in Appendix 15.

Cheshunt/A10 Housing Market Area

14.4 The following value areas that have been assessed within this study form part of this HMA (note some value areas may not be wholly within the HMA boundary):

- EN9;
- SG12;
- SG9;
- SG13 (a large part of - some small areas may fall within the Welwyn Garden City HMA);
- SG14 (a large part of - some small areas may fall within the Stevenage A1 M Corridor HMA);

Harlow and M11 Corridor Housing Market Area

14.5 The following value areas that have been assessed within this study form part of this HMA (note some value areas may not be wholly within the HMA boundary):

- CM17;
- CM18;
- CM19;



- CM20;
- CM16;
- CM22;
- CM23;
- SG11 (a large part of - some smaller areas may fall within the Cheshunt and A10 corridor HMA);
- CM6 (a large part of - some smaller areas may fall within the Chelmsford HMA).

14.6 Value area CM5 falls largely within the Chelmsford Housing Market Area boundary.

14.7 Value areas IG10 and IG7 fall largely within the North London Housing Market Area.

14.8 Value areas CB10 and CB11 fall largely within the Cambridge Housing Market Area.

Brentwood Housing Market Area

14.9 The following value areas that have been assessed within this study form part of this HMA (note some value areas may not be wholly within the HMA boundary):

- RM4 (part of);
- CM14;
- CM13;
- CM15.

14.10 Value area CM4 falls largely within the Chelmsford Housing Market Area boundary.