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 Housing<sup>1</sup> and the Government's housing policy statement 'Delivering Affordable Housing'<sup>2</sup>.

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'.

<sup>&</sup>lt;sup>1</sup> Planning Policy Statement 3: Housing, DCLG, November 2006

<sup>&</sup>lt;sup>2</sup> 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**

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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)**

#### ΑII

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 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.

# <u>Harlow</u>

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.

#### <u>Uttlesford</u>

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.
- 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 area<sup>3</sup>. 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 Services<sup>4</sup>. 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 PPS12<sup>5</sup>. 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.
- 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.
- 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"

<sup>&</sup>lt;sup>3</sup> Paragraph 29, PPS3, DCLG, November 2006

<sup>&</sup>lt;sup>4</sup> London Commuter Belt (East)/ M11 Sub-Region Strategic Housing Market Assessment, Opinion Research Services, January 2010

<sup>&</sup>lt;sup>5</sup> 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 provision<sup>6</sup>.

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.

<sup>&</sup>lt;sup>6</sup> PPS3, DCLG, November 2006, page 25 (see Appendix 10)

# 2.0 Wider Context of the Study

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

- This report was undertaken prior to the General Election May 6<sup>th</sup> 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.
- Policy H2<sup>8</sup> 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'.

<sup>8</sup> Ibid, page 34

- 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 4,800° 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		Market		
	Social Rent	Intermediate	Affordable Total	Housing
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

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 dwellings<sup>10</sup>.

 $<sup>^{9}</sup>$  ORS SHMA page 99. This figure of 4,800 includes Broxbourne at 850. Broxbourne is not covered by this report.

<sup>&</sup>lt;sup>10</sup> 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 0.5hectares, 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 villages<sup>11</sup>.
- 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' 12.

Planning Obligations SPD - 2008

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;

<sup>&</sup>lt;sup>11</sup> Affordable Housing and Lifetime Homes SPD – 2008 P.10

<sup>&</sup>lt;sup>12</sup> 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 Borough<sup>13</sup>. 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.
- 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

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<sup>&</sup>lt;sup>13</sup> 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.
- 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 need<sup>14</sup>.
- 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 unviable<sup>15</sup>.

Core Strategy Preferred Option Document

2.23 The Council formally consulted on the Core Strategy Preferred Options document from 30<sup>th</sup> November 2007 to 11<sup>th</sup> 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 sties of 0.5 ha or above. Any future policy will also take on board the outcomes of the Strategic Housing Market Assessment.

<sup>&</sup>lt;sup>14</sup> Uttlesford Local Plan Adopted January 2005, and Policies Saved in 2007. Para. 6.28

<sup>&</sup>lt;sup>15</sup> Ibid Para. 6.29

## **HARLOW**

Adopted Replacement Harlow Local Plan – July 2006

- 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 suitability<sup>16</sup>". 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'<sup>17</sup>.
- 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

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 sites<sup>18</sup>. In relation to thresholds affordable housing will be required on development sites of 15 or more dwellings or 0.5 a hectare or more<sup>19</sup>.

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

<sup>18</sup> Affordable Housing SPD, Paragraph 4.2

<sup>&</sup>lt;sup>16</sup> Ibid, Chapter 6, paragraph 6.8.7

<sup>&</sup>lt;sup>17</sup> Ibid

<sup>&</sup>lt;sup>19</sup> 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.
- 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

- Delivering Affordable Housing<sup>20</sup> 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.
- 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.
- 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).
- 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.
- 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.
- 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

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 $<sup>^{\</sup>rm 20}$  "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%	

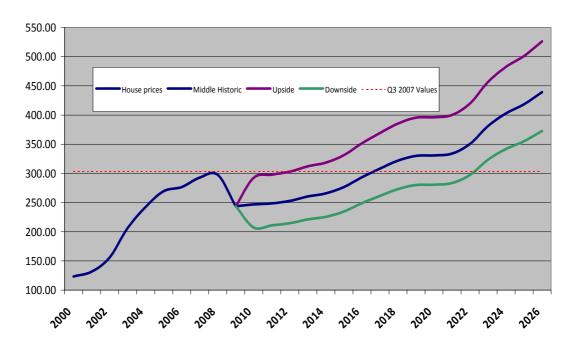
# **Downside Scenario**

- 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.
- 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% bellow 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 HSITORIC 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.
- 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.

- 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.
- 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.
- 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 the 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
- 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
- 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.
- 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 Value<sup>21</sup> 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.
- 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.

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<sup>21</sup> 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.
- 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%

- 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

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.
- 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.
- 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

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 H1<sup>22</sup>, 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

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<sup>&</sup>lt;sup>22</sup> 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.

- Each local authority requested we test a different range of affordable housing tenure mixes. Regard was had to the findings of the SHMA<sup>23</sup> 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

 $<sup>^{23}</sup>$  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.
- 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.
- 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.
- 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.
- 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.
- 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.

- 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.
- 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.
- 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 Se	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		

- 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 implementation<sup>24</sup>. The following table outlines the cost adjustments (pounds per m2) for levels 3 to 6 of the Code for Sustainable Homes:

	Flats	Houses
	(£) per	(£) per
	m2	m2
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.
- 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.

 $<sup>^{24}</sup>$  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 <a href="https://www.communities.gov.uk">www.communities.gov.uk</a>
- 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

- 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 equity<sup>25</sup>.
  - Harlow Shared ownership assumes an initial equity purchase of 50% of the property with rent charged at 2.5% per annum on unsold equity.

<sup>&</sup>lt;sup>25</sup> 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.
- 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 14<sup>th</sup> January 2010.
- 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.

		ORTION 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%			
28% to 42%	24% to 36%	22% to 34%	20% to 30%			
> 42%	> 36%	> 34%	> 30%			
		KEY:		Not Viable Marginally Viab Viable	le	

## 6.0 Results Analysis - Brentwood

### Introduction

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**

- 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.
- 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.
- 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 valuer<sup>26</sup> 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.

- 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.
- 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.
- Thus in respect of development occurring on Greenfield or industrial sites, VOA data on industrial land values in the Borough<sup>27</sup> 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).
- 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).

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<sup>&</sup>lt;sup>26</sup> See letter date 9<sup>th</sup> February 2010 from Thornes (Appendix 8)

<sup>&</sup>lt;sup>27</sup> 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.
- 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.
- 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.
- 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 assessment<sup>28</sup>. 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.
- 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

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<sup>&</sup>lt;sup>28</sup> See Thornes letter dated 9<sup>th</sup> 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)

- This section summarises the results for each value area in Brentwood. We look at 6.21 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.

	Brentwo	od - CM4	
AH Mix:	30-7	0 Social Rent:Intermed	iate
	35% Afford	able Housing	
		6 allowance	
	Nil Grant Lower	EUV sensitivity.	
		ofit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2022			
2023 2024			
2024			
2025			
2020	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=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.

	Bren	twood - CM4	
15 unit	s on a 0.5 hectare site (30 ur	nits per hectare density) - 0 flat	(s) and 15 house(s).
AH Mix:	85-15	5 Social Rent:Interme	diate
	35% Aff	ordable Housi	na
		S106 allowance	3
	Nil Grant L	ower EUV sensitivity.	
	19% Gro	ss Profit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016 2017			
2017			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
-	IOT VIABLE		
	1ARGINALLY VIABLE		
=\	/IABLE		

Figure BII

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.

		od - CM4	flat(s) and 50 house(s).
		able Housing	
AH Mix:		O Social rent:Interme	
		100% \$106 allowanc	e
	Highe	er AUV Nil Grant sensi	itivity.
	199	% Gross Profit sensiti	vity.
		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 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.

	Brer	ntwood - CM4	
15	units on a 0.3 hectare site (50 u	ınits per hectare density) - 0 fla	t(s) and 15 house(s).
	40% Aff	ordable Housi	ing
AH Mix:		5 social rent:interme	
		100% S106 allowance	9
		rant Lower EUV sensit	
	199	% Gross profit sensitiv	/ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014 2015			
2015			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026	, and the second		
	=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.

		ntwood - CM4	
		units per hectare density) - 0 fla	
AH Mix:		.5 Social Rent:Interme	
	35% Aff	ordable Housi	na
		% S106 allowance	
	Nil Grant	Lower EUV sensitivity.	
	19% Gr	oss 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 BV

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.

		ntwood - CM4	
50 uni		units per hectare density) - 0 fla	
A 1 1 B 2 1		ordable Housi	
AH Mix:		5 Social Rent:Interme 100% S106 allowance	
		ant Higher EUV sensit	
		% Gross Profit sensitiv	
		VIABILITY	•
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018 2019			
2019			
2021			
2022			
2023			
2024			
2025			
2026			
=	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.

	Brentwo	ood - CM4		
	20% Afford	able Housing		
AH Mix:		) Social rent to Interm	ediate	
		100% S106 allowanc	e	
		rant Higher AUV sensi		
	199	% Gross Profit sensiti	vity.	
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
2013				
2014				
2015				
2016 2017				
2017				
2018				
2020				
2021				
2022				
2023				
2024				
2025				
2026				
	=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

- 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 u	50 units on a 0.82 hectare site (61 units per hectare density) - 24 flat(s) and 26 house(s).				
AH Mix:					
	35% Affordable Housing				
		6 S106 allowance	3		
	Nil Grant I	Lower EUV sensitivity.			
	19% Gro	oss Profit sensitivity.			
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
2011					
2012					
2013 2014					
2014					
2015					
2017					
2018					
2019					
2020					
2021					
2022					
2023	· ·				
2024					
2025					
2026					
	=NOT VIABLE				
	=MARGINALLY VIABLE =VIABLE				
	= A TWDFC				

Figure BVIII

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 u	50 units on a 0.82 hectare site (61 units per hectare density) - 24 flat(s) and 26 house(s).			
	20% Aff	ordable Housi	ing	
AH Mix:				
		100% S106 allowance		
		rant Higher EUV sensit		
	199	% Gross Profit sensitiv	rity.	
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011 2012				
2012				
2013				
2015				
2016				
2017				
2018				
2019				
2020				
2021				
2022				
2023				
2024				
2025				
2026	NOTHIABLE			
	=NOT VIABLE =MARGINALLY VIABLE			
	=MARGINALLY VIABLE =VIABLE			
	- ATWOLF			

Figure BIX

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.

Brentwoo	od - CM4		
H Mix: 30-70 Social Rent:Intermediate			
35% Afforda	able Housina		
Nil Grant Higher	AUV sensitivity.		
19% Gross Pro	ofit sensitivity.		
	VIABILITY		
DOWNSIDE	MIDDLE	UPSIDE	
=MARGINALLY VIABLE			
	30-70 35% Afforda 100% \$100 Nil Grant Higher 19% Gross Pro  DOWNSIDE	35% Affordable Housing  100% \$106 allowance Nil Grant Higher AUV sensitivity.  19% Gross Profit sensitivity.  VIABILITY  DOWNSIDE MIDDLE	

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 densitg) - 40 flat(s) and 10 house(s).					
AH Mix:		5 Social Rent:Interme			
	35% Affordable Housing				
		6 S106 allowance			
	Nil Grant I	Lower EUV sensitivity.			
	19% Gr	oss Profit sensitivity.			
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
2011					
2012					
2013					
2014					
2015					
2016					
2017					
2018					
2019					
2020					
2021					
2022					
2023					
2025					
2025					
	NOT VIABLE				
	MARGINALLY VIABLE				
	=VIABLE				

Figure BXI

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.

	Brentwo	od - CM4	
50 units on a 0.575 h	ectare site (87 units pe	r hectare density) - 40 fla	t(s) and 10 house(s).
AH Mix:	85-1	.5 Social Rent:Intermed	iate
	35% Afford	able Housing	
		06 allowance	
		ver AUV sensitivity.	
	19% Gross Pi	rofit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015 2016			
2016			
2017			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=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**.

		ntwood - CM4			
50 u	nits on a 0.575 hectare site (87				
		ordable Housi			
AH Mix:		5 Social Rent:Interme			
		100% \$106 allowance	-		
		rant Higher EUV sensit			
	190	% Gross Profit sensitiv	ity.		
VEAD	BOWNERS	VIABILITY	LIBOTOE		
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010 2011					
2011					
2012					
2013					
2015					
2016					
2017					
2018					
2019					
2020					
2021					
2022					
2023					
2024					
2025					
2026					
	=NOT VIABLE				
	=MARGINALLY VIABLE =VIABLE				
	= AIWDFC				

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.

	Brentwo	ood - CM4	
AH Mix:	H Mix: 30-70 Social Rent:Intermediate		
	35% Afford	lable Housing	
		06 allowance	
	Nil Grant Highe	er AUV sensitivity.	
	19% Gross P	rofit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
201			
201			
201			
201			
201			
201			
201			
201			
201			
201			
202			
202			
202			
202			
202			
202			
202			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure BXIV

Value Area: CM13

# Density 30 dph

- 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.
- 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.

	Bren	twood - CM13	
50 unit≤		units per hectare density) - 0 fl	
	10% Aff	ordable Housi	ing
AH Mix:		5 Social Rent:Interme	
		100% S106 allowance	
		rant Lower EUV sensit	
	199	% Gross Profit sensitiv	/ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019	<u> </u>		
2020 2021			
2021			
2022			
2023			
2024	<u> </u>		
2026			
	NOT VIABLE		
	MARGINALLY VIABLE		
	/IABLE		

Figure BXV

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.

	Brentwo	od - CM13	
AH Mix:	50-50 Social rent:Intermediate		
	35% Afford	able Housing	
		06 allowance	
	Nil Grant Lowe	r EUV sensitivity.	
	19% Gross P	rofit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014 2015			
2015			
2010			
2017			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure BXVI

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.				
		VIABILITY			
YEAR	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

- 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.
- 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.

units on 2 0 2 hootage site (E0 ur	nits nor bootare density) Of	lates) and 15 houseful		
_		<del></del>		
15-7.		ivicy.		
DOWNSIDE	MIDDLE	UPSIDE		
	· · · · · · · · · · · · · · · · · · ·			
=VIABLE				
	DOWNSIDE  NOT VIABLE  =MARGINALLY VIABLE	=NOT VIABLE =MARGINALLY 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).

	Brent	twood - CM13	
15 un	its on a 0.3 hectare site (50 u	nits per hectare density) - 0 fla	t(s) and 15 house(s).
AH Mix:	85-13	5 Social Rent:Interme	diate
	35% Aff	ordable Housi	na
		S106 allowance	3
	Nil Grant L	ower EUV sensitivity.	
	19% Gro	ss 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 BXIX

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.

		twood - CM14	
50 unit		nits per hectare density) - 24 fl	
20% Affordable Housing			ing
AH Mix:			
		LOO% S106 allowance	
		ant Lower EUV sensit	
	199	o Gross Profit sensitiv	/ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020		<u> </u>	
2021			
2022			
2023			
2024			
2026			
	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.

		twood - CM13	
50 unit:		ınits per hectare density) - 24 fl	
		ordable Hous	
AH Mix:	85-15 Social Rent:Intermediate		
		100% \$106 allowance	
		ant Higher EUV sensi	
	199	% Gross Profit sensitiv	vity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013 2014			
2015 2016			
2016			
2017			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
=	NOT VIABLE		
=1	MARGINALLY VIABLE		
=	VIABLE		

Figure BXXI

# Density 100 dph & 120 dph

6.60 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 BXXII and relates to the 120 dph development.



Figure BXXII

6.61 Sensitivity testing demonstrates that adding grant at normal levels and/or increasing the proportion of intermediate units can increase the amount of

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

	Brentwoo	od - CM13	
AH Mix: 30-70 Social Rent:Intermediate			
	35% Afford	able Housing	
		6 allowance	
	Nil Grant Lower	EUV sensitivity.	
	19% Gross Pr	ofit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
201	0		
201			
201			
201			
201			
201			
201 201			
201			
201			
202			
202			
202			
202			
202	4		
202	5		
202	6		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure BXXIII

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.

		wood - CM13	
50 units		units per hectare density) - 50 f	
10% Affordable Housing			
AH Mix:	50-50 Social Rent:Intermediate		
		L00% S106 allowance	
		Grant Higher EUV sen	
	19%	o Gross Profit sensitiv	ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014 2015			
2015			
2016			
2017			
2018			
2019			
2021			
2022			
2023			
2024			
2025			
2026			
1=	NOT VIABLE		
=1	MARGINALLY VIABLE		
=\	/IABLE		

Figure BXXIV

Value Area: CM14

# Density 30 dph

- 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.
- Against industrial/greenfield land values we have tested down to 10% affordable housing and the results are shown in Figure BXXV.

	Bren	twood - CM14		
50 u		units per hectare density) - 0 fla		
10% Affordable Housing				
AH Mix:		85-15 Social Rent:Intermediate		
		100% S106 allowance		
		rant Lower EUV sensit		
	190	% Gross Profit sensitiv	rity.	
VEID	50000000	VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011 2012				
2012				
2013				
2015				
2016				
2017				
2018				
2019				
2020				
2021				
2022				
2023				
2024				
2025				
2026				
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure BXXV

- 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).
- 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

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.

	Bren	twood - 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				
		6 S106 allowance	3	
	Nil Grant I	Lower EUV sensitivity.		
	19% Gro	oss Profit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
2013				
2014				
2015				
2016				
2017				
2018 2019				
2019				
2020				
2022				
2023				
2024				
2025				
2026				
	=NOT VIABLE		·	
	=MARGINALLY VIABLE			
	=VIABLE			

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).

	Brentwoo	od - CM14		
15 units on a 0.3 he	ctare site (50 units per	hectare density) - 0 fl	at(s) and 15 house(s).	
AH Mix:	85-15 Social Rent:Intermediate			
	35% Afford	able Housing	1	
		6 allowance		
		ver EUV sensitivity.		
		ofit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
2013				
2014				
2015				
2016				
2017				
2018				
2019				
2020 2021				
2021				
2022				
2023				
2025				
2026				
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure BXXVII

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.

	Brent	twood - CM14	
50		ınits per hectare density) - 0 fla	
	10% Aff	ordable Housi	ng
AH Mix:	30-7	0 Social Rent:Interme	diate
		100% S106 allowance	
		ant Higher EUV sensit	
	199	6 Gross Profit sensitiv	ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015 2016			
2016			
2017			
2018			
2019			
2020			
2021			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=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.

# 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 h			flat(s) and 26 house(s).	
		od - CM14		
AH Mix:	50-50 Social rent:Intermediate			
	35% Afford	able Housing		
		6 allowance		
		r EUV sensitivity.		
	19% Gross Pi	ofit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
201				
201				
201				
201				
201				
201				
201				
201				
201: 201:				
201				
202				
202				
202				
202				
202				
202				
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=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.
- 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.

	Brent	twood - CM14	
50 uni		nits per hectare density) - 24 fla	
	10% Aff	ordable Housi	ng
AH Mix:	85-1	5 Social Rent:Interme	diate
	:	100% S106 allowance	
		ant Higher EUV sensit	
	199	⁄o Gross Profit sensitiv	ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014 2015			
2015			
2016			
2017			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
=	NOT VIABLE		
_	MARGINALLY VIABLE		
	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.

	Brentwoo	d - CM14		
AH Mix:	50-50 Social rent:Intermediate			
	35% Afforda	able Housing		
		6 allowance		
	Nil Grant Lower	EUV sensitivity.		
	19% Gross Pr	ofit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
2013				
2014				
2015				
2016 2017				
2017				
2019				
2020				
2021				
2022				
2023				
2024				
2025				
2026				
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=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.
- 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.

50 uni		units per hectare density) - 50 (	
	10% Aff	ordable Housi	ing
AH Mix:		5 Social Rent:Interme	
		100% S106 allowance	
		ant Higher EUV sensit	
	199	6 Gross Profit sensitiv	ity.
	5.5	VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012 2013			
2013			
2014			
2015			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
	NOT VIABLE		
-	MARGINALLY VIABLE		
=	=VIABLE		

Figure BXXXII

## Density 30 dph

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.

Against industrial/greenfield land values we have tested down to 10% affordable housing and the results are shown in Figure BXXXIII.

	Bren	twood - CM15	
50 u	ınits on a 1.917 hectare site (26		
	10% Aff	ordable Housi	ing
AH Mix:		5 Social Rent:Interme	
		100% \$106 allowance	
		rant Lower EUV sensit	
	199	<b>% Gross Profit sensitiv</b> VIABILITY	ity.
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			0. 3152
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020 2021			
2021			
2022			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure BXXXIII

- 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%.
- 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.

# Density 50 dph

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.

	Bren	twood - CM15				
50 un	its on a 1.15 hectare site (43 u	nits per hectare density) - 0 fla	t(s) and 50 house(s).			
AH Mix:	Mix: 85-15 Social Rent:Intermediate					
	35% Aff	ordable Housi	na			
		s S106 allowance				
	Nil Grant L	ower EUV sensitivity.				
	19% Gro	ss Profit sensitivity.				
		VIABILITY				
YEAR	DOWNSIDE	MIDDLE	UPSIDE			
2010						
2011						
2012						
2013						
2014						
2015						
2016 2017						
2017						
2019						
2020						
2021						
2022						
2023						
2024						
2025						
2026						
	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.

		Brentwo	od - CM15	
AH Mix:		50-50 Social rent:Intermediate		
		35% Afford	able Housing	I
			6 allowance	
		Normal Grant Lov	ver AUV sensitivity.	
		19% Gross Pi	rofit sensitivity.	
			VIABILITY	
YEAR		DOWNSIDE	MIDDLE	UPSIDE
	2010	<u> </u>		
	2011			
	2012			
	2013			
	2014			
	2015			
	2016			
	2017			_
	2018 2019			
	2019			
	2020			
	2022			
	2023			
	2024			
	2025			
	2026			
		=NOT VIABLE		
		=MARGINALLY VIABLE		
		=VIABLE		

Figure BXXXV

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.

	Bren	twood - CM15	
50 uni		ınits per hectare densit <b>y</b> ) - 0 fla	
	10% Aff	ordable Housi	ing
AH Mix:	85-1	5 Social Rent:Interme	diate
		100% S106 allowance	•
		ant Higher EUV sensit	
	199	⁄o Gross Profit sensitiv	/ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015 2016			
2016			
2017			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
=	NOT VIABLE		
=	MARGINALLY VIABLE		
_	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.

	Brentwo	ood - CM15			
AH Mix:	AH Mix: 30-70 Social Rent:Intermediate				
	35% Afford	lable Housing			
		.06 allowance			
	Nil Grant Lowe	er EUV sensitivity.			
	19% Gross F	Profit sensitivity.			
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
2011					
2012					
2013					
2014					
2015					
2016 2017					
2017					
2018					
2020					
2021					
2022					
2023					
2024					
2025					
2026					
	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=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.

50 uni		nits per hectare density) - 24 fl	
		ordable Housi	
AH Mix:		5 Social Rent:Interme	
		100% \$106 allowance	
		ant Lower EUV sensit 6 Gross Profit sensitiv	
	199	VIABILITY	nty.
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 BXXXVIII

- 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.

#### 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.

E0	in 0 E7E h	7 units per hectare density) - 40 f	lasta) and 10 haveneda)
50 Uli		fordable Housi	
AH Mix:		15 Social Rent:Interme	
		100% S106 allowance	
	Nil	Grant Lower EUV sensit	ivity.
	19	1% Gross Profit sensitiv	ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012	<u> </u>		
2013	<u> </u>		
2014			
2015			
2016			
2017	<u> </u>		
2018			
2019			
2020	<u> </u>		
2021	<u> </u>		
2022			
2023	<u> </u>		
2024	<u> </u>		
2025 2026	<u> </u>		
	=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.

## 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.

	Brentwo	od - RM4		
AH Mix:	30-70 Social Rent:Intermediate			
	35% Afford	able Housing		
		06 allowance		
	Nil Grant Lowe	r EUV sensitivity.		
		rofit 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 BXL

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

	Brer	ntwood - RM4			
15 units on a 0.5 hectare site (30 units per hectare density) - 0 flat(s) and 15 house(s).					
AH Mix:	85-1	5 Social Rent:Interme	diate		
35% Affordable Housing					
		6 S106 allowance			
	Nil Grant L	ower EUV sensitivity.			
	19% Gro	oss Profit sensitivity.			
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
2011					
2012					
2013					
2014					
2015					
2016					
2017					
2018 2019					
2019					
2020					
2022					
2023					
2024					
2025					
2026					
=	NOT VIABLE				
=	MARGINALLY VIABLE				
=	VIABLE				

Figure BXLI

- 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.

	Brer	itwood - RM4			
50 units on a 1.15 hectare site (43 units per hectare density) - 0 flat(s) and 50 house(s).					
AH Mix:	85-1	5 Social Rent:Interme	diate		
	35% Aff	ordable Housi	ina		
		6 S106 allowance	5		
	Nil Grant L	ower EUV sensitivity.			
	19% Gro	ss 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 UNE				
	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Figure BXLII

- 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.

	Brentwo	od - RM4			
	40% Affordable Housing				
AH Mix:		.5 Social Rent:Interme	diate		
		100% \$106 allowance	•		
		rant Lower EUV sensit			
	199	% Gross Profit sensitiv	/ity.		
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
2011					
2012					
2013					
2014 2015					
2013					
2010					
2018					
2019					
2020					
2021					
2022					
2023					
2024					
2025					
2026					
	=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.

	Brei	ntwood - RM4		
50 (	50 units on a 1.15 hectare site (43 units per hectare density) - 0 flat(s) and 50 house(s).			
	20% Aff	ordable Housi	ing	
AH Mix:		L5 Social Rent:Interme		
		100% S106 allowance		
		rant Higher EUV sensit		
	19	% Gross Profit sensitiv	rity.	
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
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2020				
2021 2022				
2022				
2023				
2024				
2025				
2020	=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.

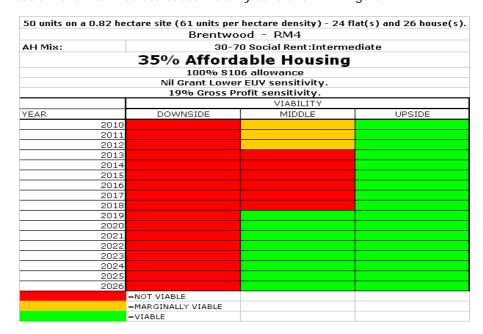


Figure BXLV

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.

	Bren	twood - RM4	
50 uni	ts on a 0.82 hectare site (61 u	nits per hectare density) - 24 fl	at(s) and 26 house(s).
	20% Aff	ordable Hous	ing
AH Mix:	85-1	5 Social Rent:Interme	diate
		100% S106 allowance	
		ant Lower EUV sensit	
	199	% Gross Profit sensitiv	/ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
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2024			
2025			
2026	NOTHIABLE		
	=NOT VIABLE =MARGINALLY VIABLE		
	-MARGINALLY VIABLE		
	- VIMDLL		

Figure BXLVI

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.

50 un	50 units on a 0.82 hectare site (61 units per hectare density) - 24 flat(s) and 26 house(s).				
		ordable Hous			
AH Mix:		5 Social Rent:Interme			
		100% \$106 allowance			
		ant Higher EUV sensit 6 Gross Profit sensitiv			
	199	VIABILITY	ncy.		
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
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2023 2024					
2024					
2025					
	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Figure BXLVII

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

# 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.



Figure BXLVIII

	Bren	ntwood - RM4	
50 unit		units per hectare density) - 40 f	
	20% Aff	ordable Housi	ng
AH Mix:		5 Social Rent:Interme	
		100% S106 allowance	
		rant Lower EUV sensiti	
	199	% Gross Profit sensitiv	ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	·		
2011			
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2017			
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2019			
2020			<u></u>
2021			
2022			
2023			
2024			
2025			
2026	NOT HAD 5		
	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.

	Bren	ntwood - RM4	
50 units		units per hectare density) - 40 (	
	10% Aff	ordable Hous	ing
AH Mix:		5 Social Rent:Interme	
		100% S106 allowance	
		ant Higher EUV sensit	
	199	% Gross Profit sensitiv	/ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013 2014			
2014			
2015			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
	NOT VIABLE		
	MARGINALLY VIABLE		
=\	/IABLE		

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.

Brentwood - CM4					
AH Mix:	H Mix: 100% Social Rent				
	10% Afford	able Housin	a		
		6 allowance	9		
	Higher AU	V sensitivity.			
	19% Gross p	rofit sensitivity.			
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
2011					
2012					
2013					
2014					
2015 2016					
2016			_		
2017					
2019					
2020					
2021					
2022					
2023					
2024					
2025					
2026					
	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Figure BLI

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

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.

	Brentwo	ood - CM15		
AH Mix:	I Mix: 100% Intermediate (25% Initial Share)			
	30% Afford	dable Housing		
		LO6 allowance		
	Lower Grant Lowe	r Land AUV sensitivity.		
	19% Gross	Profit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
	010			
	011			
	012			
	013			
	014			
	015			
	016 017			
	017			
	019			
	020			
	021			
	022			
2	023			
2	024			
2	025			
2	026			
	=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.



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

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.

	Brentwoo	od - CM15	
10 units on a 0.2 h	ectare site (50 units pe	r hectare density) - 4	flat(s) and 6 house(s).
AH Mix:	100% In	termediate (25% In	itial Share)
	20% Afford	able Housing	1
		16 allowance	
	Nil Grant Lowe	r EUV sensitivity.	
	19% Gross Pi	rofit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018 2019			
2019			
2020			
2022			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=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.
- 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

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 valuer<sup>29</sup> 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.

- 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%<sup>30</sup>. 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 district<sup>31</sup> 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).

31 See Paragraph 3.21

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<sup>&</sup>lt;sup>29</sup> See letter date 9<sup>th</sup> February 2010 from Thornes (Appendix 8)

<sup>30</sup> 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.
- 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.
- 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 assessment<sup>32</sup>. 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.
- 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

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 $<sup>^{\</sup>rm 32}$  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)

- 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

- 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.

	Eppir	ng Forest CM16	
15 u	ınits on a 0.5 hectare site (30 u	nits per hectare density) - 0 fla	t(s) and 15 house(s).
AH Mix:	70:30	) Social Rent:Interme	diate
	35% Aff	ordable Housi	ina
		o S106 allowance	
	Nil Grant L	ower EUV sensitivity	-
	19% Gro	ss Profit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
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2015			
2016			
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2019 2020			
2020			
2021			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EPI



Figure EPII

		ng Forest CM16	
15		units per hectare density) - 0 fl	
	40% Aff	ordable Hous	ing
AH Mix:	70:3	O Social Rent:Interme	diate
		100% S106 allowanc	e
		rant Lower EUV sensi	
	199	% Gross Profit sensiti	vity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
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2023 2024			
2024			
2025			
2020	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=MARGINALLT VIABLE =VIABLE		

Figure EPIII

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.

		ng Forest CM16	
50 uni		ınits per hectare density) - 0 fla	
	10% Aff	ordable Hous	ing
AH Mix:		) Social Rent/Interme	
		100% S106 allowance	
		ant Higher EUV sensit	
	199	6 Gross Profit sensitiv	vity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012 2013			
2013			
2014			
2015			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIADLE		

Figure EPIV

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.

## 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).

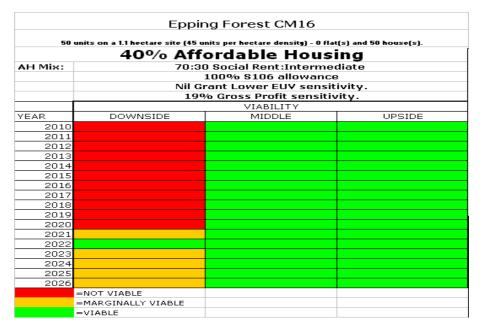


Figure EPV

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.

	Eppir	ng Forest CM16	
15 u	units on a 0.3 hectare site (50 u	nits per hectare density) - 0 fla	t(s) and 15 house(s).
	20% Aff	ordable Housi	ing
AH Mix:	70:30	) Social Rent/Interme	diate
		100% S106 allowance	)
		ant Higher EUV sensit	
	199	⁄o Gross Profit sensitiv	rity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
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2026			
	=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.

	Ерр	ing Forest CM16	
50 units		D units per hectare density) - 24 fl	
AH Mix:	70:	30 Social Rent:Intermed	diate
	35% Af	fordable Housi	ng
		% S106 allowance	
	Nil Grant	Lower EUV sensitivity.	
	19% G	ross Profit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014 2015			
2015			
2017			
2018			
2019			
2020			
2021			
2022			
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2024			
2025			
2026	NOT UZABLE		
	NOT VIABLE MARGINALLY VIABLE		
	MARGINALLY VIABLE		

Figure EPVII

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.

	Eppir	ng Forest CM16	
50 units	s on a 0.714 hectare site (70 c	units per hectare density) - 24 fl	at(s) and 26 house(s).
	10% Aff	ordable Housi	ing
AH Mix:		) Social Rent/Interme	
		100% S106 allowance	
		ant Higher EUV sensit	
	199	∕o Gross Profit sensitiv	rity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
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2025			
2026			
=	NOT VIABLE		
=	MARGINALLY VIABLE		
=	VIABLE		

Figure EPVIII

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

## 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.



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.

	Eppir	ng Forest CM16	
50 uni	ts on a 0.5 hectare site (100 u	ınits per hectare densit <b>y)</b> - 40 fl	lat(s) and 10 house(s).
	10% Aff	ordable Housi	ing
AH Mix:		D Social Rent/Interme	
		100% \$106 allowance	
		ant Higher EUV sensit	
	199	% Gross Profit sensitiv	vity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
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2020			
2021			
2022			
2023			
2024			
2025			
2026			
	NOT VIABLE		
	MARGINALLY VIABLE		
	·VIABLE		

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.
- 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.

	Eppir	ng Forest CM17	
50 u		units per hectare density) - 0 fla	
	10% Aff	ordable Housi	ing
AH Mix:		) Social Rent:Interme	
		100% \$106 allowance	
		rant Lower EUV sensit	
	190	6 Gross Profit sensitiv	vity.
VE.15	5.01111.015.5	VIABILITY	LIBOTE
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011 2012			
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2024			
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2026	NOT UTABLE		
	=NOT VIABLE =MARGINALLY VIABLE		
	=VIABLE		
	- AIMDEE		

Figure EPXI

	Epp	oing Forest CM17	
15 unit	ts on a 0.5 hectare site (3	0 units per hectare density) - 0 fla	t(s) and 15 house(s).
	14% Af	ifordable Housi	ing
AH Mix:	70:	:30 Social Rent:Intermed	diate
		100% S106 allowance	
		Grant Lower EUV sensit	
	1	9% Gross Profit sensitiv	rity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
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=1	NOT VIABLE		
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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.

## Density 50 dph

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.

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.



Figure EPXIII

	Eppi	ng Forest CM17	
15 un	its on a 0.3 hectare site (50	units per hectare density) - 0 fla	t(s) and 15 house(s).
	20% Aff	iordable Housi	ng
AH Mix:		0 Social Rent:Intermed	
		100% S106 allowance	
		irant Lower EUV sensit	
	19	% Gross Profit sensitiv	ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
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2016 2017			
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=	NOT VIABLE		
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Figure EPXIV

- 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.

## 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.

	Eppir	ng Forest CM17	
50 un	its on a 0.714 hectare site (70 t	units per hectare density) - 24 fl	lat(s) and 26 house(s).
	10% Aff	ordable Housi	ing
AH Mix:		) Social Rent:Interme	
		100% S106 allowance	
		Grant Lower EUV sen	
	199	6 Gross Profit sensitiv	rity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
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2015 2016			
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2021			
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	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=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

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	O Social Rent:Interme	diate	
	35% Aff	ordable Housi	ina	
		6 S106 allowance		
	Nil Grant I	Lower EUV sensitivity		
	19% Gro	oss 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 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.

50 units on a 1.83 hectare site (27 units per hectare density) - 0 flat(s) and 50 house(s).			
	25% Aff	ordable Housi	na
AH Mix:		0 Social Rent:Interme	
		100% S106 allowance	
		Grant Lower EUV sensit	
	19	% Gross Profit sensitiv	rity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
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2017 2018			
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2020			
2021			
2023			
2023			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EPXVII

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.

1F:		Forest EN9/CM5 inits per hectare density) - 0 flat	v(-) d 15 b (-)	
io uni	-			
40% Affordable Housing AH Mix: 50:50 Social Rent:Intermediate				
AH MIX:		100% S106 allowance		
		ant Lower EUV sensit		
		6 Gross Profit sensitiv		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
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2017 2018				
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2021				
2022				
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2024				
2025				
2026				
	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

- 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:					
	35% Aff	ordable Housi	ing		
		6 S106 allowance			
	Nil Grant L	ower EUV sensitivity.			
	19% Gro	oss Profit sensitivity.			
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
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2021					
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2024					
2025					
2026	UOT LITABLE				
	NOT VIABLE MARGINALLY VIABLE				
	VIABLE				

Figure EPXIX

- 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.

		·	
50 uni		) units per hectare density) - 24 fl	
		fordable Housi	
AH Mix:	70:2	30 Social Rent:Intermed 100% S106 allowance	
	Nil (	Grant Lower EUV sensit	
		% Gross Profit sensitiv	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
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2025			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EPXX

	Epping	Forest EN9/CM5	
15 uni		) units per hectare density) - 10 f	
	20% Aff	ordable Housi	ing
AH Mix:		0 Social Rent:Intermed	diate
		100% S106 allowance	
		rant Lower EUV sensit	
	19	% Gross Profit sensitiv	rity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
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2021	<u> </u>		
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=	=NOT VIABLE		
=	=MARGINALLY VIABLE		
-	=VIABLE		

Figure EPXXI

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 unit	s on a 0.5 hectare site (100 u	ınits per hectare density) - 40 fl	at(s) and 10 house(s).	
10% Affordable Housing				
AH Mix:		) Social Rent:Intermed		
		100% S106 allowance		
		rant Lower EUV sensit		
	199	⁄o Gross Profit sensitiv	rity.	
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
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2021				
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2024				
2025				
2026				
=1	NOT VIABLE			
=1	MARGINALLY VIABLE			
= 4	VIABLE			

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.
- 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.

		ing Forest IG7	
50 units on a 1.83 hectare site (27 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix:		0 Social Rent:Intermed	
	35% Aff	ordable Housi	ng
		6 S106 allowance	
	Nil Grant	Lower EUV sensitivity.	
	19% Gr	oss Profit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019 2020			
2020			
2021			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EPXXIII

	Ерр	ing Forest IG7	
50 (	units on a 1.83 hectare site (27	units per hectare density) - 0 fla	at(s) and 50 house(s).
	40% Aff	ordable Housi	ing
AH Mix:		0 Social Rent:Interme	diate
		100% S106 allowance	
		rant Lower EUV sensit	
	199	% Gross Profit sensitiv	/ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014 2015			
2015			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EPXXIV

- 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

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.

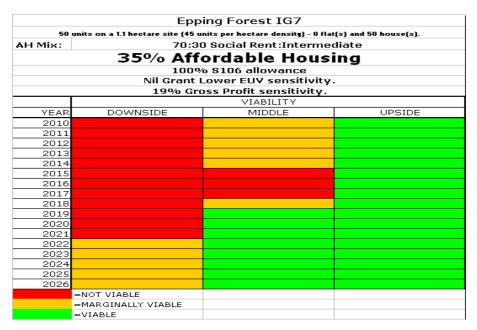


Figure EPXXV

	Epp	oing Forest IG7	
50 uni	ts on a 1.1 hectare site (45	units per hectare density) - 0 fla	t(s) and 50 house(s).
	40% Af	fordable Housi	ing
AH Mix:	70:3	30 Social Rent:Interme	
		100% S106 allowance	
		Grant Lower EUV sensit	
	19	% Gross Profit sensitiv	/ity.
<u> </u>	50000000	VIABILITY	Luporn
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2015			
2016		+	
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
	NOT VIABLE		
	MARGINALLY VIABLE		
=\	/IABLE		

Figure EPXXVI

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).				
30		ordable Hous		
AH Mix:	70:30 Nil Gr	O Social Rent/Interme 100% S106 allowance ant Higher EUV sensit Gross Profit sensitiv	ediate e tivity.	
		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			

Figure EPXXVII

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

Value Area: IG7

## Density 70 dph

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.



Figure EPXXVIII

50	nits on a 0.714 hootare site (70	units per hectare density) - 24 f	latic) and 26 house(s)
30 di		ordable Hous	
AH Mix:		0 Social Rent:Interme	
		100% \$106 allowance	•
	Nil G	rant Lower EUV sensit	ivity.
	199	% Gross Profit sensitiv	/ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014 2015			
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	=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.

	Epı	ping Forest IG7		
50 units on a 0.5 hectare site (100 units per hectare density) - 40 flat(s) and 10 house(s).				
AH Mix:	70:3	80 Social Rent:Intermed	liate	
	35% Aff	fordable Housi	na	
		% S106 allowance		
	Nil Grant	Lower EUV sensitivity.		
	19% Gr	oss Profit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
2013				
2014				
2015 2016				
2016				
2017				
2019				
2020				
2021				
2022				
2023				
2024				
2025				
2026				
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure EPXXX

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.

	Epp	oing Forest IG7	
50 uni	its on a 0.417 hectare site (12	0 units per hectare density) - 50 (	flat(s) and 0 house(s)
	10% Aff	ordable Housi	ing
AH Mix:		0 Social Rent/Interme	diate
		100% S106 allowance	
		rant Higher EUV sensit	
	19	% Gross Profit sensitiv	ity.
<del></del> +	BOUMOTEE	VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	<u> </u>		
2011 2012			
2012			
2013			
2014			
2015			
2017		<del>                                     </del>	
2018			
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2021			
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2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

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.

	Eppi	ing Forest IG10	
50		units per hectare density) - 0 fla	
	40% Aff	ordable Housi	ing
AH Mix:		0 Social Rent:Interme	
		100% S106 allowance	
		rant Lower EUV sensit	
	199	% Gross Profit sensitiv	rity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014 2015			
2015			
2010			
2017			
2019			
2020			
2021			
2022			
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2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EPXXXII

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.

	Eppir	ng Forest IG10	
50 uni	its on a 1.83 hectare site (27 t	ınits per hectare densit <b>y</b> ) - 0 fla	at(s) and 50 house(s).
	10% Aff	ordable Housi	ing
AH Mix:	60:40	) Social Rent/Interme	diate
		100% S106 allowance	
		ant Higher EUV sensit	
	199	6 Gross Profit sensitiv	/ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
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2014 2015			
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2019			
2020			
2021			
2022			
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2024			
2025			
2026			
-	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

- 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.

	Eppii	ng 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:		) Social Rent:Interme			
100% S106 allowance					
		rant Lower EUV sensit			
	199	% Gross Profit sensitiv	rity.		
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
2011					
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2015					
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2019					
2020					
2021					
2022					
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2024					
2025					
2026					
	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Figure EPXXXIV

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.

	Eppii	ng Forest IG10		
15 units on a 0.3 hectare site (50 units per hectare density) - 0 flat(s) and 15 house(s).				
AH Mix:	l Mix: 70:30 Social Rent/Intermediate			
	35% Aff	ordable Housi	ina	
		s S106 allowance		
	Nil Grant F	ligher EUV sensitivity		
	19% Gro	ss Profit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
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2013				
2014				
2015				
2016				
2017				
2018 2019				
2019				
2020				
2022				
2023				
2024				
2025				
2026				
=1	NOT VIABLE			
=1	MARGINALLY VIABLE			
=\	VIABLE			

Figure EPXXXV

	Eppi	ng Forest IG10	
50 uni	ts on a 1.1 hectare site (45 t	ınits per hectare density) - 0 fla	t(s) and 50 house(s).
	10% Aff	ordable Hous	ing
AH Mix:		0 Social Rent/Interme	
		100% S106 allowance	
		rant Higher EUV sensit	
	199	% Gross Profit sensitiv	vity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
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2017 2018			
2018			
2019			
2021			
2022			
2023			
2024			
2025			
2026			
	NOT VIABLE		
=1	MARGINALLY VIABLE		
=\	/IABLE		

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.

15 units on a 0.214 hectare site (70 units per hectare density) - 10 flat(s) and 5 house(s).			
AH Mix:	70:30	O Social Rent:Intermed	diate
	35% Aff	ordable Housi	na
		6 S106 allowance	9
	Nil Grant I	Lower EUV sensitivity.	
	19% Gro	oss 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 XXXVII

		oing Forest IG10	
50 units on a 0.714 hectare site (70 units per hectare density) - 24 flat(s) and 26 house(s).			
AH Mix:		30 Social Rent:Intermed	
	35% Af	fordable Housi	ing
		% S106 allowance	_
	Nil Grant	t Lower EUV sensitivity.	
	19% G	ross 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 EPXXXVIII

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.

	Eppi	ng Forest IG10	
15 (	units on a 0.214 hectare site (70	units per hectare density) - 10 f	lat(s) and 5 house(s).
	14% Aff	ordable Housi	ina
AH Mix:		100% Intermediate	
		100% S106 allowance	9
		rant Higher EUV sensit	
	199	% Gross Profit sensitiv	/ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017 2018			
2018			
2019			
2020			
2022			
2023			
2024			
2025			
2026			
	=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.

	Eppir	ng Forest IG10			
50 uni	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% Aff	ordable Housi	na		
		s S106 allowance			
	Nil Grant L	ower EUV sensitivity.			
	19% Gra	ss Profit sensitivity.			
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
2011					
2012					
2013					
2014					
2015					
2016					
2017 2018					
2018					
2019					
2020					
2021					
2023					
2024					
2025					
2026					
=	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.
- 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.

	Ерр	ing Forest IG10	
50 un	nits on a 0.5 hectare site (100	units per hectare density) - 40 fl	at(s) and 10 house(s).
	10% Af	fordable Housi	ing
AH Mix:	60:4	10 Social Rent/Interme	
		100% S106 allowance	
		ıl Grant Higher EUV sen	
	19	% Gross Profit sensitiv	ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011	<u> </u>		
2012			
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2016 2017			
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2021			
2022			
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2024			
2025			
2026			
	=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.



Figure EPXLII

	Eppi	ing Forest RM4	
50	units on a 1.83 hectare site (27	units per hectare density) - 0 fla	it(s) and 50 house(s).
	20% Aff	ordable Housi	ing
AH Mix:		0 Social Rent:Interme	diate
		100% \$106 allowance	
		rant Lower EUV sensit	
	199	% Gross Profit sensitiv	rity.
VE.15		VIABILITY	LIBOTRE
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012 2013			
2013			
2014			
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2023			
2024			
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2026			
	=NOT VIABLE		
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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.

	Eppi	ng 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:Intermed	liate		
35% Affordable Housing					
		6 S106 allowance	9		
	Nil Grant I	ower EUV sensitivity.			
	19% Gro	ss Profit sensitivity.			
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
2011					
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2021					
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2026					
	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Figure EPXLIV



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.

	Eppi	ng Forest RM4			
50 units	on a 0.714 hectare site (70 u	ınits per hectare density) - 24 fl	at(s) and 26 house(s).		
AH Mix:	Mix: 70:30 Social Rent:Intermediate				
	35% Aff	ordable Housi	ina		
		o S106 allowance	3		
	Nil Grant L	ower EUV sensitivity.	•		
	19% Gra	ss Profit sensitivity.			
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
2011					
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2016					
2017					
2018					
2019 2020					
2020					
2021					
2023					
2024					
2025					
2026					
=N	IOT VIABLE				
=N	MARGINALLY VIABLE				
=\	/IABLE				

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.

15 unit	s on a 0 214 bestare sits (70	units per hectare density) - 10 f	lat(s) and 5 house(s)
13 dille		rdable Housi	
AH Mix:	7-70 AIIO	100% Intermediate	iig .
AH MIX:		100% Intermediate 100% S106 allowance	•
		ant Higher EUV sensit	
		6 Gross Profit sensitiv	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
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2018			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
	NOT VIABLE		
	MARGINALLY VIABLE		
=	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.

50 :		ing Forest RM4 units per hectare density) - 40 fl	lat(s) and 10 house(s)
AH Mix:	•	O Social Rent:Interme	
AIII.			
		ordable Hous	ilig
		% S106 allowance Lower EUV sensitivity	
		oss Profit sensitivity.	•
	1940 GI	VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
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2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=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).

	Eppi	ng Forest CM16	
10 un	its on a 0.33333 hectare site (3	30 units per hectare densit <b>y</b> ) - 0	flat(s) and 10 house(s).
	30% Aff	ordable Hous	ing
AH Mix:		100% Social Rented	
		100% \$106 allowance	е
		rant Lower EUV sensi	
	199	% Gross Profit sensiti	vity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019 2020			
2020			
2021			
2022			
2023			
2025			
2026			
2020	=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.

	Epping Fo	orest CM16	
		able Housing	
AH Mix:	100% Shared Ownership 100% S106 allowance Normal Grant Higher EUV sensitivity. 19% Gross Profit sensitivity. VIABILLITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024			
2025 2026			
2026	=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.

	SCHEM	IE TYPE 3	
10 units on a 0.3333	3 hectare site (30 units p	per hectare density) - 0	flat(s) and 10 house(s).
	Epping For	est EN9 CM5	
AH Mix:	100% Shared Ownership		
	20% Afford	able Housing	
		06 allowance	
	Nil Grant Lowe	r EUV sensitivity.	
	19% Gross P	rofit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
201			
201			
201			
201 201			
201			
201			
201			
201			
201	9		
202	0		
202	1		
202	2		
202			
202			
202			
202	=NOT VIABLE		
	=NOT VIABLE =MARGINALLY VIABLE		
	=VIABLE		
	-410000		

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

	Epping Fo	rest CM17				
10% Affordable Housing						
AH Mix:	100% Shared Ownership					
		100% S106 allowan				
		ant Lower EUV sens				
	19%	o Gross Profit sensit	ivity.			
		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 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.

		ng Forest CM16	
AH Mix:	10 units on a 0.33333 hectare site (30 units per hectare density) - 0 flat(s) and 10 house(s H Mix: 100% Social Rented		
AIT MIX.	200/- Aff		n a
		ordable Housi	ng
		6 S106 allowance Lower EUV sensitivity.	
		oss Profit sensitivity.	
Т	13 /6 G/C	VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024 2025			
2025			
	=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.

Epping Forest IG7					
	10% Affordable Housing				
AH Mix:	100% Shared Ownership 100% S106 allowance Nil Grant Lower EUV sensitivity.				
		6 Gross Profit sensit			
		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 iable 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.

	Epping For	est CM16				
10% Affordable Housing						
AH Mix:	100% Shared Ownership 100% S106 allowance Nil Grant Lower EUY sensitivity. 19% Gross Profit sensitivity.					
		VIABILITY				
YEAR	DOWNSIDE	MIDDLE	UPSIDE			
2010						
2011						
2012						
2013						
2014						
2015						
2016						
2017 2018						
2018						
2019						
2020			_			
2022						
2023						
2024		<u> </u>				
2025						
2026						
	=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

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

- 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.
- 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.
- 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)
- 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 valuer<sup>33</sup> 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.

- 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.
- 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.
- Thus in respect of development occurring on Greenfield or industrial sites, VOA data on industrial land values in the district<sup>34</sup> 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).

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<sup>&</sup>lt;sup>33</sup> See letter date 9<sup>th</sup> February 2010 from Thornes (Appendix 8)

<sup>&</sup>lt;sup>34</sup> See Paragraph 3.21

- 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.
- 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.
- 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 assessment<sup>35</sup>. 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.
- 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

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<sup>&</sup>lt;sup>35</sup> See Thornes letter dated 9<sup>th</sup> 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.
- 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)**

- 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.
- 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.

	H	arlow 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% \$106 allowance Nil Grant Lower EUV sensitivity.										
								19% Gro	oss Profit sensitivity.	
								VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE							
2010										
2011										
2012										
2013										
2014										
2015										
2016										
2017										
2018 2019										
2019										
2020										
2022										
2023										
2024										
2025										
2026										
	=NOT VIABLE									
	=MARGINALLY VIABLE									
	=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% \$106 allowance Nil Grant Lower EUV sensitivity. 19% Gross Profit sensitivity.													
								VIABILITY					
							YEAR	DOWNSIDE	MIDDLE	UPSIDE			
							2010						
2011													
2012													
2013													
2014													
2015													
2016 2017													
2017													
2019													
2020													
2021													
2022													
2023													
2024													
2025													
2026													
	=NOT VIABLE												
	=MARGINALLY VIABLE												
	=VIABLE												

Figure HII

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.

		E TYPE 5	
50 units on a 1.67 h	ectare site (30 units pe		at(s) and 50 house(s).
		w CM17	
	20% Afford	able Housing	
AH Mix:		) social rent to interm	ediate
		100% S106 allowanc	e
		rant higher AUV sensi	
	199	% Gross profit sensiti∙	vity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020 2021			
2021			
2022			
2023			
2025			
2025			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure HIII

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.
- 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.

50	units on a 1 hectare site (50 ur	nits per hectare density) - 0 flat(	s) and 50 house(s).
		ordable Housi	
AH Mix:		0 Social Rent:Interme	
		100% S106 allowance	
		rant Lower EUV sensit	
	199	% Gross Profit sensitiv	rity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021 2022			
2023 2024			
2024			
2025			
2020	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure HIV

	Н	arlow CM17	
15 ur		ınits per hectare densit <b>y</b> ) - 0 fla	
	35% Aff	ordable Hous	ing
AH Mix:		0 Social Rent:Interme	
		100% \$106 allowance	•
		rant Lower EUV sensit	
	199	% Gross Profit sensitiv	/ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013 2014			
2014			
2015			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
=	=VIABLE		

Figure HV

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.

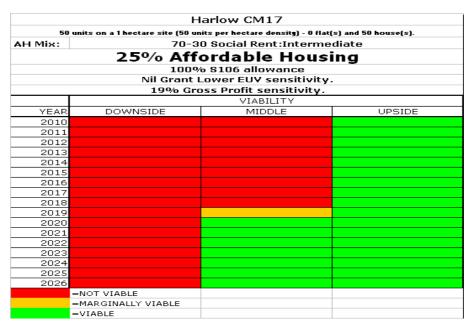


Figure HVI

	H	arlow CM17	
15 un		nits per hectare density) - 0 fla	
		ordable Housi	
AH Mix:			
		100% \$106 allowance	
		ant Lower EUV sensit	
	194	6 Gross Profit sensitiv	ity.
VEAR	DOWNSIDE	VIABILITY MIDDLE	UPSIDE
2010	DOMNSTDE	MIDDLE	OPSIDE
2010			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2022			
2023 2024			
2024			
2025			
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure HVII

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

## 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%.

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.

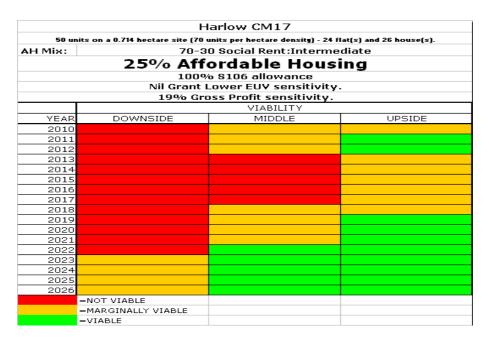


Figure HVIII

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.

	H	larlow CM17	
50 units	s on a 0.714 hectare site (70 c	units per hectare density) - 24 fl	at(s) and 26 house(s)
AH Mix:	70-3	0 Social Rent:Interme	diate
	25% Aff	ordable Housi	na
		6 S106 allowance	
	Nil Grant I	Lower EUV sensitivity.	
	19% Gra	oss Profit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2022	<u> </u>		
2023			
2024			
2025			
2026			
	NOT VIABLE		
	MARGINALLY VIABLE		
=	VIABLE		

Figure HIX



Figure HX

- 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.

## 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.

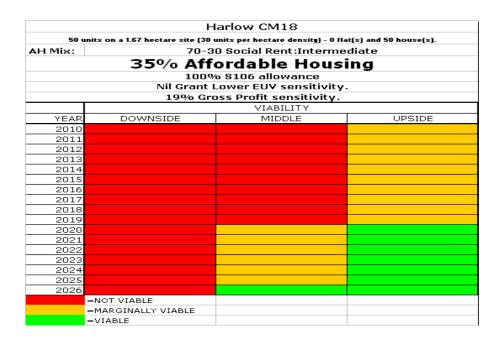


Figure HXI

SCHEME TYPE 2 (	50/50)	Harlo	w CM18
50 units on a 1.67 he	ectare site (30 units pe	r hectare density) - O 1	flat(s) and 50 house(s).
AH Mix:	70-30 Social Rent:Intermediate		
	35% Afford	able Housing	
		16 allowance	
		ver EUV sensitivity.	
	19% Gross Pi	rofit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017 2018			
2018			
2019			
2021			
2022			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

#### Figure HXII

- 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

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.

50 u	nits on a 1 hectare site (50 un	nits per hectare density) - 0 flat	(s) and 50 house(s).
	30% Aff	ordable Housi	ina
AH Mix:		0 Social Rent:Interme	
		100% S106 allowance	
		rant Lower EUV sensit	
	199	% Gross Profit sensitiv	vity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017 2018			
2018			
2019			
2020			
2021			
2023			
2023			
2025			
2026			
	NOT VIABLE		
	MARGINALLY VIABLE		
_	VIABLE		

Figure HXIII

	H	arlow CM18		
50 u	ınits on a 1 hectare site (50 ur	nits per hectare density) - 0 flat(	s) and 50 house(s).	
30% Affordable Housing				
AH Mix: 50-50 Social Rent:Intermediate				
100% S106 allowance				
		rant Lower EUV sensit		
	199	% Gross Profit sensitiv	rity.	
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
2013 2014				
2014				
2015				
2017				
2018				
2019				
2020				
2021				
2022				
2023				
2024				
2025				
2026				
	=NOT VIABLE			
	=MARGINALLY VIABLE			
-	=VIABLE			

Figure HXIV

- In the shorter term, 25% affordable housing is marginally viable against industrial/greenfield land values currently at the baseline position achieving a residual land value of circa £2million in middle market conditions.
- Against previously developed residential land values we have tested with baseline assumptions down to 25% affordable housing on the 50 unit scheme and whilst this is not currently viable (achieving a residual land value of circa £2 million per hectare in middle market conditions) it is likely to be achievable in upside market conditions and later in the Core Strategy periods in upside market conditions. This position is shown in Figure HXV.

	Н	arlow CM18				
50	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						
		6 S106 allowance	3			
	Nil Grant I	ower EUV sensitivity.				
	19% Gro	oss 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 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

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.

	Н	arlow CM18	
50 units		units per hectare density) - 24 (	
	10% Aff	ordable Hous	ing
AH Mix:		0 Social Rent:Interme	ediate
		100% \$106 allowance	
		rant Lower EUV sensit	
	199	% Gross Profit sensitiv	vity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017 2018			
2018			
2019			
2020			
2021			
2022			
2024			
2025			
2026			
	NOT VIABLE		
=1	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

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.
- 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.

	Ha	arlow CM19	
15 unit	ts on a 0.5 hectare site (30 un	nits per hectare density) - 0 flat	(s) and 15 house(s).
AH Mix:	70-30	Social Rent:Intermed	diate
	40% Aff	rdable Housi	na
		S106 allowance	9
		ower EUV sensitivity.	
		ss 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		
=\	/IABLE		

Figure HXVII

Figure HXXII



Figure HXVIII

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.

	H	arlow CM19			
15 units on a 0.5 hectare site (30 units per hectare density) - 0 flat(s) and 15 house(s).					
AH Mix:	AH Mix: 70-30 Social Rent:Intermediate				
	27% Aff	ordable Housi	ina		
		6 S106 allowance			
	Nil Grant I	ower EUV sensitivity.			
	19% Gro	oss Profit sensitivity.			
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
2011					
2012					
2013					
2014					
2015					
2016					
2017					
2018					
2019					
2020					
2021					
2022					
2023	<u></u>				
2024	<u> </u>				
2025	<u> </u>				
2026					
	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=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.
- 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.
- 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.

	H	larlow CM19	
50		nits per hectare density) - 0 flat(	
	35% Aff	ordable Housi	ing
AH Mix:		80 Social Rent:Interme	diate
		100% S106 allowance	
		rant Lower EUV sensit	
	19'	% Gross Profit sensitiv	rity.
VEAR	BOWNERS	VIABILITY	LIBOTOE
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010 2011			
2011			
2012			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2022			
2023 2024			
2024			
2025			
2020	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure HXX



Figure HXXI

## Density 70 dph

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

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 again 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

- 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.
- 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.

	Н	arlow CM20	
50 units on a 1.67 hectare site (30 units per hectare density) - 0 flat(s) and 50 house(s).			
AH Mix:	Mix: 70-30 Social Rent:Intermediate		
	35% Aff	ordable Housi	ng
		6 S106 allowance	
	Nil Grant L	ower EUV sensitivity.	
	19% Gro	oss Profit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015 2016			
2016			
2017			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure HXXII

	H	arlow CM20	
50 u		units per hectare density) - 0 fla	
	40% Aff	ordable Housi	ing
AH Mix:		0 Social Rent:Interme	
		100% S106 allowance	•
		rant Lower EUV sensit	
	199	% Gross Profit sensitiv	ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011 2012			
2012			
2013			
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure HXXIII

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.

50 .	mits on a 1 67 hectare site (30	units per hectare densit¶) - 0 fla	at(e) and 50 house(e)
00 (		ordable Hous	
AH Mix:	70-3	0 Social Rent:Interme	diate
		100% \$106 allowance	
		rant Lower EUV sensit	
	190	% Gross Profit sensitiv VIABILITY	/ity.
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	BOTTINGIBE	IIIBBEE	OFSIDE
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2022 2023			
2023			
2024			
2025			
2020	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure HXXIV

	H	larlow CM20		
50 units on a 1.67 hectare site (30 units per hectare density) - 0 flat(s) and 50 house(s).				
AH Mix:	Mix: 70-30 Social Rent:Intermediate			
	35% Aff	ordable Housi	na	
		6 S106 allowance	9	
	Nil Grant I	ower EUV sensitivity.		
	19% Gro	oss Profit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
2013				
2014				
2015				
2016				
2017 2018				
2018				
2020				
2021				
2022				
2023				
2024				
2025				
2026				
=1	NOT VIABLE			
	MARGINALLY VIABLE			
= 1	VIABLE			

Figure HXXV

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

# Density 50 dph

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.

## 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.

	H	larlow CM20		
50 units on a 1 hectare site (50 units per hectare density) - 0 flat(s) and 50 house(s).				
AH Mix:	AH Mix: 70-30 Social Rent:Intermediate			
	25% Aff	ordable Housi	na	
		6 S106 allowance		
		Lower EUV sensitivity.		
	19% Gro	oss Profit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
2013				
2014				
2015				
2016				
2017				
2018				
2019				
2020				
2021				
2022				
2023	<u> </u>			
2024	<u> </u>			
2025	<u> </u>			
2026				
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure HXXVII

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.



Figure HXXVIII



Figure HXXXIX

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

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.

	H	arlow CM20	
50	units on a 1 hectare site (50 u	nits per hectare density) - 0 flat	(s) and 50 house(s).
	35% Aff	ordable Housi	ing
AH Mix:		0 Social Rent:Interme	
		100% \$106 allowance	
		rant Lower EUV sensit	
	199	% Gross Profit sensitiv	vity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011 2012			
2012			
2013			
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
	=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

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 again 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

- 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.

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.



Figure HXXXI

	H	arlow CM17	
10 unit		units per hectare density) - 0 fla	
	10% Aff	ordable Housi	ing
AH Mix:		100% Intermediate	
		100% S106 allowance	
	Nil Gı	rant Lower EUV sensiti	ivity.
	199	% Gross Profit sensitiv	ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
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2019			
2020			
2021			
2022	·		
2023	<u> </u>		
2024			
2025			
2026			
	NOT VIABLE		
	MARGINALLY VIABLE		
=	VIABLE		

Figure HXXXII

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.

	H	larlow CM18			
10 u	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% Aff	ordable Housi	na		
		6 S106 allowance			
	Nil Grant I	ower EUV sensitivity.			
	19% Gra	oss Profit sensitivity.			
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
2011					
2012					
2013					
2014					
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2016					
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2023			<u></u>		
2024					
2025					
2026					
	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Figure HXXXIII

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.

		arlow CM19	
10 u		units per hectare density) - 0 fla	
	30% Aff	ordable Housi	ing
AH Mix:		100% Intermediate	
		100% S106 allowance	
		rant Lower EUV sensit	
	190	% Gross Profit sensitiv	rity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013 2014			
2014			
2015			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure HXXXIV

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.

10 units on a 0.33 hectare site (30 units per hectare density) - 0 flat(s) and 10 house(s).				
		ordable Hous		
AH Mix:		100% Social Rent		
		100% S106 allowance		
		rant Lower EUV sensit		
	199	6 Gross Profit sensitiv	/ity.	
YEAR	DOWNSIDE	VIABILITY MIDDLE	UPSIDE	
2010	DOWNSIDE	WIDDLE	OPSIDE	
2010				
2012				
2013				
2014				
2015				
2016				
2017				
2018				
2019		_		
2020 2021				
2021				
2022				
2023				
2025				
2026				
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=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.

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.

	Н	arlow CM20			
10 units on a 0.2 hectare site (50 units per hectare density) - 4 flat(s) and 6 house(s).					
AH Mix:	H Mix: 100% Intermediate				
10% Affordable Housing					
		6 S106 allowance			
	Nil Grant I	ower EUV sensitivity.	•		
	19% Gro	oss Profit sensitivity.			
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
2011					
2012					
2013					
2014					
2015					
2016					
2017					
2018					
2019					
2020					
2021	· · · · · · · · · · · · · · · · · · ·				
2022					
2023	<u> </u>				
2024					
2025					
2026					
	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 valuer<sup>36</sup> 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.

- 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 district<sup>37</sup> 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).

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<sup>&</sup>lt;sup>36</sup> See letter date 9<sup>th</sup> February 2010 from Thornes (Appendix 8)

<sup>&</sup>lt;sup>37</sup> 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.
- 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.
- 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 assessment<sup>38</sup>. 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

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<sup>&</sup>lt;sup>38</sup> See Thornes letter dated 9<sup>th</sup> 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.

Uttlesford - CB10					
	40% Affordable Housing				
AH Mix:		0 Social Rent:Intern			
		100% \$106 allowan	ice		
		rant Lower EUV sens			
	19	% Gross Profit sensi	tivity.		
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
201					
201					
201					
201			_		
201 201					
201					
201					
201					
201					
202					
202					
202	2				
202	3				
202	4				
202	5				
202	6				
	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Figure UI

	Utt	tlesford CB10				
50 un		units per hectare density) - 0 fl				
	40% Aff	ordable Hous	ing			
AH Mix: 70:30 Social Rent:Intermediate						
		100% \$106 allowance	•			
		rant Lower EUV sensit				
	199	% Gross Profit sensitiv	/ity.			
		VIABILITY				
YEAR	DOWNSIDE	MIDDLE	UPSIDE			
2010						
2011						
2012						
2013						
2014						
2015						
2016						
2017						
2018 2019						
2019						
2020						
2021						
2023						
2024						
2025						
2026						
	=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

	Uti	lesford CB10			
50 units on a 1 hectare site (50 units per hectare density) - 0 flat(s) and 50 house(s). 45% Affordable Housing					
		rant Lower EUV sensit			
	199	% Gross Profit sensitiv	/ity.		
		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 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.

	Ut	tlesford CB10		
50	0 units on a 1 hectare site (50 u	ınits per hectare density) - 0 flat(	s) and 50 house(s).	
	10% Aff	fordable Housi	ng	
AH Mix: 70:30 Social Rent/Intermediate				
		100% S106 allowance	•	
		l Grant Higher EUV sen		
	19	% Gross Profit sensitiv	rity.	
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
2013				
2014				
2015				
2016				
2017				
2018				
2019				
2020				
2021				
2022				
2023				
2024 2025				
2025				
2020	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=MARGINALLY VIABLE =VIABLE			
	- *18000			

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.

	Ut	tlesford CB10		
50 units on a 0.746 hectare site (67 units per hectare density) - 24 flat(s) and 26 house(s).				
AH Mix:	70:3	O Social Rent/Interme	diate	
35% Affordable Housing				
		% S106 allowance		
	Nil Grant	Lower EUV sensitivity.		
	19% Gr	oss Profit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
	2013 2014 2015			
2015				
2016				
2017				
2019				
2020				
2021				
2022				
2023				
2024	2024			
2025				
2026				
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=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.

50 un	its on a 0.746 hectare site (67	units per hectare density) - 24 f	latís) and 26 house(s).
		ordable Housi	
AH Mix:		0 Social Rent/Interme	
		100% \$106 allowance	•
	Norma	l Grant Higher EUV sen	sitivity.
	199	% Gross Profit sensitiv	rity.
		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 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.

	SCHEM	IE TYPE 3		
50 units on a 0.746	hectare site (67 units pe	r hectare density) - 24 i	flat(s) and 26 house(s).	
Uttlesford CB10				
AH Mix:	30:7	0 Social rent:Interme	diate	
	35% Afford	able Housing		
		16 allowance		
		r EUV sensitivity.		
		rofit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
201				
201				
201				
201				
201				
201				
201 201				
201				
201				
202				
202				
202				
202	3			
202	4			
202	5			
202	5			
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=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.

50 un	50 units on a 1.666 hectare site (30 units per hectare density) - 0 flat(s) and 50 house(s).				
AH Mix:					
35% Affordable Housing					
	19% Gro	oss Profit sensitivity.			
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
2011					
	2012				
2013					
2014					
2015					
2016					
2017					
2018 2019					
2019					
2020					
2022					
2023					
2024					
2025					
2026					
	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Figure UVIII



Figure UIX

	Ut	tlesford CB11		
50 units on a 0.746 hectare site (67 units per hectare density) - 24 flat(s) and 26 house(s).				
AH Mix:		0 Social Rent/Intermed		
	35% Aff	ordable Housii	1a	
		% S106 allowance		
	Nil Grant	Lower EUV sensitivity.		
	19% Gr	oss Profit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
2013	2013			
2014				
2015				
2016				
2017				
2018				
2019				
2020				
2021				
2022				
2023				
2024				
2025				
2026				
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure UX

# 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 UXI.

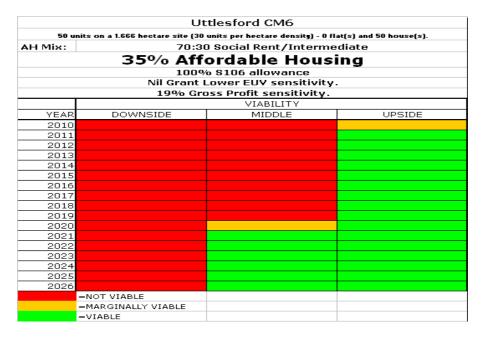


Figure UXI

- 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	• • •		Uttlesford CM6	
60 units on a 1.666 hectare site (30 units per hectare density) - 0 flat(s) and 50 house(				
AH Mix:		O Social Rent/Interme	ediate	
	35% Afford	able Housing		
		06 allowance		
		wer EUV sensitivity.		
	19% Gross P	rofit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
2013				
2014				
2015				
2016 2017				
2017				
2010				
2020				
2021				
2022				
2023				
2024				
2025				
2026				
	=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.

	Uti	tlesford CM6		
50 units on a 1 hectare site (50 units per hectare density) - 0 flat(s) and 50 house(s).				
AH Mix:	AH Mix: 70:30 Social Rent/Intermediate			
	35% Aff	ordable Housi	na	
		S106 allowance	9	
	Nil Grant L	ower EUV sensitivity.		
	19% Gro	ss Profit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
2013				
2014				
2015				
2016				
2017				
2018				
2019				
2020				
2021		_		
2022				
2023				
2024				
2026				
	IOT VIABLE			
	MARGINALLY VIABLE			
	IABLE			

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.



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.

	Ut	tlesford CM6		
50 units	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/Interme	diate	
	35% Aff	ordable Housi	na	
		6 S106 allowance	9	
		ower EUV sensitivity.		
	19% Gro	ss Profit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
2013				
2014				
2015				
2016 2017				
2017				
2018				
2020				
2021				
2022				
2023				
2024				
2025				
2026				
	NOT VIABLE			
	MARGINALLY VIABLE			
=\	/IABLE			

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.

	SCHEM	IE TYPE 3	
50 units on a 0.746 h	nectare site (67 units pe	r hectare density) - 24	flat(s) and 26 house(s).
	Uttles	ford CM6	
AH Mix:	HMix: 30:70 Social rent:Intermediate		
	35% Afford	able Housing	
		16 allowance	
	Nil Grant Lowe	r EUV sensitivity.	
	19% Gross P	rofit 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 UXVI

Value Area: CM22

## Density 30 dph

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.

	Uti	tlesford 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/Interme	diate
	35% Aff	ordable Housi	na
		6 S106 allowance	
	Nil Grant I	ower EUV sensitivity.	
	19% Gro	oss Profit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017 2018			
2018			
2019			
2021			
2022			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure UXVII

		lesford CM22	
50 un		units per hectare density) - 0 fla	
	40% Aff	ordable Housi	ng
AH Mix:		D Social Rent/Interme	
		100% \$106 allowance	
		rant Lower EUV sensit	
	199	6 Gross Profit sensitiv	ity.
	DOMINOTOR	VIABILITY	LIBOTOE
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013 2014			
2014			
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2022			
2023			
2024			
2025			
2026			
-	=NOT VIABLE		
	=MARGINALLY VIABLE		
-	=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).

	SCHEM	IE TYPE 3	
50 units on a 1.666 l	nectare site (30 units p	er hectare density) - O f	flat(s) and 50 house(s).
	Uttlesf	ord CM22	
AH Mix:	30:7	0 Social rent:Interme	diate
	35% Afford	able Housing	
		06 allowance	
	Nil Grant Lowe	r EUV sensitivity.	
	19% Gross P	rofit sensitivity.	
		VIABILITY	_
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016 2017			
2017			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=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.
- 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.

	Uttle	esford - CM22			
15 units on a 0.223 hectare site (67 units per hectare density) - 9 flat(s) and 6 house(s).					
AH Mix:	AH Mix: 70:30 Social Rent/Intermediate				
	35% Aff	ordable Housi	ina		
		6 S106 allowance			
	Nil Grant L	ower EUV sensitivity.	•		
	19% Gro	ss Profit sensitivity.			
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
2011					
2012					
2013					
2014					
2015					
2016					
2017					
2018					
2019 2020					
2020					
2022					
2023					
2024					
2025					
2026					
=	NOT VIABLE				
=	MARGINALLY VIABLE				
=	=VIABLE				

Figure UXX

	_	ttlesford CM22	
50 units on a 0.746 hectare site (67 units per hectare density) - 24 flat(s) and 26 house(s).			
AH Mix:		30 Social Rent/Interme	
	35% Aft	fordable Housi	ng
		% S106 allowance	
	Nil Grant	Lower EUV sensitivity.	
	19% G	ross Profit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016 2017			
2017			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=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 p	er hectare density) - 9	flat(s) and 6 house(s).
AH Mix:	70:3	O Social Rent/Interm	ediate
	35% Afford	able Housing	
		6 allowance	
	Normal Grant Lov	ver EUV sensitivity.	
	19% Gross Pi	rofit 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		
	=NOT VIABLE =MARGINALLY VIABLE		
	=MARGINALLY VIABLE =VIABLE		
	- ATWOLL		

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.

	U	ttlesford CM23	
50 units	on a 1.666 hectare site (3	30 units per hectare density) - 0 fla	t(s) and 50 house(s).
AH Mix:	70:	30 Social Rent/Intermed	diate
	35% Af	fordable Housi	na
		% S106 allowance	
	Nil Grant	Lower EUV sensitivity.	
	19% G	ross Profit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020	<u> </u>		
2021			
2022			
2023			
2025			
2026			
	NOT VIABLE		
1=	MARGINALLY VIABLE		
=\	/IABLE		

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.
- 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)	Uttlesfo	rd CM23	
50 units on a 1.666 hectare site (30 units per hectare density) - 0 flat(s) and 50 house				
AH Mix:	H Mix: 70:30 Social Rent/Intermediate			
	35% Afforda	able Housing		
		6 allowance		
	Normal Grant Low	er EUV sensitivity.		
	19% Gross Pr	ofit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
2013				
2014				
2015 2016				
2016				
2017				
2019				
2020				
2021				
2022				
2023				
2024				
2025				
2026				
	=NOT VIABLE			
	=MARGINALLY VIABLE =VIABLE			
	= ATMOFE			

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

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.

	Ut	tlesford CM23			
50 units on a 1 hectare site (50 units per hectare density) - 0 flat(s) and 50 house(s).					
AH Mix:	AH Mix: 70:30 Social Rent/Intermediate				
	35% Aff	ordable Housi	na		
		6 S106 allowance			
	Nil Grant I	Lower EUV sensitivity.			
	19% Gr	oss Profit sensitivity.			
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
2011					
2012					
2013					
2014 2015					
2015					
2017					
2018					
2019					
2020					
2021					
2022					
2023					
2024					
2025					
2026	=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

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.

	Uttle	esford - CM23	
15 uni	its on a 0.223 hectare site (67	units per hectare density) - 9 f	at(s) and 6 house(s).
AH Mix:	70:30	) Social Rent/Interme	diate
	35% Aff	ordable Housi	ina
		6 S106 allowance	
	Nil Grant L	ower EUV sensitivity.	•
	19% Gro	ss Profit sensitivity.	
		VIABILITY	-
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026	NOTURABLE		
	NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure UXXVI

F0:		:lesford CM23 units per hectare density) - 24 fl	
AH Mix:	•	) Social Rent/Interme	
HITTIMA.		ordable Housi	
		6 S106 allowance	119
		_ower EUV sensitivity.	
		ss Profit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020 2021			
2021			
2022			
2023			
2025			
2025			
	=NOT VIABLE		
=	=MARGINALLY VIABLE		
=	=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)	Uttlesfo	rd CM23
50 units on a 0.746	hectare site (67 units pe	r hectare density) - 24 f	lat(s) and 26 house(s).
AH Mix:	70:30 Social Rent/Intermediate		
	35% Afford	able Housing	
		06 allowance	
	Normal Grant Los	ver EUV sensitivity.	
	19% Gross P	rofit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
201			
201			
201			
201			
201			
201			
201			
201			
201			
201			
202			
202			
202			
202 202			
202			
202			
202	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=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.

	Uttlesfo	ord CB11	
H Mix: 100% Intermediate			
	30% Afforda	able Housing	
		6 allowance	
	Nil Grant Lower	EUV sensitivity.	
	19% Gross Pr	ofit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016 2017			
2017			
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

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).

	Uttlesfo	rd CB10	
AH Mix:	100% Intermediate		
	30% Afforda	able Housing	
		6 allowance	
	Nil Grant Lower	EUV sensitivity.	
	19% Gross Pr	ofit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
	010		
	011		
	012		
	013		
	014		
	015		
	016		
	017		
	018 019		
	020		
	021		
	022		
	023		
	024		
	025		
2	026		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure UXXX

	Uttlesfo	ord CB10	
	30% Afford	able Housing	I
AH Mix:		e ce	
		rant Lower EUV sens	
	259	<u>∕o Gross Profit sensit</u> VIABILITY	ivity.
YEAR	DOWNSIDE	MIDDLE	UPSIDE
		IMITODEE	OPSIDE
2010 2011			
2011			
2012			
2013			
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=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.

	Utt	lesford CB10	
10 uni		ınits per hectare densit <b>y</b> ) - 4 fla	
	10% Aff	ordable Housi	ng
AH Mix:			
		100% S106 allowance	
		ant Higher EUV sensit	
	199	6 Gross Profit sensitiv	ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020 2021			
2022 2023			
2023			
2024			
2025			
	NOT VIABLE		
	MARGINALLY VIABLE		
	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

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.
- 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.
- 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 valuer<sup>39</sup> 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.
- 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.
- 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.

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 $<sup>^{\</sup>rm 39}$  See letter date  $9^{\rm th}$  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 district<sup>40</sup> 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.
- 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.
- 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 assessment <sup>41</sup>. 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

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<sup>&</sup>lt;sup>40</sup> See Paragraph 3.21

 $<sup>^{\</sup>rm 41}$  See Thornes letter dated 9 $^{\rm th}$  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.
- 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)**

- 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.
- More detailed sensitivity testing regarding East Hertfordshire is contained in the Appendices.

Value Area: CM23

### Density 30 dph

- 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	t Herts CM23	
15 unit	s on a 0.5 hectare site (30 u	nits per hectare density) - 0 fla	t(s) and 15 house(s).
AH Mix:	75:25	Social Rent:Interme	diate
	35% Aff	ordable Hous	ina
		\$106 allowance	9
	Nil Grant L	ower EUV sensitivity	
	19% Gro	ss Profit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2022		·	
2023			
2024			
2025			
2026	OT VIABLE		
	MARGINALLY VIABLE		
	/IABLE		
= 1	IMULL		

Figure EHI

	Eas	t Herts CM23	
50 unit	s on a 1.666 hectare site (30 t	units per hectare density) - 0 fla	at(s) and 50 house(s).
AH Mix:	75:25	Social Rent:Intermed	diate
	35% Aff	ordable Housi	na
		S106 allowance	
	Nil Grant L	ower EUV sensitivity.	
	19% Gro	ss Profit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016 2017			
2017			
2018			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
=	NOT VIABLE		
	MARGINALLY VIABLE		
=	VIABLE		

Figure EHII

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.

	SCHEM	IE TYPE 3	
50 units on a 1.666 h	ectare site (30 units p	er hectare density) - 0 f	flat(s) and 50 house(s).
	Fast He	erts CM23	
		able Housing	
AH Mix:		O Social Rent:Interme	
AH MIX:	50:5	0 Social Rent:Interme	
	Norma	l Grant Lower EUV sei	
		% Gross Profit sensiti	
		VIABILITY	····y·
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EHIII

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.
- 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.

	Eas	t Herts CM23		
50 un	its on a 1 hectare site (50 un	its per hectare density) - 0 flat(	s) and 50 house(s).	
AH Mix: 75:25 Social Rent:Intermediate				
	35% Aff	ordable Housi	ina	
		s S106 allowance	3	
	Nil Grant L	ower EUV sensitivity.	•	
	19% Gra	ss 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			
=\	/IABLE			

Figure EHIV

15 unit	ts on a 0.3 hectare site (50 un	its per hectare density) - 0 fla	t(s) and 15 house(s).
AH Mix:	75:25	Social Rent:Interme	diate
	35% Affo	rdable Housi	ina
		S106 allowance	9
		ower EUV sensitivity	
		s 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		
=1	MARGINALLY VIABLE		
=1	VIABLE		

Figure EHV

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

Value Area: CM23

# Density 70 dph

10.30 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 EHVI 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.

50 unit	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:Interme	diate	
35% Affordable Housing				
	19% Gra	ss 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 EHVI

10.31 Figure EHVII shows the position of 10% 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.

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.



Figure EHVII

50 units on a 1 666 b		E TYPE 5	flat(s) and 50 house(s).		
30 units on a 1.000 i		rts CM23	mac(s) and 30 mouse(s).		
20% Affordable Housing					
AH Mix:		Social Rent to Intern	nediate		
		100% \$106 allowand			
	N	lormal Grant sensitivi	ity.		
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
2011					
2012					
2013					
2014					
2015					
2016 2017					
2017					
2018					
2019					
2021					
2022					
2023					
2024					
2025					
2026					
	=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

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

- 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.



Figure EHIX

	Ea	st 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					
	19% Gro	ss Profit sensitivity.			
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
2011					
2012					
2013					
2014					
2015					
2016					
2017					
2018					
2019					
2020					
2021					
2022 2023					
2023					
2024					
2025					
	NOT VIABLE				
	MARGINALLY VIABLE				
	VIABLE				

Figure EHX

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 TY	PE 2 (50/50)	
	East H	erts SG9	
50 units on a 1.666 h	nectare site (30 units pe	er hectare density) - O fl	at(s) and 50 house(s).
	20% Afford	able Housing	
AH Mix:	50:50	O Social Rent:Interme	
		100% S106 allowance	
		rant Lower EUV sensit	
	190	% Gross Profit sensitiv	/ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012 2013			
2013			
2017			
2016			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=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.
- 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.



Figure EHXII

		st Herts SG9			
AH Mix:	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				
AH MIX:					
	35% Affordable Housing				
		% S106 allowance			
		Lower EUV sensitivity			
	19% Gr	oss Profit sensitivity.			
		VIABILITY			
YEAR		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 EHXIII

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.

		st Herts SG9	
50 units on a 0.714 hectare site (70 units per hectare density) - 24 flat(s) and 26 house(s).			
AH Mix:		5 Social Rent:Intermed	
	35% Aff	ordable Housi	ng
	100%	6 S106 allowance	
		_ower EUV sensitivity.	
	19% Gro	oss Profit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014 2015			
2015			
2017			
2017			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
	=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.



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 pe	r hectare density) - 24	flat(s) and 26 house(s).
AH Mix:	75:2	5 Social Rent:Interme	ediate
	35% Afford	able Housing	
		6 allowance	
	Normal Grant Lov	ver EUV sensitivity.	
	19% Gross Pi	ofit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
201			
201:			
2013			
201			
201			
2016			
201			
2018			
2019			
2020			
202: 202:			
202.			+
202.			+
202			
202.			
202.	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=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

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).			
50 ur AH Mix:		units per hectare density) - 0 fla 5 Social Rent:Intermed		
AH MIX:				
		ordable Housi	ng	
	100%	s S106 allowance		
		.ower EUV sensitivity.		
	19% Gra	ss Profit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011	·			
2012				
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2018				
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2020 2021				
2021				
2022				
2023				
2025				
2026				
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=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).

	Eas	st Herts SG11	
50 unit		units per hectare density) - 0 f	
	40% Aff	ordable Hous	ing
AH Mix:		5 Social Rent:Interme	
		100% \$106 allowance	9
		rant Lower EUV sensit	
	199	% Gross Profit sensiti	vity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2023			
2023			
2025			
2026			
	NOT VIABLE		
	MARGINALLY VIABLE		
	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

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.



Figure EHXIX

		st Herts SG11			
50 units on a 1 hectare site (50 units per hectare density) - 0 flat(s) and 50 house(s).					
AH Mix:		5 Social Rent/Interme			
35% Affordable Housing					
		s S106 allowance			
	Nil Grant F	ligher EUV sensitivity	•		
	19% Gro	ss Profit sensitivity.			
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
2011					
2012					
2013					
2014					
2015					
2016					
2017					
2018					
2019					
2020 2021					
2021					
2022					
2023					
2025					
2026					
	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 hec	tare site (50 units per ho	ectare density) - O flat	(s) and 50 house(s).
	East Her	ts SG11	
	40% Afforda	ble Housina	
AH Mix:		Social Rent:Interme	diate
	1	00% S106 allowance	9
	Nil Gra	ant Lower EUV sensit	ivity.
	19%	Gross Profit sensitiv	vity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019 2020	· · · · · · · · · · · · · · · · · · ·	<u> </u>	
2020			
2021			
2022			
2023			
2025			
2026			
2020	=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.

	SCHEM	E TYPE 5	
50 units on a 1 her	ctare site (50 units per l		(s) and 50 house(s).
00 01110 011 0 2 110		rts SG11	(5) and 00 house(5).
AH Mix:			
	35% Afford	able Housing	
		6 allowance	
		her EUV sensitivity.	
		ofit sensitivity.	
<u> </u>		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013 2014			
2014			
2016			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024 2025			
2025			
2020	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=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.

	Ea	st 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								
	19% Gr	oss 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 EHXXIII

		E TYPE 5				
50 units on a 0.714 h	ectare site (70 units per	hectare density) - 24 f	flat(s) and 26 house(s).			
	East He	rts SG11				
	20% Afforda	able Housing				
AH Mix:	75:25 Social Rent:Intermediate 100% S106 allowance					
	Nil Grant Lower EUV sensitivity.  19% Gross Profit sensitivity.  VIABILITY					
YEAR	DOWNSIDE	MIDDLE	UPSIDE			
2010						
2011 2012						
2012						
2013						
2017						
2016						
2017						
2018						
2019						
2020						
2021						
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2024						
2025						
2026						
	=NOT VIABLE =MARGINALLY VIABLE					
	=MARGINALLY VIABLE =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.

		erts SG11					
AH Mix:	10% Affordable Housing  H Mix: 25:75 Social Rent:Intermediate						
нп ніх.	100% S106 allowance						
	Normal Grant Higher EUV sensitivity.  19% Gross Profit sensitivity.  VIABILITY						
YEAR	DOWNSIDE	MIDDLE	UPSIDE				
2010							
2011							
2012							
2013							
2014							
2015							
2016 2017							
2017							
2018							
2020							
2021							
2022							
2023							
2024							
2025							
2026							
	=NOT VIABLE						
	=MARGINALLY VIABLE						
	=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

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.

		Herts SG13/14	
		nits per hectare density) - 0 fla	
AH Mix:		Social Rent:Intermed	
	35% Affo	ordable Housi	ng
		S106 allowance	
	Nil Grant L	ower EUV sensitivity.	
	19% Gro	ss Profit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016	<u> </u>		
2017			
2018			
2019			
2020 2021			
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2022			
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2025			
2025			
	NOT VIABLE		
	MARGINALLY VIABLE		
=1	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).

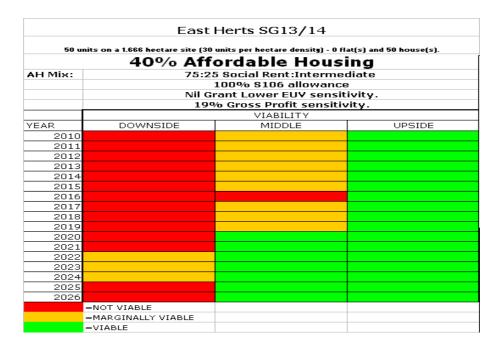


Figure EHXXVII

- 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

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.

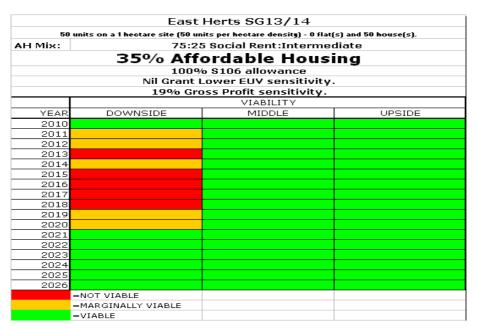


Figure EHXXVIII

50	) units on a 1 hectare site (50 ur	nits per hectare density) - 0 flat(	s) and 50 house(s).
AH Mix:	75:2:	5 Social Rent/Interme	diate
	35% Aff	ordable Housi	na
		6 S106 allowance	
	Nil Grant F	ligher EUV sensitivity	
	19% Gro	oss Profit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
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2020			
2021			
2022			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=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.

	Lastii	erts SG13 SG14	
150	units on a 3 hectare site (50 un		
	45% Aff	ordable Housi	ing
AH Mix:	75:25	5 Social Rent:Intermed	diate
		100% S106 allowance	
		ant Lower EUV sensit	
	199	6 Gross Profit sensitiv	rity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015 2016			
2016			
2017			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EHXXX

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.

	CCUEM	E TYPE 4			
50			(-)d 50 b(-)		
50 units on a 1 nec		hectare density) - 0 flat - 6010 /1 4	(s) and 50 nouse(s).		
East Herts SG13/14					
AH MIX:	H Mix: 25:75 Social rent:Intermediate				
		able Housing			
		16 allowance			
		r EUV sensitivity.			
	19% Gross Pi	ofit sensitivity.			
YEAR	DOWNSIDE	VIABILITY MIDDLE	UPSIDE		
YEAK 2010		MIDDLE	OPSIDE		
2010					
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2022					
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2024					
2025					
2026					
	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=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.

		Herts SG13.14	
	ts on a 0.714 hectare site (70 ur	•	
AH Mix:		Social Rent:Intermed	
	35% Aff	ordable Housi	ng
		S106 allowance	
		ower EUV sensitivity.	
	19% Gro	ss Profit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
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2014 2015			
2015			
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2018			
2019			
2020			
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2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
-	=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 f	lat(s) and 26 house(s).	
AH Mix:	75:25 Social Rent/Intermediate			
	35% Aff	ordable Housi	ina	
		6 S106 allowance		
		ligher EUV sensitivity	_	
		oss Profit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
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2026				
=1	OT VIABLE			
=N	MARGINALLY VIABLE			
=\	/IABLE			

Figure EHXXXIII

- 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.

	SCHEM	E TYPE 5	
50 units on a 0.714	hectare site (70 units per		lat(s) and 26 house(s).
	East Hert	ts SG13.14	
	40% Afford	able Housing	
AH Mix:		5 Social Rent:Interme	diate
		100% S106 allowance	9
	Nil Gi	rant Lower EUV sensit	ivity.
	199	% Gross Profit sensitiv	vity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
201			
201			
201			
201			
201			
201			
201			
201			
201			
201			
202			
202 202			
202			
202			
202			
202			
202	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EHXXXIV

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 incurrent conditions but viable at some point in the Core Strategy period should conditions be sufficiently favourable.

	SCHEM	IE TYPE 5		
50 units on a 0.714 h	ectare site (70 units pe	r hectare density) - 24 f	lat(s) and 26 house(s).	
	East Her	ts SG13.14		
AH Mix:	25:75 Social Rent:Intermediate			
	35% Afford	able Housing		
		6 allowance		
		her EUV sensitivity.		
		rofit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
2013				
2014				
2015				
2016 2017				
2017				
2010				
2020				
2021				
2022				
2023				
2024				
2025				
2026				
	=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

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 uni	ts on a 0.333333 hectare site (3	0 units per hectare density) -	0 flat(s) and 10 house(s).
	20% Aff	ordable Hous	ing
AH Mix:	10	00% Shared Ownersh	nip
		CIL	_
		ant Lower EUV sensi	
	19%	o Gross Profit sensiti	vity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016 2017			
2017			
2018			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
	=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 F	lerts SG13 SG14	
10	units on a 0.2 hectare site (50		
	10% Aff	ordable Housi	ing
AH Mix:	1	00% Shared Ownersh	ip
	50	0% S.106 Requiremen	its
		ant Higher EUV sensit	
	199	% Gross Profit sensitiv	/ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015 2016			
2016			
2017			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=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.
- 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.
- 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

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

- 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 mid when viewing the descriptions associated with each Figure in relation to density. The overall scheme mix has been is set out in Appendix 4.
- 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.

	Harlo	w 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% Afford	lable Housing	1	
		ture \$106 allowance		
	Normal Gra	int sensitivity.		
		rofit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
201	0			
201				
201				
201				
201				
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201			_	
202			_	
202				
202 202				
202				
202				
202				
202	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure SSI

1500 units on	a 75 hectare site (20 units per	hectare density) - 338 flat(s) and	d 1162 house(s).
	Harlo	w CM17	
	10% Afford	able Housing	
AH Mix:		o Social Rent:Intermed	diate
	2000	00 Infrastructure Allow	ance
		ormal Grant sensitivity	
	199	% Gross profit sensitiv	ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017 2018			
2018			
2019			
2020			
2022			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=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.

inu voci	s on a 75 hectare site (20 units per Harlov	w CM18	anu noz nodse(s).
		able Housing	1
AH Mix:		Social Rent to Interi	
	£	20000 S106 allowar	ice
	н	ligher Grant sensitiv	ity.
	199	√ Gross Profit sensit	ivity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
	010		
	011		
	012		
	013		
	014		
	015		
	016		
	017 018		
	018 019		
	020		
	020		
	022		
	023		
	024		
	025		
2	026		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=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.
- 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.

	Harle	ow 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% Afford	lable Housing	1	
		ture S106 allowance		
	Normal Gr	ant sensitivity.		
	19% Gross I	Profit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
20				
20				
20				
20				
20				
20				
20				
20				
20				
20				
20:				
20:				
20:				
20.				
20:				
20:				
20	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure SS4

1500 units	on a 75 hectare site (20 units per	hectare density) - 338 flat(s) and	1162 house(s).
	Harlo	w CM19	
	10% Afford	able Housing	
AH Mix:		30 Social rent:Intermed	iate
	20,000 p	er unit Infrastrucutre A	llowance
		Jormal Grant sensitivity	
	19	% Gross profit sensitivi	ty.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
20			
20			
20			
20			
20			
20			
20			
20 20			
20			
20			
20			
20			
20			
20			
20			
20			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=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 Ad	ditional Value Area	1
1500 units	s on a 75 hectare site (20 units	s per hectare density) - 338 fla	t(s) and 1162 house(s).
AH Mix:	70:30 Social Rent:Intermediate		
	30% Affo	rdable Housi	na
		structure allowance	
	Nil Gra	ant sensitivity.	
	19% Gros	s Profit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
	NOT VIABLE		
	MARGINALLY VIABLE		
=\	/IABLE		

Figure SS6



Figure SS7

	Harlow Ac	lditional Value Are	ea
1500 u	nits on a 75 hectare site (20 uni	ts per hectare density) - 338 fl	at(s) and 1162 house(s).
	35% Aff	ordable Housi	ina
AH Mix:		Social Rent:Interme	
	2500	Infrastructure Allow	rance
		Nil Grant sensitivity.	
	19%	6 Gross Profit sensitiv	vity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011		<u> </u>	
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2022		<u></u>	
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=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 mid 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.
- 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.

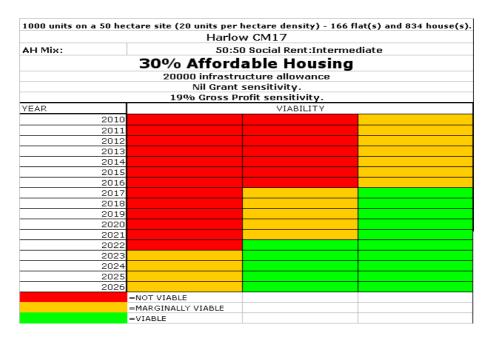


Figure SS9

	Harlo	w CM17	
AH Mix: 50:50 Social Rent:Intermediate			
	30% Afford	able Housing	
		ucture allowance	
	Nil Grant	sensitivity.	
	19% Gross P	rofit sensitivity.	
YEAR		VIABILITY	
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017 2018			
2018			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure SS10



Figure SS11

	Harlo	w CM17	
	10% Afford	able Housing	1
AH Mix:		0 Social Rent:Interm	
		#VALUE!	
		lormalGrant sensitivi	
	199	% Gross profit sensit	ivity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
201:			
2012			_
2013 2014			
2019			
2016			
2017			
2018			
2019			
2020			
202:	L		
2022	2		
2023			
2024			
2029			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure SS12

Value Area: CM18

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.

	Harlo	w CM18		
	10% Afford	able Housing	I	
AH Mix:	50:5	0 Social Rent:Interm	ediate	
	20,000 per unit \$106 allowance Normal Grant sensitivity.			
	190	% Gross Profit sensit	ivity.	
		VIABILITY	1	
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012 2013				
2013				
2014				
2016				
2017				
2018				
2019				
2020				
2021				
2022				
2023				
2024				
2025				
2026				
	=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.
- 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.



Figure SS14

	Harlow Ad	ditional Value Ar	ea
1000 u	inits on a 50 hectare site (20 uni		
	30% Affo	rdable Hous	ing
AH Mix:		Social Rent:Interme	
	30000	) infrastructure allov	wance
		Nil Grant sensitivity.	
	19%	Gross Profit sensiti	vity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021 2022			
2022	<u> </u>		
2024 2025			
2025			
2026	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=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.
- 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.
- 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.
- 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

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.

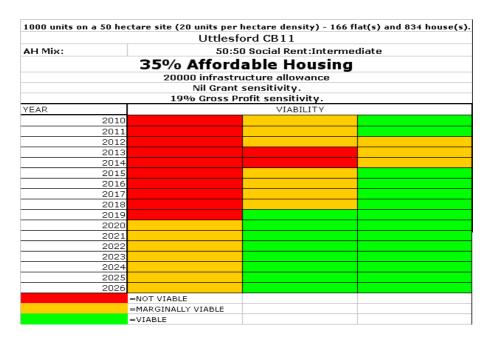


Figure SS16

	Ut	tlesford CB11	
1000	units on a 50 hectare site (20 u	nits per hectare density) - 166 f	lat(s) and 834 house(s).
AH Mix:	70:3	0 Social Rent:Interme	diate
	35% Aff	ordable Hous	ina
		rastructure allowance	
	Nil C	Grant sensitivity.	
	19% Gr	oss 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		
	= ATWOFE		

Figure SS17

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.

1000 ui	nits on a 50 hectare site (20 ur	nits per hectare density) - 166 fl	lat(s) and 834 house(s).
	35% Aff	ordable Hous	ing
AH Mix:	70:30	) Social Rent:Interme	diate
	2500	0 infrastructure allow	vance
		Nil Grant sensitivity.	
	199	6 Gross Profit sensiti	vity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	<u> </u>		
2011			
2012 2013			
2013			
2014			
2015			
2017			
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2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure SS18

1000 units on a 50 hectare site (20 units per hectare density) - 166 flat(s) and 834 house(s).			
AH Mix:		O Social Rent:Intermed	
	3500	00 infrastructure allow	ance
	100	Nil Grant sensitivity.	
	190	<b>% Gross Profit sensitiv</b> VIABILITY	πy.
YEAR	DOWNSIDE	MIDDLE I	UPSIDE
2010	DOWNSIDE	IVIIDDEE	OFDIDE
2010			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2022			
2023	<u> </u>		
2024			
2025			
2026			
	NOT VIABLE		
	MARGINALLY VIABLE		
=1	/IABLE		

Figure SS19

## 50 dph

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.



Figure SS20

	Uttl	esford CB11	
1000 un	nits on a 50 hectare site (20 uni		
20% Affordable Housing			
AH Mix:	70:30	) Socialrent:Interme	diate
		r unit Infrastructure	
		Nil Grant sensitivity.	
	19%	Gross profit sensiti	vity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019 2020			
2020			
2021			
2022			
2023			
2025			
2026			
	=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.

	Uttlesi	ford CM22	
	35% Afford	dable Housing	
AH Mix:		50 Social Rent:Intermed	liate
		100 infrastructure allow	
		Normal Grant sensitivity	
	19	9% Gross Profit sensitiv	ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020 2021			
2021			
2022			
2023			
2024			
2025			
2020	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure SS22

## 50 dph

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.

	Uttlesf	ord CM22			
35% Affordable Housing					
AH Mix:	50:50 Social Rent:Intermediate 20000 infrastructure allowance Normal Grant sensitivity.				
		% Gross Profit sensitiv			
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
2011					
2012					
2013					
2014					
2015					
2016					
2017					
2018					
2019					
2020 2021					
2021					
2022					
2023					
2025					
2026					
	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Figure SS23

Value Areas: CM23 and CM6

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.

	Uttlesfo	ord CM23	
	35% Afford	able Housing	1
AH Mix:	30:70 Social Rent:Intermediate 20000 infrastructure allowance Normal Grant sensitivity. 19% Gross Profit sensitivity.		
	19.	NV	ivity.
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 SS24

	Uttlesfo	rd CM23		
20% Affordable Housing				
AH Mix:		Social Rent:Interm		
		0 per unit S106 allo		
		rmal Grant sensitiv		
	19%	Gross profit sensit	ivity.	
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010		<u></u>		
2011				
2012				
2013				
2014				
2015				
2016				
2017				
2018				
2019				
2020				
2021 2022				
2022		<u> </u>		
2023				
2024				
2025				
2020	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure SS25

# 50 dph

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.

	Uttlesf	ord CM23	
	35% Afford	able Housing	
AH Mix:	30:70 Social Rent:Intermediate 20000 infrastructure allowance Normal Grant sensitivity. 19% Gross Profit sensitivity.		
		N∨	-
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019 2020			
2020			
2021			
2022			
2023			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure SS26

	Uttlesfo	ord CM23		
20% Affordable Housing				
AH Mix:		Social rent to Intern		
		00 per unit S106 allov		
		ormal Grant sensitivi		
	190	6 Gross Profit sensiti	vity.	
VE + B	BOUNDARDE.	VIABILITY	LIBOTES	
YEAR 2010	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2013				
2014				
2015				
2016				
2017				
2018				
2019				
2020 2021				
2021			+	
2022				
2024				
2025				
2026				
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure SS27

#### FAST 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

- 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 o	n a 75 hectare site (20 units per		and 1162 house(s).
		erts SG9	
	35% Afford	able Housing	g
AH Mix:		5 Social Rent:Interm	
		00 infrastructure allo	
		lormal Grant sensitiy	
	199	% Gross Profit sensi	tivity.
VEAD	DOWNSIDE	NV MIDDLE	UPSIDE
YEAR 2010		MIDDLE	OPSIDE
2010			_
201.			
2013			
2014			
2015	5		
2016	5		
2017			
2018			
2019			
2020			
202: 202:			
2022			
2023			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure SS28

	East He	rts SG9	
35% Affordable Housing			
AH Mix:	25:75 Social Rent:Intermediate 30000 infrastructure allowance Normal Grant sensitivity.		
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012		<u> </u>	
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024			
2025		<u> </u>	
2026	=NOT VIABLE	<u> </u>	
	=NOT VIABLE =MARGINALLY VIABLE		
	=MARGINALLY VIABLE =VIABLE		

Figure SS29

Value Areas: SG11, SG12, SG13 and SG14

- 11.42 These areas have similar results and therefore the conclusions here relate to these three value areas.
- Against most sensitivity tests, 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. However, viability may be compromised where higher section 106/infrastructure is required as can be seen in Figures SS30, SS31 and SS32 showing the effect of different infrastructure requirements between £20,000 per unit and £35,000 per unit.

	East	Herts SG13/14		
1500 units on a 75 hectare site (20 units per hectare density) - 338 flat(s) and 1162 house(s).				
AH Mix:	x: 75:25 Social Rent:Intermediate			
	35% Aff	ordable Housi	na	
		rastructure allowance	9	
		rant sensitivity.		
	19% Gro	oss Profit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
2013				
2014				
2015				
2016				
2017				
2018 2019				
2019				
2020				
2022				
2023				
2024				
2025				
2026				
=	=NOT VIABLE			
=	=MARGINALLY VIABLE			
=	=VIABLE			

Figure SS30

	East	Herts SG13/14	
1500 u		nits per hectare density) - 338 fl	
	35% Aff	ordable Housi	ing
AH Mix:	75:2	5 Social Rent:Interme	diate
	2500	00 infrastructure allow	ance
		Nil Grant sensitivity.	
	199	% Gross Profit sensitiv	vity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011	<u> </u>		
2012	·		
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020 2021			
2021			
2022	<u> </u>		
2023			
2024			
2025			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure SS31

	East	Herts SG13/14				
1500 uni	its on a 75 hectare site (20 un	its per hectare density) - 338 fl	at(s) and 1162 house(s).			
35% Affordable Housing						
AH Mix:						
	3500	0 infrastructure allow	ance			
		Nil Grant sensitivity.				
	199	o Gross Profit sensitiv	rity.			
		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 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

- 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.

	East H	lerts SG9		
	10% Afford	lable Housing	<b>j</b>	
AH Mix:	50:50	O Social rent to Interr	nediate	
		100 per unit S106 allo		
		Normal Grant sensitiv		
	19	19% Gross Profit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
201				
201			_	
201				
201				
201				
201 201			_	
201				
201				
201				
202				
202				
202				
202				
202	4			
202				
202	6			
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure SS33

	East H	lerts SG9	
	35% Afford	able Housing	
AH Mix:		O Social Rent:Interme	
	200	00 infrastructure allo	wance
		lormal Grant sensitivi	
	19	% Gross Profit sensit	ivity.
	VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024 2025			
2025			
2026	=NOT VIABLE		
	=NOT VIABLE =MARGINALLY VIABLE		
	=MARGINALLT 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.

	East Hert	ts SG13/14		
		able Housing		
AH Mix:	50:50 Social Rent:Intermediate 30000 infrastructure allowance Nil Grant sensitivity. 19% Gross Profit sensitivity.			
		N∀		
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 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).

	Eppir	ng Forest CM16	
1500 c	ınits on a 75 hectare site (20 un		
	35% Aff	ordable Housi	ing
AH Mix: 70:30 Social Rent:Intermediate			
	3000	10 infrastructure allow	ance
		Nil Grant sensitivity.	
	190	% Gross Profit sensitiv	/ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016 2017			
2017			
2018			
2019			
2020			
2022			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure SS36

	Eppii	ng Forest CM16		
1500 c		nits per hectare density) - 338 fl		
	35% Aff	ordable Housi	ing	
AH Mix:	70:3	0 Social Rent:Intermed	diate	
	35000 infrastructure allowance Nil Grant sensitivity.			
	199	% Gross Profit sensitiv	rity.	
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
2013				
2014				
2015				
2016 2017				
2018 2019				
2019				
2020				
2021				
2023				
2024				
2025				
2026				
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=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.

1300 units of	a 75 hectare site (20 units per h Epping Fo	rest CM17	una noc noase(s).
	15% Afford		
AH Mix:		Social Rent to Inter	
	20,00	00 per unit S106 allo	wance
		ormal Grant sensitiv	
	19% Gross profit sensitivity.  VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			_
2016			_
2017 2018			
2018			
2019			
2020			
2022			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure SS38

## Value Areas: CM5 and EN9

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 For	est CM5/EN9		
1500 units o	n a 75 hectare site (20 units per	hectare density) - 338 flat(s) an	d 1162 house(s).	
AH Mix: 70:30 Social Rent:Intermediate			diate	
	35% Afford	able Housing		
		ure \$106 allowance		
	Normal Gra	nt sensitivity.		
	19% Gross P	rofit sensitivity.		
	VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
201:				
2012				
2013				
2014				
201				
2016 201				
201				
2010				
2020				
202:				
2022				
2023	3			
2024	1			
202				
2026	5			
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure SS39

#### 12.0 Commuted Sums

## Commuted Sum Principles

- The principles outlined in ODPM Circular 05/2005 confirm that planning "obligations created run with the land" 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." 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." 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."
- 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'<sup>46</sup>) 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" <sup>47</sup>
- 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

<sup>&</sup>lt;sup>42</sup> Paragraph A3 Circular 05/05

<sup>&</sup>lt;sup>43</sup> Paragraph B7 Circular 05/05

<sup>44</sup> Paragraph B12 Circular 05/05

<sup>&</sup>lt;sup>45</sup> Paragraph B5 Circular 05/05

<sup>&</sup>lt;sup>46</sup> PPS3 paragraph 29 Department of Communities and Local Government November 2006

<sup>&</sup>lt;sup>47</sup> 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

- 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.
- 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.
- 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 input<sup>48</sup>

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;

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<sup>&</sup>lt;sup>48</sup> 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 percentage $^{49}$ .

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.
- 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.

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<sup>&</sup>lt;sup>49</sup> 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:

#### **DEVELOPER SUBSIDY**

=

## RESIDUAL VALUE OF DEVELOPMENT UNENCUMBERED BY AFFORDABLE HOUSING

#### **LESS**

# RESIDUAL VALUE OF DEVELOPMENT ENCUMBERED BY AFFORDABLE HOUSING (TAKING INTO ACCOUNT ANY REALISTICALLY ACHIEVABLE ESTABLISHED ALTERNATIVE OR EXISTING USE)

#### 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.
- 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

#### 13.0 Conclusions and Recommendations

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.

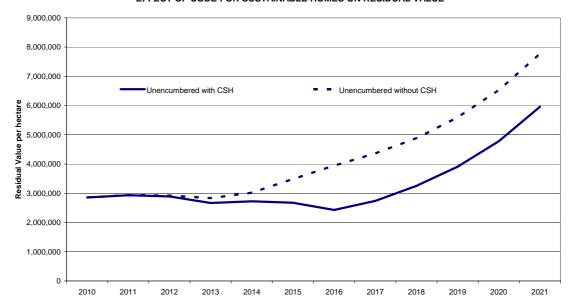
Effect of Code for Sustainable Homes Requirements

- 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			
2011								
2012								
2013								
2014								
2015								
2016								
2017								
2018								
2019								
2020								
2021								
2022								
2023								
2024 2025								
2025								
2026								

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



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.

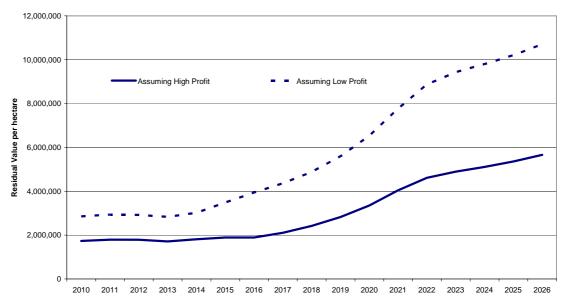
## Effect of Different Profit Assumptions

- 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.
- 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.
- 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.

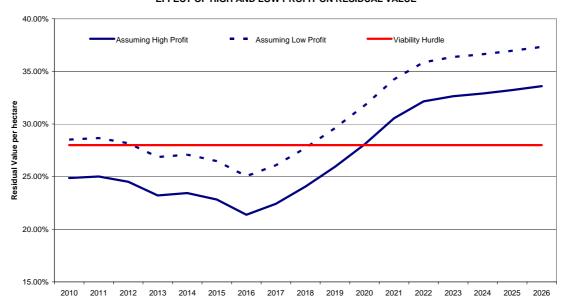
- However, it should be noted that the results of our testing at 25% gross profit against GDV has a significant effect on the viability of schemes. In this case, where specific site constraints and market conditions dictate, the Council may consider the case for higher profit levels to be taken into 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.

#### **EFFECT OF HIGH AND LOW PROFIT ON RESIDUAL VALUE**



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.

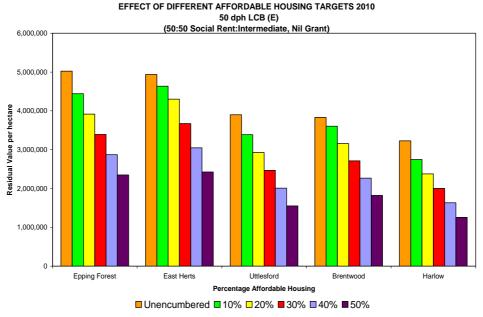


Figure SR1

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.

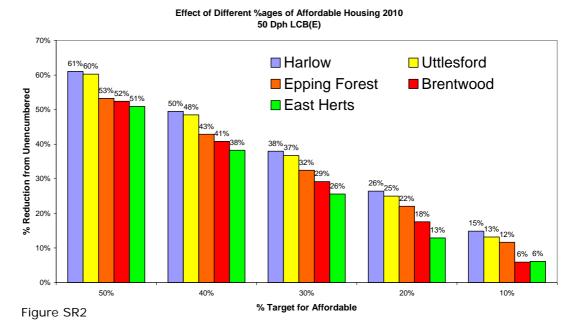


Figure SR3 shows the effect of different density developments on the potential amount of affordable housing that may be achieved. It can be seen that the optimum development density ranges between local authority areas from 30 dph in Harlow to 100dph in Epping Forest. For East Hertfordshire and Uttlesford the optimum development density appears to be 50 dph. For Brentwood the optimum development density is from 50 dph to 70 dph.

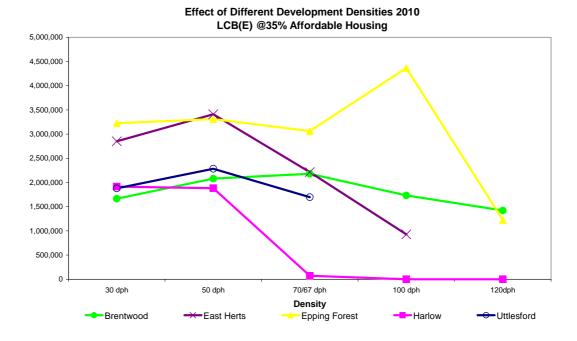


Figure SR3

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**

- 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%.

- 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.
- 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

- 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

- 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

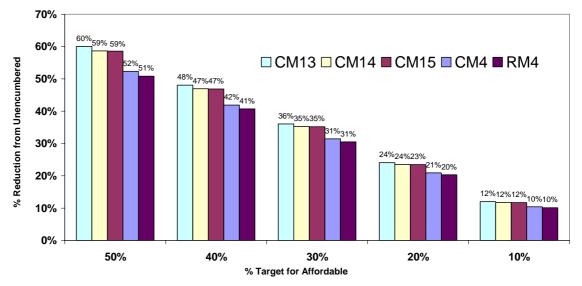


Figure BLV

- 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.
- 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.

## EFFECT OF DIFFERENT AFFORDABLE HOUSING TARGETS 2010 50 dph BRENTWOOD

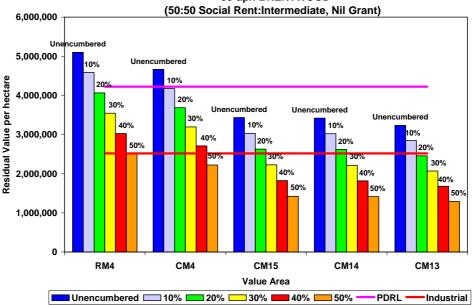


Figure BLVI

- 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

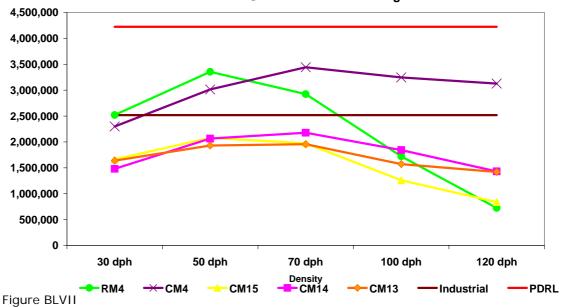


Figure BLVIII shows the impact upon viability of three different affordable housing tenure mixes in Brentwood. Increasing the proportion of intermediate affordable housing is a mechanism that could be employed to ease viability if required on

## EFFECT OF DIFFERENT AFFORDABLE HOUSING MIXES BRENTWOOD 2010 (Social Rented to Intermediate)

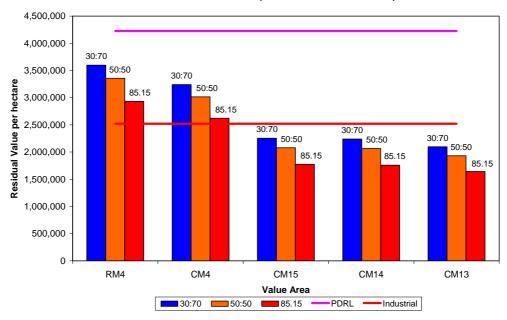


Figure BLVIII

certain schemes.

13.42

## Conclusions Relating to Each General Development Site Assessed

## 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. 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% 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

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

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

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

- 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 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.
- 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.
- 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 2005<sup>50</sup> Therefore the requirement of Policy H6 is consistent with the 35% policy target recommended for general development sites.
- 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.

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<sup>&</sup>lt;sup>50</sup> '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

- 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.

## Effect of Different %ages of Affordable Housing 2010 50 Dph East Herts

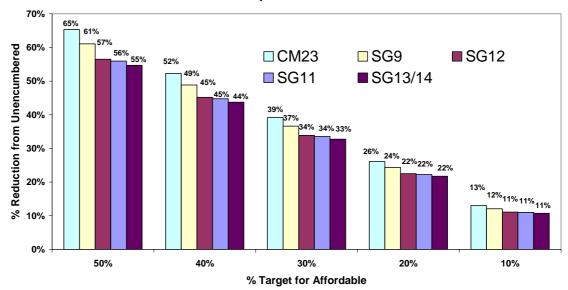


Figure EHXXXVIII

- 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.
- 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) 7,000,000 ncumbered 6,000,000 Unencumbered 10% Unencumbered 10% 20% 10% Residual Value per hectare 5,000,000 20% 30% 4,000,000 10% 30% 40% Unencumbered 40% 20% 40% 10% 50% 3,000,000 30% 50% 20% 50% 40% 30% 2,000,000 50% 40% 1,000,000 0 SG13/14 SG11 SG12 SG9 Value Area Unencumbered 10% 20% 30% 40% 50% PDRL Industrial

Figure EHXXXIX

- 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).
- 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.

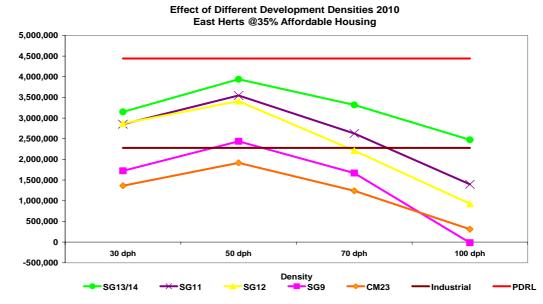


Figure EHXL

13.66 Figure EHXLI 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.

## EFFECT OF DIFFERENT AFFORDABLE HOUSING MIXES EAST HERTS 2010 (Social Rent:Intermediate)

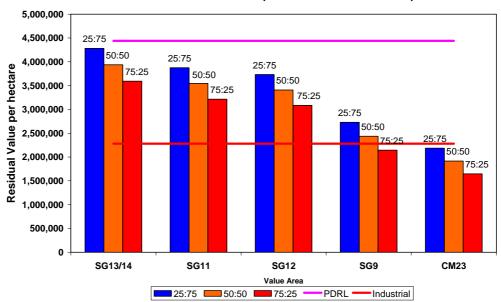


Figure EHXLI

### 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 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.
- 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

- 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.
- 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

- 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.
- 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.
- 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
- 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

- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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

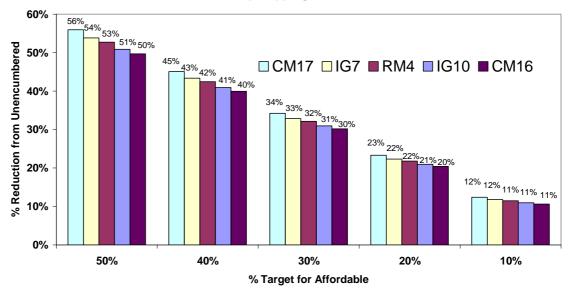


Figure EPLVI

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.

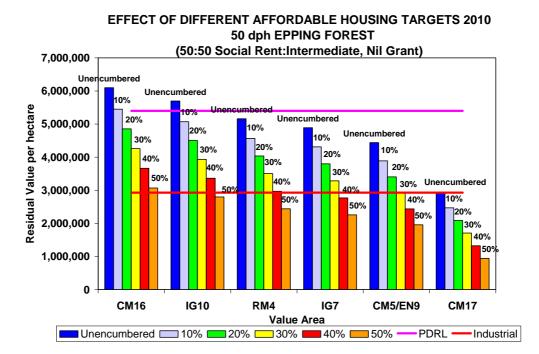


Figure EPLVII

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

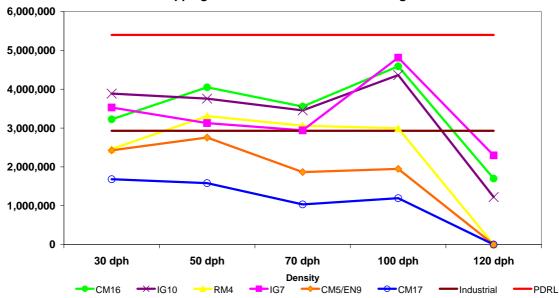


Figure EPLVIII

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)

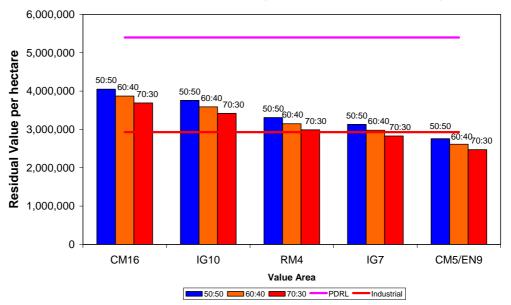


Figure EPLIX

## 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.
- 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.
- 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.
- 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.
- 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 in 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.
- 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

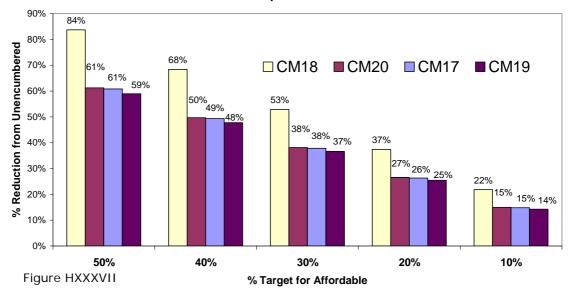


Figure HxXXVIII examines the relationship between residual land value per hectare and the percentage of affordable housing, again this analysis is based upon a 50 unit 50 dph notional scheme. A scheme unencumbered by affordable housing is exceeding the industrial/greenfield land values in all value areas 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.

## EFFECT OF DIFFERENT AFFORDABLE HOUSING TARGETS 2010 50 dph HARLOW

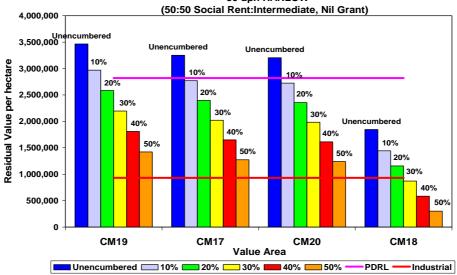


Figure HXXXVIII

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.

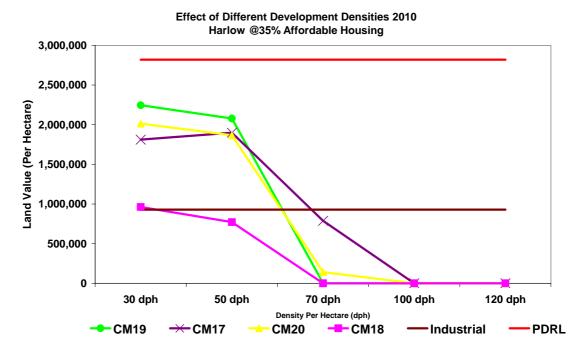


Figure HXXXIX

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.

# EFFECT OF DIFFERENT AFFORDABLE HOUSING MIXES Harlow 2010 (Social Rented to Intermediate)

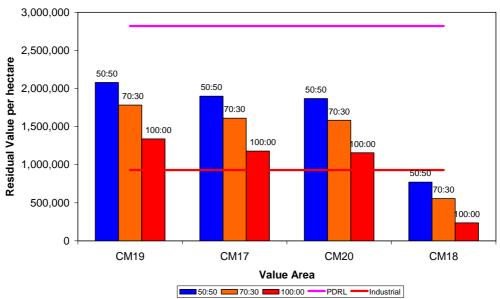


Figure HXL

#### 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.
- 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 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.
- 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.
- 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.
- 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.

# Effect of Different %ages of Affordable Housing 2010 50 Dph Uttlesford

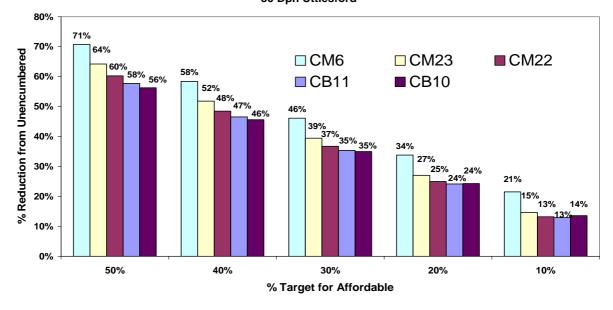


Figure UXXXIII

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.

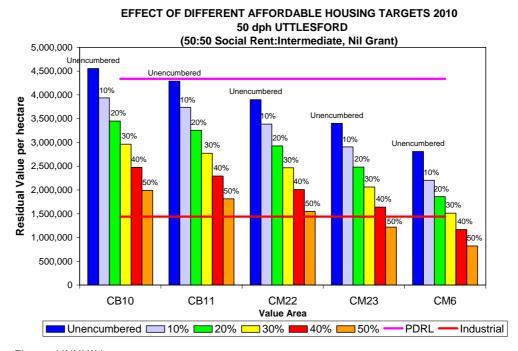


Figure UXXXIV

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

50 dph

Density

CM6

Figure UXXXV

30 dph

**→** CB11

CB10

0

5,000,000 4,500,000 4,000,000 3,500,000 2,500,000 2,000,000 1,500,000 500,000

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.

CM22

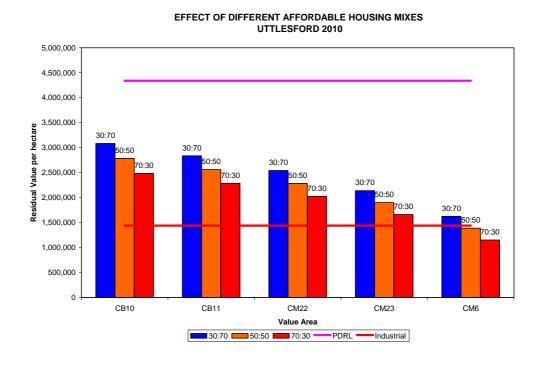


Figure UXXXVI

67 dph

Industrial

PDRL

#### 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.
- 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.
- 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.
- 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.

- 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.
- 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

- 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.
- 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 o
	this HMA (note some value areas may not be wholly within the HMA boundary):

	Ε	N	9	
_		IV	7	

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 o	f
	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.



Viability Assessment

For London Commuter Belt East Sub Region

APPENDICES

By Levvel

August 2010

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# Appendix One – Invitation to Tender – Study Brief

# **INVITATION TO TENDER**

# STRATEGIC HOUSING MARKET ASSESSMENT:

# **VIABILITY ASSESSMENT**

### **CONSULTANCY BRIEF**

Commissioned by:











#### 1.0 Introduction

- 1.0 The purpose of commissioning this work is to obtain a robust viability assessment to test the findings of the emerging Strategic Housing Market Assessment (SHMA), which is being prepared for the London Commuter Belt East/M11 sub-region.
- The London Commuter Belt East sub-region comprises Brentwood Borough Council, East Herts District Council, Epping Forest District Council, Harlow District Council and Uttlesford District Council (the Consortium).
- The Consortium has jointly commissioned Opinion Research Services (ORS) to undertake a Strategic Housing Market Assessment (SHMA) as required by Planning Policy Statement 3: Housing (PPS3). At a local level it informs the preparation of the Local Development Frameworks (LDFs) in each authority. The SHMA forms part of the evidence base for each of the Authority's Local Development Frameworks (LDF) and assists with the production of their respective Housing Strategies. The SHMA will also inform the housing strategy for the London Commuter Belt subregion as a whole.
- 1.3 The Planning and Compulsory Purchase Act 2004 (as amended) requires local authorities to produce Local Development Frameworks (LDFs) to replace Local Plans. Government guidance on the preparation of LDFs is set out in Planning Policy Statement 12. This makes it clear that policies prepared by a local planning authority should be founded on a thorough understanding of the needs of their area. Through the examination process, one of the tests of soundness will be whether policies are based on a "robust and credible evidence base" (para. 4.24).
- 1.4 In accordance with PPS3, the SHMA has three main objectives:
  - Estimate housing need and demand in terms of affordable and market housing;
  - Determine how the distribution of need and demand varies across the plan area, for example, between the urban and rural areas;
  - Consider future demographic trends and identify the accommodation requirements of specific and occupational groups.
- The original brief for the SHMA study was based on the Government's practice guidance for Strategic Housing Market Assessments. This states that the findings of the SHMA should provide an appreciation of the wider housing market in order to help develop a spatial vision for the area, as well as estimates of current and future housing need and demand. In addition to findings provided by a SHMA, the guidance states that authorities should consider other factors to determine affordable housing targets, including an assessment of economic viability within their areas.
- 1.6 Although the original SHMA brief included viability work as an optional addition, in light of a recent court of appeal case (Blyth Valley v Persimmon Homes, 2008) the emphasis on all SHMAs being supported by robust viability assessments has been increased. Thus, the Consortium is now seeking a more comprehensive strategic viability assessment for the LCB East / M11 sub-region.

#### Study Objectives

- 1.7 The purpose of this study is to undertake a strategic assessment of the viability of the recommendations of the SHMA study to inform the affordable housing policy targets of the planning policies in each Authority's respective LDFs. It will test the affordable housing tenure mix suggested by the SHMA for each local authority area to provide the evidence base needed for the planning policies.
- 1.8 As well as informing the policies within the LDF, the findings of the viability assessment will set the context for detailed site specific appraisals as part of each of the Strategic Housing Land Availability Assessments (SHLAAs) of each authority.
- 1.9 The SHMA will provide information on the housing market areas to be considered (Figure 1). This viability assessment should test a range of scenarios in relation to the provision of affordable housing and report on the viability of delivering the affordable housing targets, including the range of circumstances in which affordable housing will be required, in accordance with PPS3.

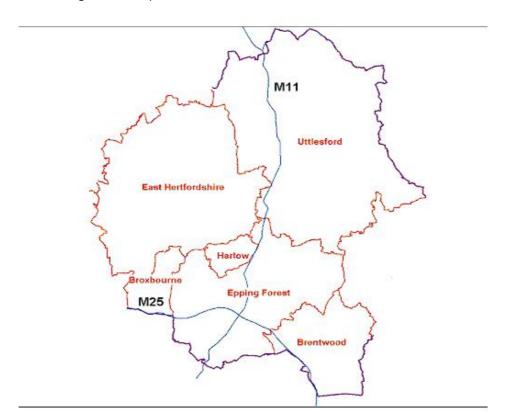


Figure 1: The Study Area

#### The Study Area

- 1.10 The study area for the viability assessment will cover the LCB East /M11 sub-region which comprises the local authority areas of Brentwood Borough Council; East Hertfordshire District Council; Epping Forest District Council; Harlow District Council; and Uttlesford District Council (Figure 1). The SHMA work also includes Broxbourne Borough Council, but this authority is not included in this further assessment of viability.
- The Consortium is all part of the wider London Commuter Belt sub-region, which comprises Brentwood, Broxbourne, Chelmsford, Dacorum, East Herts, Epping Forest, Harlow, Hertsmere, North Herts, St Albans, Stevenage, Three Rivers, Uttlesford, Watford and Welwyn Hatfield, which itself lies within the East of England region. The East of England Plan was published in May 2008, and Policy H1 sets district wide housing provision targets for each of the local planning authorities, and the suggested figures for a continuation of policy H1 beyond 2021. Figure 2 shows the growth required to meet the targets to 2021.

Minimum Dwelling Provision, 2001 to 2021							
(net increase, with annual average rates in brackets)							
Area/District  Total to Build: April 2001 to March 2021  Of which already built: April 2001 – March 2009  Total to Build A 2009 to March 2021							
Harlow	16,000	1,371 (171)	14,629 (1,219)				
Uttlesford	8,000	3,006 (376)	4,994 (416)				
Brentwood	3,500	1,651 (206)	1,849 (167)				
Epping	3,500	1,784 (223)	1,716 (143)				
East Herts	12,000	4,032 (504)	7,968 (664)				

Figure 2: Extract: Policy H1 - East of England Plan, May 2008

1.12 Please note that the figure for Harlow is for total housing growth at Harlow, including urban extensions in Epping Forest and East Herts districts. These urban extensions have not yet been fully defined, nor has building commenced therefore build rates for Harlow relate only to development within Harlow. Whilst the actual

split between districts will be determined through the LDF process, for the purpose of the SHMA study, to 2021 the following figures have been assumed: East Herts 14,500; Epping Forest 6,500; Harlow 10,500.

Average House Prices and Price changes 2005 - 2009						
Area/District	Average House Price in September 2009	Average House Price in March 2005	Percentage Change (4.5 years)			
Harlow	£172,300	£166,400	3.5%			
Uttlesford	£306,500	£286,600	14.2%			
Brentwood	No access to data on Hometrack	No access to data on Hometrack	No access to data on Hometrack			
Epping	£303,300	£282,400	7.4%			
East Herts	£282,800	£257,000	10.0%			

Average LCB East (exc Brentwood)	£266,225	£248,100	7.3%

Figure 3: Average House Prices (Source: Hometrack, accessed 18/11/2009)

1.13 Initial assessments of the housing markets in each of the authorities in LCB East have been conducted as part of the SHMA. Across the LCB East/M11 sub-region as a whole, on average house prices rose by 114% between 2001 and 2008 and are currently around 125% above the East of England average. However, house prices within and between the authorities vary significantly – within the local authority boundaries there are pockets of lower and higher priced housing. Figure 3 shows the average house prices and house prices changes for the LCB East/M11 sub-region for the period 2005 to 2009.

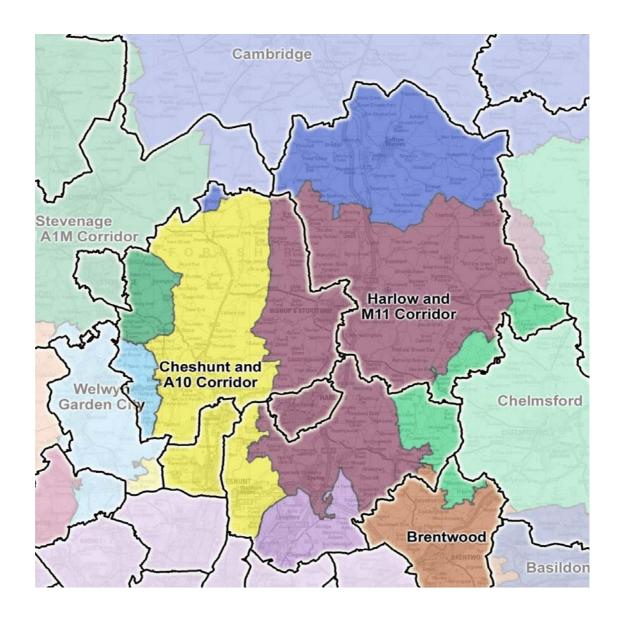


Figure 4: Housing market Areas in the LCB East/M11 sub-region (Source: draft LCB East/M11 Sub-region SHMA, ORS)

- The LCB East/M11 sub-region does not operate as one housing market and the SHMA study has identified a number of smaller housing market areas based on travel to work information (Figure 4). It is apparent that these housing market areas are not contiguous with local authority boundaries. Thus, the viability assessment will also need to take account of other relevant studies recently completed or currently planned for the remaining LCB authorities and other surrounding authorities. Appropriate linkages should be highlighted where these may exist. The Consortium is aware of the following relevant assessments:
- 1.15 Stevenage & North Herts SHMA conducted by David Couttie Associates;
  - Dacorum, Hertsmere, St Albans, Three Rivers, Watford, Welwyn & Hatfield SHMA conducted by ORS

- Broxbourne Viability Assessment conducted by Fordhams
- Chelmsford, Colchester and Braintree (Colchester and Braintree not in the LCB) SHMA conducted by Fordhams.

#### Methodology

- 1.16 As set out in Section 2 above, this viability assessment should test a range of scenarios in relation to the provision of affordable housing and report on the viability of delivering the affordable housing targets, including the range of circumstances in which affordable housing will be required, in accordance with PPS3.
- 1.17 In their submissions, consultants should clearly set out their proposed methodology for undertaking this viability assessment including a full justification of their assumptions. One such methodological approach could follow the four-stage approach set out below:
  - Stage 1: Identification of Site Typologies
  - Stage 2: Viability Assumptions
  - Stage 3: Viability Assessment
  - Stage 4: Outputs and Conclusions
- 1.18 Whichever methodological approach is used, it is anticipated that as a minimum, the following requirements should be met. Where an alternative approach is proposed, it must be fully justified.
- Site typology identification will need to take into account the typical sites on which housing will be delivered across the LCB East/M11 sub-region (e.g. Greenfield or previously developed, urban or rural, infill or urban extensions, large or small). Site typologies should be relevant to overall delivery in each local authority area, but at the same time, reflect the housing market areas identified in the SHMA. This approach will ensure that any disparities in the housing market are identified and properly assessed to ensure that sufficient affordable housing delivery can be achieved in each authority.
- 1.20 The viability assessment must identify and justify the types of site to be assessed both in terms of the housing market areas identified by the emerging SHMA, as well as the housing supply pipeline and most recent trajectories identified by individual local authority areas. The types of site to be assessed must be representative of the nature and scale of development that is likely to arise in each housing market area and district. This will need to ensure that a full appraisal of the types of sites (although in most cases not the specific locations) that will come forward to meet housing requirements in the period up to 2026. This will ensure that the 15-year time horizon envisaged by PPS3 and PPS12 can be adhered to in preparing (in particular) Core Strategies for each authority area.
- 1.21 In undertaking this study, consultants should seek to strike a robust balance between ensuring a thorough assessment of the viability of each scenario and ensuring that there is a good and representative sample of scenarios covering all

- site typologies and representing all the housing market areas. Consultants will need to demonstrate a full appreciation of the LCB East/M11 housing market.
- 1.22 Considered explanation of the assumptions that will be made about matters including, but not restricted to, land values, build costs, abnormal costs, s.106 contributions, market demand, sales values, residual values, grant availability, funding and the housing market downturn must be submitted, including details of how any assumptions used in the assessment will continue to be fit-for-purpose over a several year period. Any further assumptions used must be fully justified.
- 1.23 The successful consultant should be able to demonstrate the methods that will be used, such as stakeholder workshops, to engage the development industry in the assessment process. It will be the responsibility of the consultant appointed to organise any such events.
- 1.24 Consultants should also demonstrate their familiarity with the requirements of PPS3 and the SHMA practice guidance.
- 1.25 As well as testing a range of affordable housing policy targets and site thresholds the assessment should demonstrate a viable housing mix showing the balance of market, intermediate and social housing recommended for each typology. This should take account of the housing and tenure mix requirements recommended in the SHMA study.
- Where appropriate, the successful consultant should recommend revised planning policy targets that are viable for consideration by the local planning authorities. In terms of outputs, the viability assessment should ensure that the requirements of PPS3 paragraph 29 are met. Recommendations should be supported by justified analysis. This will enable each local authority area to assimilate the findings into their LDF policies and comply with the requirement in PPS3 for each authority to set an overall (i.e. plan wide) target for the amount of affordable housing to be provided.
- This viability study is a strategic level assessment to test the broad viability of the affordable housing targets identified in the SHMA. The findings of this strategic viability assessment will then be applied to specific sites identified within each authority's Strategic Housing Land Availability Assessment (SHLAA) to assess the deliverability of each site and ensure that each authority can deliver a continuous 5 year supply if housing as part of its 15 year housing trajectory.

# Appendix Two – Policy Context

#### 2.0 National Policy

- 2.0 In 2003, the government set out their current vision for housing in the Communities Plan. This publication led to a period of significant change in planning systems across the UK and the current housing policy document which is Planning Policy Statement 3 and the companion document Delivering Affordable Housing.
- 2.1 The Key objectives Of the Communities Plan state that our communities should:
  - Be economically prosperous;
  - Have decent homes at affordable prices;
  - Safeguard the countryside;
  - Enjoy a well designed, accessible and pleasant living and working environment; and
  - Be effectively and fairly governed with a strong sense of community.
- 2.2 PPS3 supplements these aims and identifies a number of specific requirements, but emphasises that policy should be applied flexibly, "having regard to housing need and supply and taking account of risks to delivery, drawing upon an informed assessment of the level of finance available, including public subsidy and the level of developer contributions that could reasonable be assumed". 1
- A companion document to PPS3, Delivering Affordable Housing expands upon these principles; "Effective use of planning obligations to deliver affordable housing requires good negotiation skills, ambitious but realistic affordable housing targets and thresholds given site viability, funding 'cascade' agreements in case grant is not provided, and use of an agreement that secures standards".<sup>2</sup>
- The approach is therefore to identify the level of need and its nature, to consider the types of affordable housing that might best meet this need and then to consider the economics of delivery and how sources of uncertainty (such as the availability of public funds and economic changes over the life time of the development) can best be managed. This process will necessarily involve the assessment of the financial circumstances of development sites, a process that lies outside the scope of this statement.
- The basis of affordable housing must also be considered in the light of economic viability and deliverability. It is important that policies must be grounded in the real world so that they do not hinder development and restrict sites coming forward for (residential) development.
- 2.6 PPS12 considers the deliverability and flexibility of Core Strategies in paragraphs 4-44 to 4-46. This is within the context of overall infrastructure requirements but it is

<sup>&</sup>lt;sup>1</sup> Paragraph 29, PPS3, DCLG, November 2006

<sup>&</sup>lt;sup>2</sup> Delivering Affordable Housing, CLG November 2006. paragraph 10 page 3

- clear that if the infrastructure is to be delivered then viability of policies, including affordable housing policies, are viable within this context.
- Furthermore, the flexibility of core strategy requirements should also be assessed and PPS12 goes on (paragraph 4-46) to suggest a minimum 15 year consideration of the impact of policy to calculate how contingencies should be dealt with so that constraints and challenges to policy can be considered over the longer time frame.
- 2.8 PPS12 also gives specific guidance on the evidence base necessary to support core strategies. The evidence base should be based on two elements; participation and research/fact finding. Generally, the core strategies should be based on "through evidence".
- 2.9 Paragraph 29 of PPS3 also refers to viability being important for the setting of overall affordable housing targets. This involves looking at the risks to delivery and the likely level of finance available including public funding and developer subsidy.
- 2.10 Circular 05/05 also has a key role to play in the subject of viability as it provides guidance on the use of planning obligations under S106 of the Town and Country Planning Act 1990. Paragraph B5 of the Circular requires that planning obligations are only sought where they meet all of the following tests:
  - Relevant to planning
  - Necessary to make the proposed development acceptable in planning terms;
  - Directly related to the proposed development;
  - Fairly and reasonably related in scale and kind to the proposed development;
     and
  - Reasonable in all other respects
- Paragraph B7 goes on to confirm that 'planning obligations should never be used purely 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".
- 2.12 The level of financial contributions required on individual sites can be critical in any assessment of financial viability. Circular 05/05 provides the basis upon which Local Authorities should incorporate sufficient information in to the plan-led system in order to enable developers to predict as accurately as possible the likely contributions they will be asked to make through planning obligations. On occasions formulae and standard charges may be appropriate, as part of the framework of negotiating and securing planning obligations. This may change in the near future as further work progresses on introducing the Community Infrastructure Levy (CIL). Regulations implementing CIL will come into force on 6<sup>th</sup> April 2010. However, Planning Obligations will remain after CIL is introduced and affordable housing is likely to continue to be secured through planning obligations rather than CIL.
- 2.13 The Government argue that CIL will improve predictability and certainty for developers as to what they will be asked to contribute. It will increase fairness by broadening the range of developments asked to contribute and will allow the cumulative impact of small developments to be better addressed. A key benefit of

CIL is that it is can more easily fund sub-regional infrastructure, typically larger elements that will benefit more than one Local Authority Area. The Government proposes that Local Authorities should have the freedom to work together to pool contributions from CIL within the context of delivering their development plan. It is also anticipated that public sector bodies such as the Regional Development Agency could forward fund infrastructure and be reimbursed from a CIL Income Stream.

#### **REGIONAL POLICY**

#### East of England Plan

2.14 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. Local planning authorities should plan for delivery of housing for at least 15 years from the date of adoption of relevant development plan documents<sup>3</sup>. Policy H1 also indicates that district allocations should be regarded as minimum targets to be achieved, rather than a ceiling which should not be exceeded. Minimum provision is made in each local authority for 2001-2021. The following table outlines minimum dwelling provision in each of the five commissioning London Commuter Belt authorities.

	Minimum to build April 2001 to March 2021	Completions – April 2001 to March 2006	Minimum to build April 2006 to March 2021
Brentwood	3,500 (175)	920 (180)	2,580 (170)
East Hertfordshire	12,000 (600)	2,140 (430)	9,860 (660)
Epping Forest	3,500 (175)	1,210 (240)	2,290 (150)
Harlow	16,000 (800)	810 (160)	15,190 (1,010)
Uttlesford	8,000 (400)	1,610 (320)	6,390 (430)

- 2.15 Figures for both Epping Forrest and East Hertfordshire exclude provision in urban extensions to Harlow<sup>4</sup>. Minimum dwelling provision for Harlow includes the urban extensions in Epping Forest and East Hertfordshire Districts, the split between the districts is determined through development plan documents.
- 2.16 Policy H2<sup>5</sup> sets out the region's affordable housing policy. Within the requirements of Policy H1, DPD's should set appropriate targets taking into account RSS

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<sup>&</sup>lt;sup>3</sup> East of England Plan, May 2008, p.28

<sup>&</sup>lt;sup>4</sup> Ibid

<sup>&</sup>lt;sup>5</sup> Ibid, page 34

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'.

- 2.17 Based on studies of affordable housing commissioned by EERA and its partners in 2003/04, the region needs approximately 11,000 new affordable homes each year (7,200 social rented, 2,400 intermediate rent and 1,320 social rented backlog). The studies also indicated that about 13,200 additional units were needed to address un-met needs, e.g. homelessness, families in overcrowded accommodation and suppressed households<sup>6</sup>.
- 2.18 Policy LA1 contains guidance for the London Arc which comprises the areas closest to and most strongly influenced by London. Within the context of this report the districts of Brentwood and Epping Forest fall within the London Arc. Some of the characteristics of the Arc extend further to East Hertfordshire and Harlow but these districts are not included because their commuting relationship with London is less strong. However, it is stated<sup>7</sup> that parts of policy LA1 are broadly applicable to these areas.
- Policy HA1: Harlow Key Centre For Development and Change sets the strategy for the new town through developing its role as a major regional housing growth point. Policy HA1 also states that Development Plan Documents should provide for a total of 16,000 additional dwellings between 2001 and 2021, including urban extensions in Epping Forest and East Hertfordshire districts<sup>8</sup>. Housing should be provided within the existing area of the town through selective renewal and development. Urban extensions are also planned for the north, east and on a smaller scale the south and west. Development Plan Documents need to be coordinated by the three authorities to determine appropriate distribution between the urban extensions. A review of the Northern part of the town may lead to at least 10,000 dwellings and possibly more.
- 2.20 Policy T15 identifies the London to Stansted corridor, including Harlow and access to Stansted Airport, as one of the areas likely to come under transport pressures.
- 2.21 The East of England Regional Assembly (EERA) is committed to carrying out an early review of the Plan which will look ahead to 2031. Government has indicated that it expects the review to be completed by the end of 2011 and EERA will submit its draft revised Plan to Government by the end of March 2010.

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<sup>&</sup>lt;sup>6</sup> Ibid, page 33

<sup>&</sup>lt;sup>7</sup> Ibid page 91, paragraph 13.35

<sup>8</sup> Ibid, page 98

Regional Housing Strategy for the East of England: 2005 - 2010

- The Regional Housing Strategy for the East of England was published by the East of England Regional Assembly (EERA) in May 2005 and outlines its main vision as:
- 2.23 "To ensure everyone can live in a decent home which meets their needs, at a price they can afford and in locations that are sustainable"9.
- The RHS aims to meet the 'aspirational' target of 40% for the provision of affordable housing across the region set in the East of England Plan; to reduce the backlog of current need and the provision of units for Key workers. The EERA undertook an Affordable Housing Study in 2003 and based on this research identified that there is a need for 23,900 units projected across the region throughout the duration of the plan period from 2001-2021. Additionally, the EERA claims that there is a need of 11,000 affordable housing units per year of which, 7,200 of dwellings should be designated for the social rented sector. A further Affordable Housing Study estimates that in order to meet the "backlog of unmet need for social housing" that 1,320 units per annum need to be built for ten years.
- In terms of public funding allocations, the RHS states that the government had contributed a grant funding for the whole of the East of England region of £431 million for 2006-2008 which is pinpointed for the development of new affordable housing as well as improving current housing stock.
- 2.26 The London Commuter Belt is the largest of the sub-regions spanning 15 local housing authorities and two counties. 14 of the 15 local authorities are also included in the "prospering uk" super group based upon the ONS Census based classification. The "London effect" is evident across the sub- region and this include the problem of housing affordability<sup>10</sup>. The future development of Stansted airport and policy- led growth of the London- Stansted- Cambridge- Peterborough Corridor poses challenges for the sub region which need to deal with the tensions arising from the need to protect greenbelt whilst supporting housing growth.
- 2.27 The Regional Housing Strategy also states that local targets should meet the targets set out in the East of England Plan. Local authorities should also:
  - ensure sufficient high quality homes are located in the right locations to support economic activity and regeneration;
  - address affordable housing needs and the needs of migrant workers, refugees and other socially excluded groups;
  - develop demonstrator projects that that deliver high density high density, resource efficient affordable housing to maximise the use of brownfield land opportunities.

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<sup>&</sup>lt;sup>9</sup> Regional Housing Strategy for the East of England, P.3

<sup>10</sup> Ibid, page 19

- The Housing Corporation published an Investment Statement for the East of England for the period 2008 to 2011 in April 2008. The Regional Assembly proposed that the regional 2008-11 programme will provide at least 23,700 new affordable homes (based on funding of £711 million), over double the number of affordable homes compared to 2006-08. It was also proposed that nearly 15,000 will be affordable rent, and more than 9,400 for affordable sale through the government's HomeBuy initiative.
- 2.29 It is expected that the programme will deliver an average of 8,000 new homes a year to 2011. It was estimated that the first stage of the programme will deliver 3,122 new rented homes and 2,685 low cost homes (including 1,478 Open Market HomeBuy units). It is expected that 50% of the programme remains to be allocated through regular market engagement.

			LCHO					
	RENT	HBYNB	ОМНВ	HOLD	LCHO	Sub -	Other	Grand
					Total	total		Total
Value	119.1	14.6	51.7	1.0	67.3	186.4	0.2	186.6
(£m)								
Homes	3,122	1,184	1,478	23	2,685	5,808	9	5,816

<sup>11</sup>Table: First Stage of Regional Allocations for the Entire East of England

- The Regional Assembly recommended that 33.8% of the total allocation (£711 million) be for the London Commuter Belt Sub Region at £240.3 million. The initial programme allocated a total of 25.3 million. The majority of this funding (£21.3 million) will provide 575 affordable rented homes (£37,043 per unit); the remaining 3.7 million will help to deliver 227 Low Cost Home Ownership (LCHO) units (£16,299 per unit).
- 2.31 The programme also indicates that the M11 Corridor has been outlined as a growth area according to the National Affordable Housing Programme. £30.3 million is allocated to provide 758 social rented dwellings and 275 LCHO units will be delivered through the funding of £1.9 million.
- The latest quarterly Investment Statement is dated October 2009 and produced by the Homes and Community Agency. The overall allocation for 2008-2011 indicates that funding of £384.79 million will lead to the allocation of 8,086 social rented affordable housing units across the East of England. 6,280 intermediate units have also been allocated based on funding of £187.21 million. The total identified spend is now 572 million about 80% of the originally identified £711 million. Updated information for the London Commuter Belt Sub Region indicates that a total of £114.87 million (almost 50% of the original £240.3 million) will now be allocated as follows: £64.31 million to deliver 1,427 social rented (£45,065 per unit) homes and £50.56 million to help deliver 1,515 units (£33,372 per unit).

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<sup>&</sup>lt;sup>11</sup> East of England Investment Statement 2008 to 2011 (April 2008) Housing Corporation page.8

The London Commuter Belt Housing Strategy 2009 – 2011

- 2.33 The London Commuter Belt Sub-Region (LCBSR) is the largest of the nine sub-regions in the East of England. Affordability and access to housing remains an issue across the sub- region. The Housing Strategy identifies and analyses housing issues and priorities in the context of the sub- region's housing market. The existing regional and local strategies provide the basis for the development of the strategy. The Housing Strategy does not attempt to present the sub-region as a uniform collection of authorities. It is recognised that there are internal differences between the more urban authorities such as Harlow and the mostly rural districts of East Hertfordshire and Uttlesford<sup>12</sup>.
- 2.34 In 2009 there were 43,000 households registered on housing lists in the Sub-Region. Maximising affordable housing delivery has been identified as one of the three sub-regional priorities. Affordability remains a challenge and is an urgent priority. Three sub-regional priorities have been identified including:
  - Maximising the delivery of affordable housing;
  - Improve the condition and use of the housing stock in the private sector within the sub-region;
  - Delivering outcomes through effective partnership working<sup>13</sup>.
- 2.35 The LCB authorities have predicted that a total of 3811 affordable homes will be completed in the sub region between 2009/10 and 2010/11. Completed and projected affordable housing delivery can be broken down into the following tenures:

	2008/09 Completions	2009/10 Planned	2010/11 Planned
Social Rent	887	1137	1438
Intermediate Rent	80	112	266
Low cost home ownership	426	357	501
Total	1393	1606	2205

2.36 The LCB authorities are also facing a mismatch between the current level of need for housing in the context of supply and the projected level of need and future supply. The impact of the recession is having a considerable impact on the ability to deliver the affordable housing programme throughout the sub-region. The

<sup>&</sup>lt;sup>12</sup> The London Commuter Belt Housing Strategy 2009 – 2011 page 7

<sup>13</sup> Ibid, page5

<sup>14</sup> Ibid page 32

housing strategy identifies the lack of mortgages for first time buyers, the downturn in the supply of affordable homes provided through section 106 agreements, the lack of liquidity and cash flow impacting developers/RSLs, the fall in housing transactions and the rise in repossessions as some of the major challenges faced by the sub-region. However, falling land values reduced material and labour costs may provide some opportunities to deliver new housing<sup>15</sup>.

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

- 2.37 Opinion Research Services working in partnership with Savills were jointly commissioned by Brentwood, Broxbourne, East Herts, Epping Forest, Harlow and Uttlesford Councils and referred to collectively as LCB (East)/M11 Sub Region) to undertake a comprehensive and integrated Strategic Housing Market Assessment (SHMA) for the sub-region. This will form a crucial part of the evidence bases currently being developed across the region as part of the Local Development Framework development process. The SHMA contributes to all three levels of planning. At the regional level it develops an evidence base for regional housing policy, informs Regional Housing Strategy reviews and will assist with the review of the Regional Spatial Strategy. At the Sub Regional level is will provide a deeper understanding of housing markets at the strategic level and will form part of the evidence base for the Sub Regional Housing Strategy. At the local level it will provide an evidence base for Local Development Documents and assist with the production of Core Strategies at the local level.
- 2.38 The Study Report on Findings was released in January 2010 and is a comprehensive 200+ page document to inform future policy development. The overall level of housing need identified is at Figure 90, page 99 of the SHMA confirming that 1.8% or 4,800<sup>16</sup> existing households are in housing need.
- 2.39 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.
- 2.40 There is an intermediate market for those earning between £20,000 and £49,999, and many households who are currently allocated to social housing can potentially afford intermediate housing products. If more intermediate provision is made this may release some pressure on social housing. <sup>17</sup>
- 2.41 Section 8 of the SHMA estimates the future requirement for all tenures of housing. The initial projections in paragraph 8.72 identified an overall housing requirement between 2007 and 2026 for 50,100 with a tenure split of 29.4% market housing,

<sup>15</sup> Ibid page 36

<sup>&</sup>lt;sup>16</sup> ORS SHMA page 99. This figure of 4,800 includes Broxbourne at 850. Broxbourne is not covered by this report.

<sup>&</sup>lt;sup>17</sup> Ibid page 109

49.2% Intermediate Housing and 21.5% Social Rented Housing. This was an extreme conclusion and reflects house prices at their peak in 2007/08. The report goes on at paragraph 8.90 to confirm that house prices used for affordability were reduced from the 2007/08 level by 21.5% to take into account the long term house price trends. This then changes the tenure mix requirements to 54.3% Market Housing, 24.2% Intermediate Housing and 21.5% Social Rented Housing. This overall requirement varies dramatically across the individual districts as detailed in Figure 136 of the report with the highest level of market housing required being 79.5% in Harlow and lowest at 4.9% in Brentwood.

The report goes on to provide 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 but tenure and local Authority Area as detailed below.

Local Authority		Market		
Local Additionity	Social Rent	Intermediate	Affordable Total	Housing
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%

Source – Extract from Figure 152, ORS SHMA 2008 page 146<sup>18</sup>

- 2.43 The assessment of future housing requirements if complicated by the short term volatility of house prices and the uncertainty attached to their rate of recovery. The report therefore looks at two main conclusions. The level of social rented requirement stays constant, as this group only have enough income to afford social housing rents. The requirement for intermediate housing reduces and market housing increases proportionately when lower prices from long terms trends are used.
- 2.44 Much works has also been undertaken on the needs of specific sub groups including, the needs of older people, black and minority ethnic groups, the BME dimension of homelessness and rural households.
- 2.45 Section 11 of the report provides some discussion on the key policy issues and implications arising from the SHMA. The key conclusion is that it will be possible for Local Authorities to use the information in the SHMA to inform the evidence base, but that it will need to assessed alongside additional information provided by an economic appraisal of development sites in order to establish a robust and credible affordable housing target. <sup>19</sup>

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<sup>&</sup>lt;sup>18</sup> Figures may not sum due to rounding.

<sup>&</sup>lt;sup>19</sup> Ibid, paragraph 11.71, page 194

2.46 The key message is that the SHMA estimates of housing requirements are not necessarily targets in themselves. Account needs to be taken of a number of local policy aims and priority groups before tenure and size mix targets can be met.

#### **EAST HERTS**

#### Local Plan

- 2.47 The East Hertfordshire Local Plan Second Review 2007 was adopted by the Council on the 18th April 2007. It has been saved for a period of three years. After April 2010 only specific policies will be saved, and saved policies will gradually be replaced by the Local Development Framework. The Local Plan defines affordable housing as 'housing provided, with subsidy, both for rent and low cost market housing, for people who are unable to resolve their housing requirements on the local privates sector housing market because of the relationship between local housing costs and incomes'<sup>20</sup>.
- 2.48 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. Targets for allocated sites are detailed in the Settlement Chapter, whilst other aspects of allocated and windfall sites are assessed on the basis of Policies HSG3 and HSG4. 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 dwellings<sup>21</sup>.
- 2.49 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.

#### Local Development Scheme – June 2007

- 2.50 The Council published 'version 2' of their Local Development Scheme in November 2006. However, the Council has not been able to meet many of its key milestones set out in the LDS. According to the 2008/09 Annual Monitoring Report the Council intend to update the Local Development Scheme in 2010 In order to update the timetable.
- 2.51 The Council is currently working on its first Development Plan Document the Core Strategy and will be proceeding with an Issues and Options consultation in the summer of 2010. The revised LDS will then follow.
- 2.52 The Core Strategy will be followed by a Site Allocations DPD that will allocate specific sites for development and a Development Control Policies DPD that will set out the policies used by the Council's Development Control Service to determine planning applications.

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<sup>&</sup>lt;sup>20</sup> The East Hertfordshire Local Plan Second Review 2007 paragraph 3.10.1

<sup>&</sup>lt;sup>21</sup> Ibid, paragraph 3.10.3

- 2.53 The Council has already adopted a number Supplementary Planning Documents as indicated below:
  - Landscape Character Assessment SPD 2007
  - Historic Parks and Gardens SPD 2007
  - Sustainability Appraisals: Indicators and Targets SPD 2007
  - Affordable Housing and Lifetime Homes SPD 2008
  - Planning Obligations SPD 2008
  - Vehicle parking Provision at New Development SPD 2008
  - Open Space, Sport and Recreation SPD 2009

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

- 2.54 The Affordable Housing & Lifetime Homes Supplementary Planning Document (SPD) supplements the Council's policies on affordable housing and Lifetime Homes in the Local Plan Second Review 2007. It was adopted on 9th January 2008 and is a material consideration that will be taken into account.
- 2.55 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 villages<sup>22</sup>.
- A site may not be suitable for affordable housing provision if it does not lead to the creation of sustainable mixed communities and will result in a successful housing development. If a developer believes that a successful development cannot be achieved evidence needs to be submitted to the Council. According to paragraph 6.20, to achieve mixed, inclusive and sustainable communities, affordable housing should apply:
  - On all sites be distributed across the site rather than provided in on single parcel;
  - On sites incorporating 30 or more residential units be provided in groups of no more than 15% of the total number of units being provided or 25 affordable units, whichever is the lesser'23.
- In relation to size, type and tenure of affordable housing, this will be influenced by the minimum requirements of the Affordable Housing provider and determined by Policy HSG4 of the Local Plan. The SHMA was not available when the SPD was published; however, based on the results of the 2004 Housing Needs Survey it is

<sup>&</sup>lt;sup>22</sup> Affordable Housing and Lifetime Homes SPD – 2008 P.10

<sup>&</sup>lt;sup>23</sup> Ibid P.14

stated that social rented affordable housing constitutes the majority need in the district.

2.58 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'<sup>24</sup>.

## Planning Obligations SPD - 2008

- 2.59 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.
- 2.60 Thresholds are in place in the six main settlement areas for affordable housing (as outlined in policy HSG3 of the Local Plan), nature conservation and landscape, sustainable construction, community recycling facilities and all other contributions including healthcare and County Council contributions. Thresholds may be lowered in Category 1 and 2 villages as outlined by Local Plan Policies OSV1 and OSV2. A number of Indicative standard charges are outlined in Table 4 of the Planning Obligations SPD for amenity green space and outdoor sports facilities, etc. In addition to the items in Table 4 the Council may seek planning obligations for other items for which standard charges have not been developed as detailed in paragraph 2.10.5 of the SPD<sup>25</sup>.

# New Affordable Homes Commissioning Brief – September 2008

- 2.61 East Herts published a commissioning brief on new affordable housing in September 2008. The brief accompanies the Council's Affordable Housing and Lifetimes Homes Supplementary Document (SPD) and the Council's Housing Strategy and is underpinned by the Housing Needs Survey 2004 (updated in 2005)
- 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 guality standards.
- 2.63 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;

<sup>&</sup>lt;sup>24</sup> Ibid, P.15, paragraph 6.29

<sup>&</sup>lt;sup>25</sup> Planning Obligations SPD – 2008, P.14/15

- Properties to be fixed equity, marketed at 60% open market value;
- 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)
- The briefing states that, 'the Council will no longer support the provision of social housing grant or other public subsidy for affordable housing on any site subject to a planning agreement under Section 106 of the Town and Country Planning Act 1990, unless it can be proved by use of a recognised economic appraisal toolkit that the scheme becomes unviable'26. Schemes brought forward which are not subject to a s106 agreement will be considered for public subsidy, including the Housing Corporation Funding, in accordance with the Council's Schedule of rates ranging from £24,500 for a shared ownership unit up to £41,000 for a rented 3 bed unit.

Annual Monitoring Report 2008-2009

2.65 The Annual Monitoring Review measures housing delivery against the Adopted Local Plan target of 11,100 dwellings from 1991 to 2011 and the East of England target of 12,000 dwellings from 2001 to 2021.

Target Source	Plan Period	Total Housing Required	Total Housing Built During Plan Period
Adopted Local Plan Second Review	1991-2011	11,100	10,161
East of England Plan	2001-2021	12,000	4,032

Source Annual Monitoring Report 2008/09 December 2009 P.22

- 2.66 The PPS3 five year supply calculation 2010/11 to 2014/15 indicates that East Herts has 4.9 years supply. The housing trajectory indicates the Council will need to identify further sites for housing the Local Development Framework
- 2.67 A total of 145 affordable homes were completed during the monitoring year which represents 24% of all completions. However, when the adopted Local Plan thresholds are applied, the percentage of affordable homes is 35%. 77% of development has taken place in the District's six main settlements. This includes

<sup>&</sup>lt;sup>26</sup> New Affordable Homes Commissioning Brief, East Herts District Council, September 2008, p.2

Bishop's Stortford (31%), Ware (24%) and Hertford (13%). Monitoring also indicates that the type and size of dwellings completed during 2008/2009 is broadly in line with the Council's Housing Needs Survey.

### **BRENTWOOD POLICY REVIEW**

Brentwood Replacement Local Plan - August 2005

- 2.68 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 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<sup>27</sup>. At the time of adoption the 1998 Housing Needs Study (Fordham Research Services) recommended that the Council should seek to negotiate a proportion of at least 30% affordable housing on new development sites. It was also suggested that any target for shared ownership accommodation should be 5% and this can be added to the 30% for subsidised rented housing. The Council therefore adopted the 35% target. Policy H9 also defines affordable housing as being both subsidised rented accommodation and low lost market housing.
- 2.69 There is also Policy H10 which 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.
- The Local Plan notes that the housing stock is relatively recent in construction with 70% of private sector properties having been built since 1945. 3, 4 and 5 bed Detached and semi-detached dwellings are the dominant housing type and property prices are high. These factors combined with a shortfall in the supply of rented housing mean that it can be quite difficult for first time buyers to access the housing market. Paragraph 3.7 states that, "there is therefore, a need to direct housing policies towards making best use of land that is available for housing and to ensure that an appropriate mix of housing types, sizes and tenures is available within the Borough to meet all needs"<sup>28</sup>.
- 2.71 Paragraph 3.12 presents a list of 22 major housing sites which contribute to housing provision over the period 1996 to 2011. These sites are defined as, 'sites with unimplemented planning permission, either implemented or unimplemented, or with potential capacity (at an average density assumption) for 12 or more dwellings'.<sup>29</sup> Policy H1 makes provision for 1,450 new dwellings (net) to be built during the period 1996 to 2011. Apart from housing allowed for within the context of policy H10 and Green Belt policies, new development should be provided within the existing settlement areas.
- The Local Plan also outlines that at the time of publication much of the supply of housing development land already had planning permission and that there are many small sites which fall below affordable housing thresholds. The Urban Capacity Study indicated that within the villages opportunities for delivering affordable housing would only arise if a threshold of 5 dwellings and above or 0.16 hectares and more was adopted.

<sup>29</sup> Ibid, paragraph 3,12

<sup>&</sup>lt;sup>27</sup> Brentwood Replacement Local Plan, 2005, Chapter 3

<sup>&</sup>lt;sup>28</sup> Ibid, paragraph 3.7

2.73 In May 2008 the Council made an application to the Secretary of State to save all but 24 of the Adopted Replacement Local Plan policies beyond the automatic 3 year period. This also includes policies H9 and H10. Policy H1 is not saved.

## 5 Year Land Supply

2.74 There is no SHLAA available. However, the Council published a 5 year land supply assessment April 2010 to March 2015 in November 2009. The assessment shows that Brentwood can demonstrate a 5 year supply of housing of 951, this is 172 more than the current RSS requirement of 779 and equates to a land supply of 6.1 years.<sup>30</sup> The Council is in the process of completing its first SHLAA.

### Local Development Framework

- 2.75 The First Local Development Scheme (LDS) was approved by the Secretary of State on 1 August 2006. A Second LDS was approved by the Secretary of State on 25 July 2007 and was formally brought into effect on 27 September 2007. The preparation of Local Development Documents is behind schedule and the LDS is now in need of further review.
- The Council continues to work on the LDF Evidence Base and is at an early stage in the process of preparing the Core Strategy and Development Control DPD. The first formal stage of consultation on Issues and Options commenced on 11 November 2009 for a 6 week period ending on 23rd December 2009. The Issues and Options paper notes that a high proportion of the existing dwellings within the Borough are larger three and four bedroom detached properties. However, indications show that the predominant need within the Borough is for smaller one and two bedroom properties. Recent completions have aimed to address this, with 80% of completions in 2007/8 being one and two bedroom dwellings<sup>31</sup>.
- 2.77 The key issues to be addressed, as identified by the Issues and Options Paper, are how to:
  - Provide an appropriate range of housing in terms of types, sizes, tenure and mix:
  - Secure more affordable housing provision in new housing development through a review of the thresholds and the proportion of affordable housing required, in order to meet the identified local need:
  - Deliver an appropriate split of affordable housing between social rented and intermediate:
  - Deliver sufficient special needs accommodation;

<sup>&</sup>lt;sup>30</sup> 5 Year Deliverable Housing Supply Assessment: 1 April 2010 to 31 March 2015 Nov 2009 – Paragraph

<sup>&</sup>lt;sup>31</sup> Brentwood Borough's Sustainable Community Strategy and Local Development Framework Core Strategy DPD, paragraph 7.29, page 33

- Meet the housing needs of an ageing population, particularly through the provision of accessible housing;
- Develop links with other care organizations<sup>32</sup>.
- 2.78 The 2007 Local Development Scheme also sets out a summary timetable for the following Local Development Documents:
  - Site Specific Allocations DPD;
  - Urban Place Supplement SPD (formally adopted on 26 September 2007);
  - Planning Obligations & Developer Contributions SPD;
  - Shopfront Guidance SPD formally adopted on 11th March 2010;
  - Town Centre SPD (consultation on the sustainability appraisal commencing on Wednesday 16 December 2009 and finishing on Wednesday 27 January 2010).

2008/09 Annual Monitoring Report and Delivery Rates – December 2009

2.79 The 2008/09 Annual Monitoring Report indicates that since 2001, 1,631 dwellings have been delivered across the Borough, leaving an outstanding requirement of 1,860 equating to an average of 156 per year. The five year requirement is therefore 779 dwellings. Annual net dwelling completions have been above the RSS average annual requirement, apart from 2004/05 and 2005/06. 251 net dwellings (273 Gross dwellings) were completed during the monitoring year, including 78 affordable housing units. Of these completions 29 units (37%) were social rented dwellings. The following table illustrates delivery rates of affordable housing from 2001/02 to 2008/09<sup>33</sup>:

Year	Number of Affordable Dwelling Completions	% of Total Permanent Dwelling Completions
2001/02	81	44.75
2002/03	14	5.30
2003/04	0	0.00
2004/05	2	1.32
2005/06	21	18.10
2006/07	39	17.89
2007/08	82	34.02
2008/09	78	27.37

Table: Affordable Housing Completions 2001/02 to 2008/09

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<sup>&</sup>lt;sup>32</sup> Core Strategy Issues and Options, November 2009, p.34

<sup>&</sup>lt;sup>33</sup> Annual Monitoring Report 2008/09 Table 7, page 31

#### **EPPING FOREST POLICY REVIEW**

#### Local Plan

- The Epping Forest Local Plan Alterations were adopted in 2006. House prices in the Epping Forrest District are among the highest in the country. Demand for housing is driven by a number of factors the proximity to London, the accessibility of the urban areas, the high standard of housing and an increasing amount of single households<sup>34</sup>. As such, there is an acute need for affordable housing, especially for key workers. Paragraph 9.29a defines affordable housing as, "that which is provided for people who are unable to rent or buy on the open market"<sup>35</sup>.
- 2.81 Policy H1A: "As the Replacement Structure Plan target of 2,400 (NET) houses during the period 1996 to 2011 has already been substantially exceeded, no further provision for housing land is made by this plan"<sup>36</sup>.
- 2.82 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.
- 2.83 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.
- The 2003 Housing Needs Study recommended that an affordable housing target of 40% on suitable sites should be implemented. 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.

## 5 Year Land Supply

A five year land supply paper was published in December 2009. 1,309 units are predicted to be completed within the next 5 year financial year period. This reduces to 1,178 when a 10% non-build rate is applied. The Council have demonstrated that it has a 5 year supply of land for housing, and actually has a surplus of land supply in the short term. If the 1,178 residual is compared to the

<sup>&</sup>lt;sup>34</sup> EFDC Local Plan Alterations, Adopted July 2006, Chapter 9 Housing (Replacement Chapter) paragraph 9.1a page 65

<sup>35</sup> Ibid Paragraph 9.29a, page 72

<sup>&</sup>lt;sup>36</sup> Ibid, paragraph 9.12a page.67

EEP target of 3,500 between 2001-2021, the remaining units left to provide for are  $538^{37}$ 

2.86 A total of 1,784 net new dwellings have been completed within the district since 2001:

Year	Net Additional Dwellings
2001-2002	237
2002-2003	271
2003-2004	208
2004-2005	240
2005-2006	286
2006-2007	277
2007-2008	108
2008-2009	157
Total	1,784

Source 38

## LCB Affordable Housing Directory August 2009 (LCBHSR)

2.87 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 rations of property types (houses, flats, etc.) and bedroom numbers.

### 2008/2009 Annual Monitoring Report - December 2009

Core Output Indicator H5 measures gross affordable housing completions and during the monitoring period 2008-09, 31 (gross) affordable units were completed. Of these 31 units, 29 were for social rent, and 11 were intermediate homes. This is a significant improvement on the previous year's figure of 14 affordable homes. The 14 in 2007/08 were split over two sites, both of which were 100% affordable housing developments. Many smaller sites which fall below the affordable housing threshold have come forward historically. The housing trajectory indicates that within the next few monitoring years, several larger sites above the 15 unit threshold are expected to progress to completion, all of which will provide a proportion of affordable housing.

 $<sup>^{37}</sup>$  EFDC 5 Year Assessment of Land Supply 01/04/2010 to 31/03/2015 page 3

<sup>38</sup> Ibid Page 1

2.89 From 2001/02 to 2006/07 annual net dwelling completions remained well above the East of England Plan annualised target of 175. However, in the monitoring year (2007/08) completions fell to 108 due to the slowdown in the economy. In 2008/09 the 157 dwellings completed in the monitoring period is lower than many of the previous years, but does represent an improvement from 2007/08, although the recession is still having a marked effect on house building. The overall annualised average since 2001 equates to 223 which still exceeds the EEP annualised target of 175.

Monitoring Year	Net number of dwellings completed
2001/02	237
2002/03	271
2003/04	208
2004/05	240
2005/06	286
2006/07	277
2007/08	108
2008/09	157
Total	1,784 (223 annualised)

Source AMR 2007/08 Paragraph 5.2.1.3

### Local Development Framework

- 2.90 The Local Development Scheme was revised and re-submitted to GO East in November 2007. The LDS is currently under review, and a new version is due for publication in early 2010. According to the 2007 LDS the following Local Development Documents were planned (adoption dates may occur later):
  - Core Strategy Adoption August 2010 (Issues and Options to now occur in Spring 2010).
  - Land Allocations Adoption May 2011
  - North Weald Area Action Plan Adoption May 2011
  - Land Around Harlow Area Action Plan Adoption May 2011

#### S.106 Contributions

The 2009 AMR confirms that the delays to the Core Strategy have had a knock on effect upon the rest of the LDF. The Land Allocations DPD and Area Action Plan for 'Lands around Harlow' have not been progressed and can't be until the strategic decisions about growth are made through the Core Strategy. The Area Action Plan for 'Land at North Weald' is no longer needed, as the proposals for North Weald Airfield in earlier drafts of the East of England Plan were subsequently removed. The Council continues to build on its Evidence Base to support the ongoing LDF process.

### **UTTLESFORD POLICY REVIEW**

#### Local Plan

- The Uttlesford Local Plan was adopted in January 2005. Policy H1 proposes the development of 5,052 dwellings for the period 2000 to 2011. At the time it was estimated that the scale of requirements for affordable housing was nearly 300 homes per annum for the period 2001 to 2006, reducing to about 230 homes per annum for the next five year period to 2011. According to paragraph 6.6, the Local Plan has also identified 8 strategic sites.
- 2.93 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.
- 2.94 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 need<sup>39</sup>.
- 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 unviable<sup>40</sup>.
- 2.96 According to Policy H10 'Housing Mix', all development sites of 0.1 hectares and above or 3 or more dwellings will be required to include a significant proportion of market housing comprising smaller properties.
- 2.97 Policy H11 deals with affordable housing on "Exception Sites". The development of affordable housing will be permitted outside settlements on a site where housing would not normally be permitted provided that a number of criteria are met. 100% of the dwellings are to be affordable and provided through an RSL, the development will meet local needs that cannot be met in any other way, the development is a scale appropriate to the size, facilities and character of the settlement and the site adjoins the settlement.

### Local Development scheme

- 2.98 The third revision of the Local Development Scheme was submitted to the Secretary of State in January 2009.
- 2.99 **Core Strategy:** Further public participation on the preferred options will run for the 6 weeks between 15<sup>th</sup> February 2010 and 9<sup>th</sup> April 2010. Consultation on the

<sup>&</sup>lt;sup>39</sup> Uttlesford Local Plan Adopted January 2005, and Policies Saved in 2007. Para. 6.28

<sup>&</sup>lt;sup>40</sup> Ibid Para. 6.29

- submission Core Strategy will take place in winter 2010 before the Strategy is submitted for examination in May 2011 with adoption in Spring 2012.
- 2.100 **Development Control DPD:** According to the LDS, work is due to begin on this DPD in January 2011. However, work on the document will begin when the Core Strategy has been through examination.
- 2.101 **Site Allocations DPD:** Commencement will begin in January 2011 and according to the LDS the DPD is scheduled to be adopted in October 2013.

## Core Strategy

- 2.102 The Council formally consulted on the Core Strategy Preferred Options document from 30<sup>th</sup> November 2007 to 11<sup>th</sup> January 2008. Objective 5 is 'to meet the housing requirement for Uttlesford as set out in the East of England Plan and to make sure that the housing being provided creates balanced communities and meets local housing needs in terms of type and tenure including affordable housing and special needs housing'.
- Affordable housing is also a key issue identified by the Council. Policy DC1 (Housing 2.103 Need) outlines that the preferred option proposes that the current 40% target should be maintained applying to schemes of 15 units or more or sties of 0.5 ha or above. Any future policy will also take on board the outcomes of the Strategic Housing Market Assessment. The housing strategy will provide for 9,666 new homes between 2001 and 2024. The revised Core Strategy currently out to consultation increased the overall number of new home to be provided to 10,150 between 2001 and 2026. With reference to the overall target early indications from the SHMA recently commissioned is that the proposed 40% may need to increase to meet identified needs. Viability is to be tested before further revisions are progressed. The new Draft also suggests a new policy be introduced to manage the phasing and delivery of housing. Policy DC2 outlines the Housing Strategy for the district. This has also been revised to make reference tot 10,150 homes over the extended period of 2001 to 2026. Further details on the 5 year supply is contained within the Annual Monitoring Report

2.104 From 2000/01 to 2008/09 3,230 dwellings have been delivered as illustrated by the following table:

Year	Net Additional Dwellings
2000-2001	224
2001-2002	182
2002-2003	396
2003-2004	241
2004-2005	344
2005-2006	542
2006-2007	326
2007-2008	538
2008-2009	437
Total	3230

Table: Net additional dwellings – 2000/01 to 2008/09

2.105 The target in the Uttlesford Plan is to provide 980 affordable homes between 2000 and 2011. The following table includes both exception sites and affordable housing as an element of market housing schemes. In total, 143 affordable homes were delivered during the monitoring year 2008-2009. Of this total 104 were social rented and 39 were intermediate homes. Planning permission exists for a further 421 affordable units the majority of which will be on major sites. If all these sites come forward the district target will be exceeded.

Year	Number of Affordable Homes Completed
2000-2001	26
2001-2002	28
2002-2003	14
2003-2004	25
2004-2005	112
2005-2006	172
2006-2007	50
2007-2008	56
2008-2009	143
Total	626

Table: Affordable Housing Provision – 2000/01 to 2008/09

2.106 Uttlesford District Council's five year land requirements based on the RSS East of England Plan for the period 2010 to 2015 will be 2,150 or 430 per annum.

Appendix 3 in the AMR identifies a range of allocated and unallocated sites that will

be developed in the five years totalling 2,724 units. The significant risk to achieving this supply is the deliverability of land North East of Elsenham – a key element of the Core Strategy. However, even if this were removed from the trajectory the council would still achieve 2,124 or 99% of its plan target.

#### HARLOW POLICY REVIEW

Adopted Replacement Harlow Local plan – July 2006

2.107 The Harlow Replacement Local Plan was adopted in July 2006 and defines affordable housing as:

"Housing which is accessible to people whose income does not enable them to afford to buy or rent for their needs on the free housing market. The monthly cost of housing should not exceed thirty per cent of the household's net monthly income" <sup>41</sup>.

- 2.108 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 suitability<sup>42</sup>". 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'<sup>43</sup>.
- 2.109 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.
- 2.110 Policy H6 states that, 'on housing sites where a Registered Social Landlord will not be involved in the management of affordable housing, housing for successive occupants will be secured by the use of planning obligations. The legal agreement will restrict the occupancy to those who cannot compete in the housing market'<sup>44</sup>.

The Affordable Housing Supplementary Planning Document - March 2007

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 sites<sup>45</sup>.

<sup>44</sup> Ibid Chapter 6, paragraph 6.8.11

<sup>&</sup>lt;sup>41</sup>Adopted Harlow Replacement Local Plan paragraph 6.8.8

<sup>42</sup> Ibid, Chapter 6, paragraph 6.8.7

<sup>&</sup>lt;sup>43</sup> Ibid

<sup>&</sup>lt;sup>45</sup> Affordable Housing SPD, Paragraph 4.2

- In relation to thresholds affordable housing will be required on development sites of 15 or more dwellings or 0.5 a hectare or more 46.
- 2.112 Paragraph 5.10 states that the Council will require a minimum of 5 units or 25% of all new affordable units built to comply with full Lifetime Homes Standard.
- 2.113 According to paragraph 7.1, the Council will only accept New Build HomeBuy as low cost home ownership provided through S.106 agreement. Any other forms of HomeBuy such as Open Market HomeBuy will not be counted as contributions to affordable housing.
- 2.114 Paragraph 7.1 also indicates that 'HomeBuy will only be acceptable as where the required minimum equity purchase is no greater than 50%. The Council will only accept New Build HomeBuy as low cost home ownership provided through Section 106 Agreement's unless otherwise negotiated and agreed jointly by the Council's Planning and Strategic Housing Service' 47.
- 2.115 The SPD also expects developer contributions of free serviced land and grant free affordable development on Section 106 sites, unless the necessary financial information is submitted to justify the need for public subsidy. 48

## Annual Monitoring Report 2008-09

2.116 The adopted Regional Spatial Strategy allocates 16,000 dwellings for the Harlow Area, including possible urban extensions in Epping Forest District Council and East Hertfordshire District Council. According to the Annual Monitoring Report, 'it is estimated that the quantum of additional dwellings between 2001 and 2021 that this study should seek to distribute between the urban extensions in the Harlow Area is approximately 11,000 dwellings'<sup>49</sup>. Until an options appraisal has been completed which will indicate how the dwellings may be apportioned in the District's Core Strategies, 8000 dwellings has been assumed as Harlow's apportionment over the same period. The following table illustrates the net additional completions in the district from 2004/05 to 2008/09:

Year	Net Dwellings
2004/05	102
2005/06	358
2006/07	159

<sup>46</sup> Ibid Paragraph 4.3

<sup>&</sup>lt;sup>47</sup> Ibid Paragraph 7.1,

<sup>&</sup>lt;sup>48</sup> Ibid Section 8

<sup>&</sup>lt;sup>49</sup> Annual Monitoring Report, paragraph 5.4 page.20

2007/08	145
2008/09	259

Table: Net completions 2004/05 to 2008/09<sup>50</sup>

- 2.117 In the monitoring year there were 32 Affordable Housing completions, equating to 12.12% of total completions. This falls well below the Council's target of 33%. Of the total number of affordable housing units completed, 11 were intermediate and 21 were social rented.
- 2.118 Affordable Housing completions have been reliant on permissions that incorporated an affordable housing element. Newhall and the Gateway scheme will be providing a significant proportion of affordable units and have yet to complete at the rate expected in the future. Other developments set out in the housing trajectory will also incorporate at least 33% affordable units and will therefore contribute more in coming years.

### Local Development Scheme

2.119 The most recent Local Development Scheme that came into effect in summer 2007 is the 'Local Development Scheme 2007 Issue 4'. Both the Affordable Housing SPD and the Common Guidelines SPD were adopted in March 2007. It was anticipated that the LDS would be revised to change the start date for DPD production to coincide with the adoption date of the East of England Plan. However, the RSS identifies Harlow Area for significant growth and the Council is working with East Herts DC and Epping Forest DC to align Core Strategy DPD's. It is anticipated that consultation on Issues and Options will commence in spring 2010.

## Harlow Housing Strategy 2008 – 2013 (November 2008)

- 2.120 This document sets out a framework for housing activity and investment by the Council and its partner organisations. It sets out the long term vision for housing in Harlow up to 2013. There are four priority areas within the strategy:
  - Maximise the delivery of a range of new affordable homes and make the best use of existing resources to help those in housing need.
  - Improve the condition of Harlow's housing stock across all sectors
  - Help develop sustainable and safe communities
  - Provide an efficient and effective housing service that provides value for money.
- 2.121 The Stansted Area housing Partnership (SAHP) is a partnership between Harlow, Uttlesford, Braintree and East Herts. Councils following the granting of planning

<sup>50</sup> Ibid page 20

permission by Uttlesford to BAA to increase passenger through put at 25 million. BAA Stansted contributed £2.2 million towards the finding of affordable housing within a 10 mile radius of the airport. A key feature of the SAHP is the development of a cross boundary nomination agreement, giving the opportunity for residents of the four councils to move across local authority boundaries.

Appendix Three - Current and Projected Economic Conditions

#### 3.0 Market Trends

#### Introduction

- In order for our analysis of viability to be dynamic it is important to understand past trends in order to assess how future markets might perform. While past history has its own specific characteristics which may be peculiar to the period in question, there are still fundamental principles that can be seen that will suggest how markets might perform in the future. 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 future scenarios.
- 3.1 It is important to note that our analysis is limited to the housing market. Where we discuss the general economy this is in the context of its action upon the housing market both nationally and locally. It is not our purpose, here, to predict general economic conditions either locally or nationally. However, we do look at the effects of the economy on the housing market both in terms of price trends and affordability.
- 3.2 Although local housing markets are contingent upon local conditions, they are also subject to both the economic conditions internationally and nationally. More specifically, they are subject to national regulation and constraints. In particular, the availability and cost, generally, of finance dictates the price that home owners are able to afford. The costs of finance for individuals will be influenced by national lending practices and interest rates. These, in turn, are influenced by the national economy and, increasingly, the role of international markets is important.
- 3.3 Looking at past market performance can only give trends and the interpretation of how markets act must be considered carefully. For instance, the housing market recession of the late 1980s and early 1990s has been considered to be due to the dramatic increase in base interest rates and the cost of finance. While this admittedly caused a number of home owners to get into financial difficulties, some commentators<sup>51</sup> have pointed to the possibility that the housing market had already been in decline and that the decline in values had already started to take place. In these terms the housing market recession of the 1990s would have happened in any case notwithstanding the effect of Black Wednesday in 1992. The housing market was beginning to recover just before that stage and the dramatic increases in the cost of borrowing immediately following Black Wednesday heralded a further period of house price stagnation. However it is still not clear whether this was part of the general cycle in house price inflation/deflation and, in particular, Fred Harrison points to an approximate 18 year boom and bust land and property cycle that has been evident over the long-term<sup>52</sup>. In other words, it may be possible that

<sup>52</sup> Even the current Prime Minister when he was Chancellor of the Exchequer, acknowledged the effect of a volatile housing market: "Most stop-go problems that Britain has suffered in the last 50 years have been led or influenced by the more highly cyclical and often more volatile nature of our housing market" - Gordon Brown, Chancellor of the Exchequer, House of Commons, June 2003

<sup>&</sup>lt;sup>51</sup> See especially Fred Harrison "Boom Bust: House Prices, Banking and the Depression of 2010" Shepheard Walwyn 2005, Andrew Oswald "The Great 2003-2005 Crash in Britain's Housing Market" November 2002, Cameron Muellbauer and Murphy "Was there a British House Price Bubble? Evidence form a Regional Panel" March 2006

these property price fluctuations occur despite general economic trends and, indeed, may be their very cause.

- Another peculiar feature of the housing market is the positive price: transaction volume correlation<sup>53</sup>. When prices inflate, the number of transactions increases; trading is more frequent and volume is higher when prices go up and vice versa<sup>54</sup>. This means that we have to look at a more dynamic approach to the assessment of the performance of the housing market.
- Rady and Ortalo-Magne<sup>55</sup> suggest a model to explain the underlying reasons for "boom-bust" housing market cycles. It assumes households will generally prefer home-ownership and that the income of young households plays a critical role in the fluctuations in the market. The market is sensitive to income "shocks" amplified by credit constraints which affect the timing of household moves that explains the positive price: transaction volume correlation.
- The actions, generally, of first-time buyers is to access the market at a level that can be afforded but with the prospect that they will increase housing consumption as their means allow. Thus, as their income increases, they are able to increase their ability to pay and as income increases for first-time buyers in turn then this will increase the capital for those wishing to make purchases up the housing ladder. Liberalisation of the finance market has a similar effect to increasing income especially at the bottom of the market.
- 3.7 Credit liberalisation coincided with the high rate of property price inflation during the 1980s. Together with the increase in tax allowance in the 1983 budget for Mortgage Interest Tax Relief at Source (MIRAS) and the ability for couples to pool their resources, access to mortgages for young first time buyers helped many on to the housing ladder. Right to Buy social housing (following 1980) also encouraged many tenants to enter the housing market thereby increasing the potential market for subsequent homebuyers in the latter part of the 1980s. As Rady and Ortal-Magny have pointed out, all of this "prompted a major adjustment of the distribution of debt and housing across households, hence a period of exceptionally many transactions". They point to the rapid increase of transactions in the 1980s to "repeat buyers bringing forward their moves up the property ladder".
- House price growth, however, only remains sustainable while incomes are able to support values. As we have pointed out, the main driver of this is first time buyer (starter home) purchase, typically those households in the 24-35 age group. Pressure on these households is strong because, generally, these are the most highly geared. Subsequent movers in the late 1980s those that had bought in

<sup>&</sup>lt;sup>53</sup> The effect of the ability to borrow and asset value is discussed by Lamont and Stein where "over some regions, a fall in asset prices can actually lead to reduced asset demands, because it impairs the ability of potential buyers to borrow against the assets". Owen Lamont (University of Chicago) and Jeremy C Stein (MIT Sloan School of Management) "Leverage and House-price dynamics in US Cities"

<sup>&</sup>lt;sup>54</sup> See Wenlan Qian "Heterogeneous Agents, Time-varying Macro Fundamental and Asset Market Dynamics." Haas School of Business University of Berkeley (2008)

<sup>&</sup>lt;sup>55</sup> Rady and Ortalo-Magny "Housing Market Dynamics: On the Contribution of Income Shocks and Credit Constraints" Department of Economics, University of Munich (2001)

- the early 1980s were dependent upon the generation of high levels of equity in order to realise their progression in the housing market.
- An examination of information form Halifax shows that the relationship between incomes and house prices increased rapidly from 3.59 (average income to average house price) in 1983 to 4.43 33 in 2009<sup>56</sup>. In the London Commuter Belt area, the main SHMA report<sup>57</sup> reports on house prices to incomes. Figure 134 of that report shows the long term trends for the East region while figure 94<sup>58</sup> shows the variation in median full time earnings to average house prices. This varies between under 8 times income for Harlow and 11 times for Epping Forest. This shows that the income to house price ratio in the sub-region is particularly challenging. The long term trend position would suggest that prices will need to fall further in order to meet more reasonable affordability levels and that, despite the rise in values during the last half of 2009, there is still a possibility that values will have to fall considerably.
- 3.10 However, looking solely at the relationship between prices and incomes in isolation does not explain the full picture. Many commentators<sup>59</sup> have pointed to other features of both the economy and the housing market itself.

# Unresponsive Supply

- 3.11 The Council for Mortgage lenders (CML)<sup>60</sup> has remarked on the supply of housing being unresponsive to prices being for two main reasons. Firstly, the durability of housing being such that new housing becomes only a small proportion of the total stock and, secondly, that bringing new housing to the market is both lengthy and has significant barriers.
- Taking these factors into consideration, the inelastic supply of housing leads to the "demand driven" increases in price. Any increase in demand due, say, to demographic changes locally or increases in incomes, will lead directly to high housing market inflation.
- 3.13 While certainly it is undeniable that constraints on supply, including the constraints imposed through the planning system, have an effect on the housing market, this will have different effects regionally and demand side influences would appear to be more easily modelled.

<sup>&</sup>lt;sup>56</sup> Halifax Price Index Published by Lloyds Banking Group (House Price earnings Ratio)

 $<sup>^{57}</sup>$  London Commuter Belt (East)/M11 Sub-region Strategic Housing Market Assessment 2008 Report of Study Findings Jan 2010 paragraphs 8.85 to 8.87

<sup>58</sup> Ibid page 102

 $<sup>^{59}</sup>$  See especially Charles River Associates on behalf of the Council for Mortgage Lenders ("Managing the Housing Market", 2001)

<sup>&</sup>lt;sup>60</sup> Ibid pp11 - 12

3.14 We have already pointed to some of the features of the economy that have had an effect on the housing market including credit liberalisation. Interest rates directly affect the costs of housing. These rates have fluctuated widely during the last 25 years as the following graph shows.

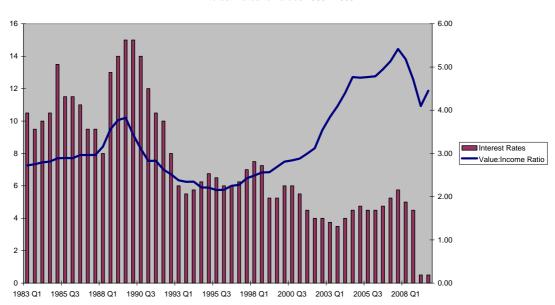


Figure 3 Interest Rates to Values 1983 - 2009

- 3.15 While this analysis is only general it is difficult to suggest that interest rates on their own have a direct effect on house prices. It is clear that the high interest rates of the late 1980s and early 1990s were a contributing factor in the unaffordability of housing but it becomes more difficult to prove a direct causal link to house price inflation or deflation. Interest rates and the cost of money has become less during the period since 1997 when the government gave control of monetary policy to the Bank of England. While this period coincided with the house price inflation of the mid 2000s, the control of interest rates has failed both to control the rapid increase in property prices (2000 to 2007) and the subsequent crash in prices from that period. There has been an increase in values during the last half of 2009. Curiously, interest rates have been at the lowest point ever since March 2009 and house prices have increased in the latter half of the year. While there is a correlation, the causal link is still difficult to establish as actual new mortgage rates are still high because of the general difficulties with obtaining mortgage finance.
- Other economic factors, both internationally and nationally, have occurred which may or may not have directly affected the housing market to some extent or another. These include the economic recession of 1979-1980; the abolition of exchange rate controls in 1979; the high unemployment rates and miners strike during the mid 1980s; discontinuation of membership of the ERM in 1992 (Black Wednesday); the introduction of the minimum wage by the incoming Labour government; the Bank of England given the power to set interest rates; and the recent worldwide recession. All of these factors have affected both supply side and demand side factors in the housing market.

## The Housing Market and Economic Growth

3.17 The current economic position is looking fragile according to many commentators. While the economy officially came out of recession at the end of 2009, any recovery to pre recession levels looks unlikely for quite some time. Employment and wage levels are under pressure and the ability of households to be able to afford current house price levels is uncertain. While it is not certain that this will lead to further falls in house prices that would enable access for first time buyers, undoubtedly this will act as a brake on rapid house price growth in the near future.

#### Conclusion

- 3.18 While our analysis would suggest that there is a strong causal link between affordability and housing market prices. Other market conditions, and particularly the cost and availability of finance (including interest rates), are, together, important factors in driving house price inflation. Other macro economic factors are important but it would appear that the volatility of house prices may be somewhat independent of economic factors. Some commentators were suggesting in the early and mid 2000s that the house price increases were sustainable and that the volatility of the past had been "due to a combination of unstable demand and unresponsive supply" 61.
- 3.19 The Council for Mortgage Lenders in 2001, in line with many commentators at the time, were suggesting that the housing market booms and busts were a thing of the past for the following reasons:
  - There are less likely to be large swings in interest rates;
  - Large swings in financial liberalisation are less likely;
  - There is likely to be more macroeconomic stability;
  - Greater financial products increase the flexibility of loan conditions.

Finally, the CML believed at that time that:

"The risk to consumers is now lower than during the last house price boom, but it seems more likely that borrowers – rather than lenders – are misperceiving the risks".

Other economic factors have been important recently. For example, it is clear that the sub-prime crisis in America which led to the worldwide recession has affected the UK economy generally and the affects affordability in the housing market. This may not have been foreseen but it is also clear that house prices generally and starter homes in particular, had reached an unsustainable level. This suggests that there may be some further falls in property prices in order to enable affordability to return to the market. If we are return to our suggested 3.5 times income analysis then prices in the UK will have to fall a further 14%.

<sup>&</sup>lt;sup>61</sup> CML 2001 page 18

- 3.21 This is especially a problem for a number of further reasons:
  - Unemployment is increasing and the recession is likely to continue;
  - There is pressure on incomes generally;
  - Public finances are under pressure and there will have to be cuts in expenditure early in the new period of the new government;
  - Finance is increasingly difficult to obtain, high loan-to-value (LTV) mortgages (especially for first-time buyers) are difficult to obtain and, despite low base interest rates, finance is expensive (particularly for those wishing to enter the market for the first time);
  - Market confidence is low and households expect prices to fall further.
- 3.22 While these factors are influential on the market, the government has (in the 2009 budget and with additional subsequent announcements), attempted to support the house building industry through a number of measures. It is not yet clear how these measures will affect the property market either in the short or the long terms.
- Therefore, a number of factors have affected the housing market and the affordability of housing. These have included macro-economic influences, the worldwide recession. However, there are also systemic pressures from within the workings of the housing market which affect the affordability of housing and, ultimately, how the market works. In the next section we look at the regional and local situation.

## **Regional and District Analysis**

- In our analysis of market trends in Section 1 of this section of the report, we highlighted some of the general characteristics of the housing market in the subregion with regard to affordability especially of first-time buyers. This is a general assessment based on average incomes and house prices. More specific economic analysis of the sub-region and local housing sub-markets has been identified in the Strategic Housing Market Assessment<sup>62</sup>.
- Generally, the evidence shows that there is high pressure on salaries within the sub-region in the next two years due to the effects of the economic recession. Therefore, while the pressures on affordability will be alleviated, the evidence would suggest that prices will still have to fall by approximately 25% before they reach an affordable position. This is taken into account in the 4 scenario positions for future house prices that we consider in the final section of this report.

## **Scenario Testing**

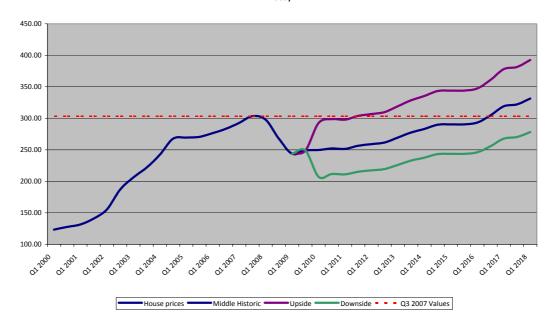
- 3.26 We have seen that the sub-region has been affected by both the recent high house price inflation and the effects of recession that have been prevalent in the rest of the region and country. The rise in house prices has exceeded median incomes by a considerable amount and despite the recent falls in house prices affordability in all of the Districts remains a problem.
- Our analysis of past trends, and taking into account the continuing pressures due to the recession, suggests that there may be a long period of stagnation in the property market despite the rises during the 3<sup>rd</sup> quarter of 2009.
- However, we want to test scenarios that assume both a more optimistic position as well as the downside. Therefore, using past trends as a guide, we suggest that there are 3 potential directions (or scenarios) that should be tested representing a range of potential alternative directions the market might take<sup>63</sup>.
- The first of these is an "upside" position where values show an increase in prices 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).
- 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.
- 3.31 The second scenario is our "middle historic" and assumes property values follow the trend seen between 1992 and 2003. The short term follows a continuing decrease in values with a slow recovery with affordability ratios remaining fairly benign until the later part of the period.

<sup>&</sup>lt;sup>62</sup> ORS SHMA Section 8

<sup>&</sup>lt;sup>63</sup> Annex A sets out the percentage assumptions for the three scenarios including the assumptions for other cost and value indicators.

- Finally, 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.
- 3.33 All three scenarios can be seen in the following diagram:

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



- 3.34 We propose a dynamic assessment of viability. To do this we will use the three scenarios to feed into our viability analysis by taking the house price indices that are generated. House price inflation is one component of our proposed future proofing methodology and we will combine projections for other elements of the inputs including Retail Prices Index, Construction Cost forecasts and land value forecasts. We will then use these forecast indices to inform the viability assessments over the length of the development periods as well as to assess variable development start dates. A matrix of costs will be used which uses the property price values described above together with some assumptions on RPI and cost construction indices.
- 3.35 It is anticipated that these projections will remain constant between the different property value scenarios so that the relative effect of the upside, downside and middle projections for values can be assessed. Annex A includes how different cost and value elements are linked to the various indices. For example, professional fees will be linked to construction cost inflation while planning fees may be linked to RPI.
- 3.36 Sites will be coming forward through the planning process over different timescales. Therefore, our dynamic approach will allow us to consider developments with completions up to 2026. Clearly, projections at later dates must be treated with caution but this will give a general indication about possible long-term viability. This may allow the council to look at a flexible approach to policy setting over the time of the Core Strategy that will enable challenging but realistic targets for affordable housing to be set.

### Annex A

## **Scenario Testing Parameters**

- 3.37 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 two basic scenarios being, 1) the upside and, 2) the downside. The three scenarios are as follows:
- 3.38 1) Upside Scenario: This is an optimistic view of property market values. This assumes a rapid re-correction of values to 2007 levels and then a future performance trend similar to the previous period (1992 to 2003). Year on year house price inflation and indices will be as follows (Q1 1997 = 100):

	Upside 9	
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%

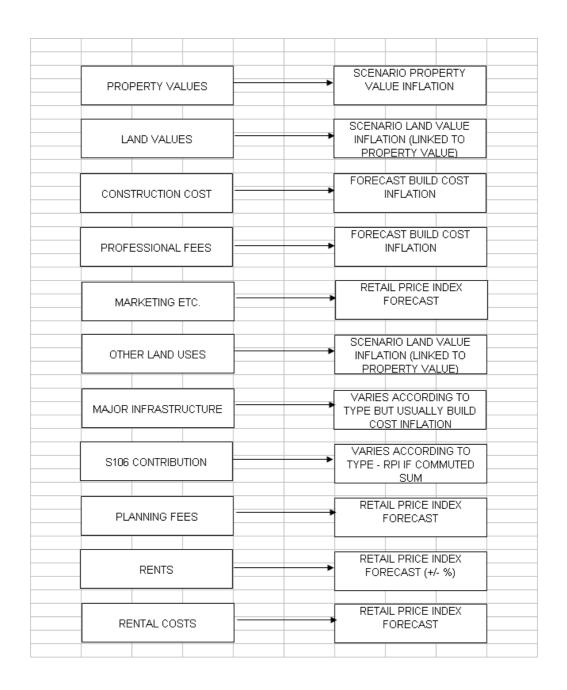
2) The Downside Scenario: This is a pessimistic view of property values and possibly a "worst-case" position. In this scenario it is assumed that initial values will continue to fall and that the market will continue to be at approximately 30% bellow the long term trend. The breakdown of the index for 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%				

3.40 3) The Middle Historic Scenario: 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 be affordable for average incomes (assuming incomes maintain their historic rate of increase) 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%			

- These indices will be used within our financial modelling. Our research will establish local values in Quarter 4 of 2009. Sales will be tested assuming the above inflation rates so that sales in a future quarter will be calculated back according to the following formula where x is the future value, y is the current value, z is the future quarter index and w is Q42009 (the base quarter) index:
- 3.42 x = (y/z) \* w
- 3.43 For the purposes of the model 2009 values will be recalculated to index to 100 in order that the property prices can be assessed on the same basis as the indices for RPI, construction costs, land values and incomes. The modelling assumes that there will be variable rates of inflation for different elements of the development cashflow. Thus, certain elements will be linked to each of the four main cost/value inflation points in the following manner:



3.44 These forecast figures will feed into the financial modelling so that a complete 30 year projection of values and costs can be made. This will either be on a flat rate basis or on variable year on year rates according to the status of the information that is available at the time of the main assessments. The assumptions made will be clear in the final viability report to the Council. It is likely that early year on year assumptions on various inflation rates may be variable but medium to long term rates will be standard rates that do not vary year on year.

# Appendix Four – Notional Site Composition

# 4.0 Notional Site Composition

The unit type, size profile and density of each notional development scheme can be found in the tables below.

	m2	1500 unit 40 dph	3000 unit 40 dph	3000 unit 30dph	3000 unit 50 dph	5000 unit 30 dph	5000 unit 50 dph
1 bed studio	32	_	-		-		
1 bed 2 p flat	48	138	276	180	340	280	566
2 bed 3 p flat	60	100	200	160	260	260	434
2 bed 4 p flat	67	100	200	160	260	260	434
2 bed 3 p house	71	125	250	200	300	334	500
2 bed 4 p house	76	250	500	360	500	600	830
3 bed 4 p house	81	125	250	250	300	416	500
3 bed 5 p house	86	200	400	480	500	780	834
3 bed 6 p house	95	62	124	160	100	260	168
3 bed 6 p house	100						
4 bed 6 p house	107	300	900	760	380	1250	634
4 bed 7 p house	108						
4 bed 7 p house	115						
5 bed 7 p house	115	100	200	290	60	560	100
6 bed 8 p house	125						
Total units		1500	3000	3000	3000	5000	5000

	m2	250 unit 30 dph	250 unit 50 dph	250 unit 67dph
1 bed studio	32	0	0	0
1 bed 2 p flat	48	0	0	40
2 bed 3 p flat	60	0	0	40
2 bed 4 p flat	67	0	0	40
2 bed 3 p house	71	0	0	0
2 bed 4 p house	76	30	100	56
3 bed 4 p house	81	0	0	0
3 bed 5 p house	86	60	100	0
3 bed 6 p house	95	60	0	0
3 bed 6 p house	100	0	0	64
4 bed 6 p house	101	20	0	0
4 bed 6 p house	107	0	50	0
4 bed 7 p house	108	60	0	0
4 bed 7 p house	115	0	0	10
5 bed 7 p house	115	20	0	0
6 bed 8 p house	125	0	0	0
Total units		250	250	250

	m2	150 unit 30 dph	150 unit 50 dph	150 unit 70 dph
1 bed studio	32	0	0	0
1 bed 2 p flat	48	0	0	24
2 bed 3 p flat	60	0	0	24
2 bed 4 p flat	67	0	0	24
2 bed 3 p house	71	0	0	0
2 bed 4 p house	76	18	60	36
3 bed 4 p house	81	0	0	0
3 bed 5 p house	86	36	60	0
3 bed 6 p house	95	36	0	0
3 bed 6 p house	100	0	0	36
4 bed 6 p house	101	12	0	0
4 bed 6 p house	107	0	30	0
4 bed 7 p house	108	36	0	0
4 bed 7 p house	115	0	0	6
5 bed 7 p house	115	12	0	0
6 bed 8 p house	125	0	0	0
Total units		150	150	150

	m2	50 unit 30 dph	50 unit 50 dph	50 unit 67dph	50 unit 70 dph	50 unit 100 dph	50 unit 120 dph
1 bed studio	32						8
1 bed 2 p flat	48			8	8	16	16
2 bed 3 p flat	60			8	8	12	14
2 bed 4 p flat	67			8	8	12	12
2 bed 3 p house	71					2	
2 bed 4 p house	76	6	20	10	12	6	
3 bed 4 p house	81						
3 bed 5 p house	86	12	20				
3 bed 6 p house	95	12					
3 bed 6 p house	100			14	12	2	
4 bed 6 p house	101	4					
4 bed 6 p house	107		10				
4 bed 7 p house	108	12					
4 bed 7 p house	115			2	2		
5 bed 7 p house	115	4					
6 bed 8 p house	125						
Total units		50	50	50	50	50	50

	m2	15 units 30 dph	15 units 50 dph	15 units 67 dph	15 units 70 dph
1 bed studio	32				
1 bed 2 p flat	48			4	4
2 bed 3 p flat	60			4	4
2 bed 4 p flat	67			1	2
2 bed 3 p house	71			2	2
2 bed 4 p house	76	1	6	4	3
3 bed 4 p house	81				
3 bed 5 p house	86	4	6		
3 bed 6 p house	95	2			
3 bed 6 p house	100				
4 bed 6 p house	101	4	3		
4 bed 6 p house	107				
4 bed 7 p house	108	4			
4 bed 7 p house	115				
5 bed 7 p house	115				
6 bed 8 p house	125				
Total units		15	15	15	15

	0	10 units	10 units	10 units	10 units	3 units	3 units
1 bed studio	<b>m2</b> 32	30 dph	50 dph	67 dph	70 dph	40 dph	20 dph
	48			2	4		
1 bed 2 p flat			0				
2 bed 3 p flat	60		2	4	4		
2 bed 4 p flat	67		2	4	2		
2 bed 3 p house	71						
2 bed 4 p house	76		2				
3 bed 4 p house	81	2					
3 bed 5 p house	86	4				1	
3 bed 6 p house	95		4			1	
3 bed 6 p house	100						
4 bed 6 p house	101	2					
4 bed 6 p house	107						1
4 bed 7 p house	108	2				1	1
4 bed 7 p house	115						1
5 bed 7 p house	115						
6 bed 8 p house	125						
Total units		10	10	10	10	3	3

# Appendix Five – Value Area Information

#### 5.0 Value Area Information

5.0 Brentwood sales values are set out in the table below. The figures are £ per square metre and show the values that have been used for each Postcode Sector and for each unit type.

Туре	CM13	CM14	CM15	CM4	RM4
Flat	3216	3220	3014	3800	2976
Terrace	2692	3130	2821	3292	3627
Semi	2937	2985	3132	3699	3609
Detached	3365	2969	3194	3604	3984

5.1 Uttlesford sales values are set out in the table below. The figures are £ per square metre and show the values that have been used for each Postcode Sector and for each unit type.

Туре	CB10	CB11	CM22	CM23	CM6
Flat	2467	2375	2589	2606	1875
Terrace	3501	2590	2898	2820	2764
Semi	2875	2989	2757	2693	2705
Detached	3750	4218	3510	3091	3089

East Herts sales values are set out in the table below. The figures are £ per square metre and show the values that have been used for each Postcode Sector and for each unit type.

Туре	CM23	SG11	SG12	SG13/14	SG9
Flat	2606	2946	2786	3384	2366
Terrace	2820	3166	3121	3309	2722
Semi	2693	3353	2933	3556	3662
Detached	3091	4692	5134	4929	2732

Harlow sales values are set out in the table below. The figures are £ per square metre and show the values that have been used for each Postcode Sector and for each unit type.

Туре	CM17	CM18	CM19	CM20	Additional Value Area
Flat	2661	1853	1781	2103	3326
Terrace	2515	1999	2203	2159	3144
Semi	2663	2421	2757	2783	3329
Detached	3600	2725	4194	3846	4500

5.4 Epping Forest sales values are set out in the table below. The figures are £ per square metre and show the values that have been used for each Postcode Sector and for each unit type.

Туре	CM16	CM17	CM5/EN9	IG10	IG7	RM4
Flat	3504	2661	2762	3360	3685	2976
Terrace	3471	2515	2933	3397	2833	3627
Semi	4157	2663	3368	3277	3146	3609
Detached	4790	3600	4229	5679	5431	3984

# Appendix Six – Section 106/CIL

## 6.0 Section 106/CIL

# 6.0 Essex County Council Requirements

- **Education** (education contributions have been applied to 10 units or more but not 1 bedroom units) Flats £3,852 per unit, Houses £8,085 per unit
- Transport £2,714 per unit
- Libraries £235 per unit
- Waste management £288 per unit
- Public art -1% build cost including fees
- Adult learning and social care £127 per unit

# 6.1 Hertfordshire County Council Requirements<sup>64</sup>

# **Contributions Table and Calculator**

Bedrooms*	1	2	3	4	5+	1	2	3
		•	HOUSES				FLATS	
	Market & other					Ma	rket & ot	her
Primary Education	£231	£1,036	£2,469	£3,721	£4,692	£93	£816	£1,392
Secondary Education	£263	£802	£2,561	£4,423	£5,662	£47	£444	£1,677
Nursery Education	£35	£175	£340	£459	£545	£32	£195	£270
Childcare	£14	£64	£138	£199	£244	£8	£57	£89
Youth Facilities	£6	£16	£50	£82	£105	£3	£13	£41
Library Facilities	£98	£147	£198	£241	£265	£77	£129	£164
Total	£647	£2,240	£5,756	£9,125	£11,513	£260	£1,654	£3,633
			HOUSES			FLATS		
		\$	Social Rer	nt		Social Rent		
Primary Education	£247	£2,391	£3,860	£5,048	£5,673	£44	£1,167	£2,524
Secondary Education	£62	£450	£1,676	£2,669	£2,405	£14	£261	£1,084
Nursery Education	£39	£453	£475	£503	£955	£9	£216	£313
Childcare	£12	£121	£188	£226	£277	£4	£65	£113
Youth Facilities	£2	£8	£31	£51	£55	£1	£6	£21
Library Facilities	£48	£91	£130	£156	£155	£38	£82	£107
Total	£410	£3,514	£6,360	£8,653	£9,520	£110	£1,797	£4,162

 $<sup>\</sup>mbox{\tt *uses}$  an assumed relationship between bedrooms and habitable rooms

<sup>64</sup> Hertfordshire County Council – Planning Obligations Guidance Toolkit for Hertfordshire whole doc jan 2008.doc

# 6.2 East Herts District Council Requirements<sup>65</sup>

# **Summary of Indicative Standard Charges**

Number of Bedrooms per dwelling	1	2	3	4	5	6+
Occupancy rate (multiplier)	1.08	1.32	1.77	2.48	2.92	3.45
Parks and Public Gardens (section 3.2)	£207	£253	£340	£476	£561	£662
Outdoor Sports Facilities (section 3.3)	£573	£701	£940	£1,317	£1,551	£1,832
Amenity Green Space (section 3.2)	£89	£108	£145	£203	£239	£283
Provision for Children and Young People (section 3.2)	£O	£103	£138	£193	£228	£269
Recycling Facilities (section 3.5)	£72	£72	£72	£72	£72	£72
Community Centres and Village Halls (section 3.7)	£153	£187	£251	£352	£415	£490
Accessibility (section 6.2)	£625	£750	£1,125	£1,500	£1,500	£1,500
Total if all standard charges are applied	£1,719	£2,174	£3,011	£4,113	£4,566	£5,108

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<sup>&</sup>lt;sup>65</sup> East Herts District Council, Planning Obligations Supplementary Planning Document, October 2008

# 6.3 Harlow Council Open Space Requirements<sup>66</sup>

Number of Bedrooms	Contribution per unit
1	£788
2	£1,313
3	£1,836
4	£2,363
5	£2,363

# 6.4 Uttlesford District Council – Open Space Assumptions Used for the Purposes of this Study

# **Open Space Contribution**

Number of Bedrooms per dwelling	1	2	3	4	5	6+
Total Charge	£869	£1,166	£1,563	£2,190	£2,578	£3,046

 $<sup>^{66}</sup>$  Based on table 3 of Harlow District Council Open Space, Sport and Recreation SPD 2007

# Appendix Seven – Development Timetable

# 7.0 Development Timetable

# 7.1 10 and 15 Unit Schemes

	Start Month	End Month
Main Development Cashflow	1	24
Planning Application	2	6
Site Acquisition	7	8
Construction (Single Phase)	9	18
Sales Period (Single Phase)	15	24
Receipt from Affordable Housing	17	18

# 7.2 50 Unit Scheme

	Start Month	End Month
Main Development Cashflow	1	31
Planning Application	2	6
Site Acquisition	7	8
Construction (Single Phase)	9	27
Sales Period (Single Phase)	18	31
Receipt from Affordable Housing	26	27

# 7.3 150 Unit Scheme

	Start Month	End Month
Main Development Cashflow	1	45
Planning Application	2	6
Site Acquisition	7	8
Construction (Single Phase)	9	39
Sales Period (Single Phase)	18	45
Receipt from Affordable Housing	38	39

# 7.4 250 Unit Scheme

	Start Month	End Month
Main Development Cashflow	1	51
Planning Application	2	6
Site Acquisition	7	8
Construction (Single Phase)	9	45
Sales Period (Single Phase)	18	51
Receipt from Affordable Housing	44	45

# 7.5 1000 Unit Phase of a 3000/ 5000 unit scheme

	Start Month	End Month
Main Development Cashflow	1	75
Planning Application	2	6
Site Acquisition	7	8
Construction (Single Phase)	18	66
Sales Period (Single Phase)	30	75
Receipt from Affordable Housing	40	60

# 7.6 1500 Unit Scheme

	Start Month	End Month
Main Development Cashflow	1	95
Planning Application	2	6
Site Acquisition	7	8
Construction (Single Phase)	9	81
Sales Period (Single Phase)	24	95
Receipt from Affordable Housing	30	80

Appendix Eight – Thornes Chartered Surveyors Letter

## 8.0 Thornes Chartered Surveyors letter



Mr Simon Mitchell Levvel Leigh House 147 Leigh Road Wimborne BH21 2AD

Our Ref: GT/SD/LCB East Viability Assessment

Tuesday 9th February 2010

Dear Simon.

#### Re: LCB East Viability Assessment - Open Market Values.

Thank you for your letter of the 1st February 2010 in connection with the above and following our various telephone conversations I would confirm that we have assessed the information presented by you on a postcode sector level and have checked these against comparables available on a postcode basis through Rightmove and also through Mouse Price.com.

We found that generally the prices stated are approximately correct. However, those urban properties at lower densities can become misleading in some of the postcode areas where the houses are of larger 4/5 bedroom accommodation. There have been few sales in some of the postcode areas and the average figures therefore being produced are not necessarily correct.

We would suggest that in replying to the authority the 4/5 bedroom units should be stated to be within the urban area and not having more than 0.1 of a hectare. However, due to the small number of properties that have been sold over the recent past, the upper quartile properties in the survey appear to produce a higher value against their square meterage. Taking the case of Brentwood CM4 the average Rightmove detached house on the basis of 31 sales comes in at 511,290 rather than the hometrack figure upper quartile average of 105 square metres at 795,000. This means that the value per square metre for the upper quartile is only an average and generally these figures are too high.

22, Parkstone Road, Poole, Darset. EH15 2PG 1: 01202 684004 fr: 01202 683462 e: info@thornes.org.uk w: www.thornes.org.ul



land, property & planning consultants, energy assessors, valuers & chartered surveyor

This is also the case looking at Epping Forest, IG10, where the upper quartile is again £820,000 at 105 square metres and £6,490 per square metres for the average. In the upper range of the houses in the survey, we would suggest it is very unlikely that the 6 bedroom eight person houses could only have a meterage of 125 this is more likely to be in the range of 180/200 square metres and therefore have a smaller meterage and value figure.

#### Land Values

We have checked land values throughout the various areas being investigated and would report that over the last two year period there have been very few land sales generally. However, those that have taken place have been influenced by the various section agreement costs or infrastructure payments and it is therefore very difficult to be specific with regard to the various postcode areas as in some of these areas there have been no land sales recorded over the last three year period. However, from our experience we would confirm that over the last three year period land prices have been effected by not only the credit crunch but also the increased requirement in either social housing contributions or 106 agreements or a combination of both. In this context we have found that high density housing (i.e Flats) have become less attractive to build due to the costs and generally poor sales and the land price has therefore reduced to a figure in the region of 25% of the GDV of the actual units. This figure rises as the density of building becomes less and up to a point where very low density housing could be 45%/50% of the GDV of the unit. We would therefore place a percentage on the various bands as follows.

- Land values in the various areas or high density flat development sites at approximately 25% of the GDV of the completed units.
- Land values for terraced housing in an urban environment up to 81 square metres in size figures in the region of 30% of the GDV of the completed unit.
- Land values for detached housing to 100 square metres in size a figure nearer to 35% of the GDV of the unit.
- Land values for detached housing with density in the region of 10 units per acre (25 DPH) 38% of the GDV of the completed unit.

Land values for 5/6 bedroom houses is in the region of 40% of the GDV of the unit.

Land values for properties having a square meterage of over 150 square metres is between 40%-50% of the GDV of the unit depending on the area of land to be sold with the unit.

We would comment that these figures have been realised recently on land sales throughout the areas being investigated but may again be influenced by the up coming national infrastructure levy (nil), we have estimated this could effect the land values to the extent of a further 10% in a downwards direction in the case of residential property and a figure could be as high as 40% with regard to industrial or commercial land values if the charge is around £50 per square metre, which equates to around £100,000 per acre.

We would suggest that it could be beneficial to meet to conclude adjusting the figures on the range of upper property meterage and figures and will await hearing from you accordingly.

Yours sincerely,

Graham C Thorne FRICS FCIOB

# Appendix Nine – Stakeholder Engagement

# 9.0 Stakeholder Engagement

## Stakeholder Methodology

9.0 In consultation with the Council it was agreed that the most appropriate method of stakeholder engagement for this study would be the use of an email/postal questionnaire and two stakeholder events. A copy of the questionnaire can be found at the end of this section.

#### Stakeholder Ouestionnaire

- 9.1 The questionnaire sought to ascertain stakeholder's views on key assumptions that would be modelled to assess the impact upon development of a range of affordable housing policy options. Thus the questionnaire outlined a range of key assumptions in order that development conditions within the sub region could be fairly reflected within the parameters of the study.
- 9.2 Each Council provided a comprehensive contact list of circa 314 active stakeholders within the sub region. These included, not exclusively, Registered Social Landlords (RSLs), private developers, house builders, planning and other development consultants and land owners.
- 9.3 A copy of the questionnaire and letter was sent to all stakeholders on the week beginning 21<sup>st</sup> December 2009 with a requested response date of January 14<sup>th</sup> 2010. In total, 10 responses were received. The questionnaire responses were used to inform the modelling assumptions.

#### Response Rate

- 9.4 A total of 10 Questionnaires were returned and the response rate by type of organisation was as follows:
  - Agents/ Consultants 3
  - Developers 3
  - RSLs 4

#### Response to Specific Questions

## 9.5 Q.1 Scheme Types

Respondents were asked to select appropriate site types that reflect the land being brought forward for development. The questionnaire presented four scheme types labelled A to D. Respondents were also asked to include any other scheme types that have not been considered.

- The study should also consider the provision of flats within Estate Housing at circa 50 dwellings per hectare.
- One stakeholder with interests in East Hertfordshire and Harlow stated that Sustainable Urban Extensions also need to be tested. A range of different densities with a range of dwelling types including flats, terraces, maisonettes,

semi-detached and detached with an overall average between 44 dph and 70 dph need to be tested.

- It is important to ensure that a consistent and appropriate definition of density is applied.
- An additional option should be considered testing densities in the region of 25-30 dph at Greenfield locations at the edge of the existing urban areas.
   This could be suitable for sustainable urban extension schemes such as in North Harlow.
- Rural scheme types should be added to address local needs.

#### 9.6 Q.2 Affordable Housing Percentages

- Sensitivity analysis should be undertaken from 15% to 50% at 5% intervals.
   Percentages below 20% will need to be tested.
- The percentage will vary according to the tenure mix, availability of social housing grant, Section 106 requirements and abnormal costs. Testing and policy will need to spell out assumptions and how other factors will be taken into account in adjusting affordable housing requirements.
- A range of between 10% and 40% would be a more appropriate range of affordable housing to test based on affordable housing within the area.
- If the study is to inform the formulation of planning policy it is important that appropriate flexibility is incorporated in the wording.
- 9.7 Q.3 Thresholds It was proposed that Levvel will test a 15 unit threshold and sites as low as 5 dwellings.
  - A broad range of thresholds should be considered for different areas. It is unlikely that sites accommodating 5 units or less will be able to contribute an element of affordable housing.
  - If rural sites are being considered the threshold will need to be from 5 units to capture affordable housing.

## 9.8 Q.4 Values Required to Bring Land Forward for development

In Brentwood a net value of at least £1,600,000 per hectare must be achieved in order for land to be brought forward for development (assuming that community benefits and affordable housing have already been taken off). The response rate to this question was low although one respondent was able to advise on land values in Epping Forrest.

#### Greenfield/ Agricultural Land

Epping Forest - £3,000,000 per hectare

#### **Brownfield Land**

Epping Forest £2,000,000 per hectare

#### Industrial Land

Epping Forest £2,000,000 per hectare

One respondent noted that there can be no assumption generally applied. What is sufficient to bring land forward will depend upon existing land use value and personal financial circumstances.

- 9.9 Q.5 Land Value Expressed as a Percentage of the Development Value
  - Greenfield land values typically account for 30% to 40% of development value.
  - Brownfield land accounts for 30% to 40% of development land value
  - A range of 30% to 40% was recommended for industrial land.

One respondent noted that "a rule of thumb" of 35-40% of GVD is highly inaccurate but this will have an influence on landowner's expectations. Site specific abnormal costs and the level of planning obligations need to be taken into account.

- 9.10 Q.6 Is 17% of Gross Development Value and acceptable profit rate?
  - Profit levels of 10% to 25% should be tested at 2% intervals.
  - The forward sale of affordable housing needs to be accounted for.
  - A profit level of around 22% is more realistic in reflecting the high level of risk to reward and also the likelihood of future tax increases.
  - Acceptable returns will vary depending on the nature of the scheme. A range of 17-25% should be tested as the minimum return to the developer.
  - Current conditions are likely to dictate a higher margin in new sites. One respondent noted that at present the margin sought is likely to be around 25 28% of GDV. In more normal market circumstances profit is still likely to be 20 to 22% of GDV for normal market housing, however, this is also dependent on site specific risks.
- 9.11 Q.7 Should we be assessing profit/return on a different basis e.g. profit on cost, internal rate of return?
  - Profit on cost should be used it represents an industry benchmark. IRR
    could also be used but may be overly detailed for the purposes of the study.
  - Profit should be assessed on the basis of how house-builders in particular assess profit/risk.
  - The internal rate of return should be looked at where a scheme includes flats.
  - It would be appropriate to test a number of indicators and these would vary from scheme to scheme.

- The Internal Rate of Return can be used.
- Another benchmark is the "first year deficit" where the developer looks to subsidise by a first year deficit of £500 per unit.
- One respondent that the Internal Rate of Return is a useful means of comparing investment decisions.

#### 9.12 Q.8 Build Costs

Stakeholders were asked for their views on an appropriate build cost per m2 on the basis of Gross Internal Floor Area. Some stakeholders were able to advise on build costs for public buildings. Only one stakeholder advised on build costs for private dwellings and has requested that the information provided remain confidential. A variety of responses were received:

Development Type	Build Cost
Flatted Development:	Public £1,050 to £1,600 m2
Terraced Housing/ Town Houses:	Public £1,050 to £1,600 m2
Semi- Detached:	Public: £1,050 to £1,700 m2
Detached:	Public 1,300 m2

### 9.13 Q.9 Dwelling Sizes

Stakeholders were asked what dwellings size should be assumed for the following flat and house types. Respondents suggested the following ranges for private and public dwellings in each category:

Unit Type	Private Dwelling Size	Public Dwelling Size
1 bed flat	46 to 60m2	30 to 53m2
2 bed flat	56 to 74m2	Public 45 to 74m2
2 bed house	61 to 84 m2	50 to 84m2
3 Bed House (Semi Detached)	80 to 105m2	55 to 86m2
3 bed house (Detached)	90 to 111 m2	60 to 111m2
4 bed house (Detached)	100 to 121 m2	65 to 121 m2

## 9.14 Q.10 Rent

Respondents gave their views on gross rents, management, maintenance, voids and the cost of major repairs for a number of dwelling types ranging from a 1 bed flat to a 4 bed house. Two respondents completed this section of the questionnaire and their suggested figures for Harlow and Epping Forest are included. Another respondent provided general rents that were not specific to any one local authority.

Unit Type	Gross Rent	Management	Maintenance	Voids	Major Repairs
1 Bed Flat	£74.12- £78.19	£500	£500 - £600	1.9% - 2.5%	0.5% - 0.8%
2 Bed Flat	£80.97 - £89	No Response	No Response	No Response	No Response
2 Bed House	£83.29 - £94	No Response	No Response	No Response	No Response
3 Bed House	£93.47- £107.40	No Response	No Response	No Response	No Response
4 Bed House	£103.66- £117	No Response	No Response	No Response	No Response

#### 9.15 Q. 11 Capitalisation of Rents

- 9.16 Views were sought on whether the proposed assumption of 6% for the capital receipt from social rented properties is correct.
  - It should be highlighted that a yield of 6% may fluctuate. A yield of 7% should also be considered.
  - Whist 6% is likely to be reasonable in the current market this is likely to vary and should therefore be subject to sensitivity testing.

# 9.17 Public Subsidy

- 9.18 It was explained that the methodology would initially assume a nil public subsidy baseline before testing the effect of public subsidy. Stakeholders were asked for recommendations for an appropriate level of public subsidy. The following responses were received:
  - £50,000 subsidy per unit for social rented and £20,000 per unit for intermediate rent.
  - A range of levels should be tested drawing on past allocation but also taking account he likely future changes to grant allocation.
  - Recent schemes have achieved an average of £40,000 per social rented and £18,000 per shared ownership unit.
  - In Epping, one respondent recommended £65,000 per social rented and £35,000 per intermediate HomeBuy unit.
  - £22,000 per shared ownership and £50,000 per social rented unit.

#### 9.19 Further Comments

- Affordable Housing Viability should be considering affordable Gypsy and Traveller sites which are a form of affordable housing according to the CLG.
- Shared ownership is selling very well in Epping Forest.
- The grant rates in the East of England HCA region tend to be low and this has proved a challenge to develop schemes in the region.
- 9.20 Following the stakeholder events held on 14<sup>th</sup> January 2010, there were requests from some stakeholders for more information therefore a précis of stakeholder feedback at the events and more information on the study methodology was forwarded by email to all stakeholders who had responded to the questionnaire, attended a stakeholder event and/or those who had expressed an interest in the study but were unable to attend the stakeholder events. The information (sent in the form of a brief report) was sent on 22<sup>nd</sup> January and can be found at the end of this section.
- 9.21 Further information received from stakeholders as a result of this additional report is summarised below:

- There is a need to identify what is the minimum land value that needs to be achieved in order to ensure that landowners will sell their land and whether any variations exist across the sub region. Some respondents disagreed with the intention to apply percentage uplifts to the Existing Use Value of site.
- The importance of the cost/value of land was emphasised. There were concerns about the real cost of affordable housing in the current market and increased build costs associated with the Code for Sustainable Homes Standards. Some also voiced their concerns about setting targets over the period of the LDF. Some commented on the over supply of intermediate rented flats and of general needs flats. It was further commented that grant levels may also decrease in the next bidding round.
- Although the proposed methodology reflects a situation where land is purchased and developed as a single entity this may not reflect the full range of ways that land is brought forward for development.
- It is important that all relevant inputs and methodologies are very carefully considered and justified in the context of the local markets which the study covers. The final paper should clearly identify the range of inputs applied to the study.
- The proposed methodology will include two main tests of a development's viability. The residual land value will be measured as a proportion of gross development value and will also be compared to alternative use values. One respondent noted that considerable care must be exercised with such an approach to ensure that land comes forward on the basis of a willing seller. Most landowners will wish to see a commercial uplift in land value which properly reflects the risks of development.
- It is important that variations to inputs and assumptions between authorities is set out clearly from the outset in order to ensure the ranges are appropriate and clarification is required as to which inputs which are constant across the sub region and those which are local authority specific.
- One respondent noted that the approach to mixed developments is not clear.
   This was of concern as development economics on larger and mixed use schemes will be very different to small/ medium sized residential schemes.
- Any target that is eventually agreed upon by the constituent Councils should, in keeping with PPS3, serve as the basis for further negotiation between Council and developer sot that full regard is given to the viability of each application. Any percentage target set out in the Core Strategy should not be treated as a fixed requirement. A degree of flexibility is required having regard for the level of developer contribution that can be reasonably secured through each application.
- Planning policy should not allow for a proportion of land value to be secured for the community benefit. This is strictly contrary to national planning policy and the principle that local authorities should not attempt to share in the profits of development.
- To reflect costs and expectations the calculation model should consider net developer profit.

- One respondent stated that the model sets an indicative price at a
  percentage above existing use value. There were concerns about this
  assumption as landowners do not enter into negotiation with developers on
  the basis of a default price.
- It may be helpful if the assumptions loaded into the viability model were tested against a range of actual schemes to see whether this would have resulted in implementable schemes.
- In relation to developer profit one stakeholder noted that to properly reflect costs and expectations the model should consider a net developer profit.
   This figure should be net of tax that is potentially payable to a landowner. It was advised that this would provide a true indicator of the net residual land value.
- Any calculation should identify what is the minimum land value that landowners expect to achieve from their sites in order that they will sell their land.



# STRATEGIC HOUSING MARKET ASSESSMENT: AFFORDABLE HOUSING VIABILITY ASSESSMENT

# STAKEHOLDER QUESTIONNAIRE













The London Commuter Belt East/M11 Sub-Region Consortium has commissioned Opinion Research Services to undertake the Strategic Housing Market Assessment with the results being tested by a further study of the economic viability. Levvel has been appointed to undertake the study on affordable housing economic viability in the sub-region which incorporates BRENTWOOD, EAST HERTFORDSHIRE, EPPING FOREST, HARLOW and UTTLESFORD council areas. The study will be undertaken in the context of Planning Policy Statement (PPS) 3: Housing (November 2006).

The overall aim of the study is to produce a sound, robust technical evidence base that will support the sub-regional Strategic Housing Market Assessment (SHMA). It will ultimately inform Core Strategy affordable housing policies in all five local authority areas and contribute to other objectives identified by the local authorities including the effects of the current economic climate with regard to sites coming forward for residential development. The study will test the impact of affordable housing on development viability on a strategic basis, relevant to the local circumstances in each local authority area. It will look at a number of issues including (but not exclusively):

- The levels of affordable housing that could be sought by planning policy;
- Thresholds that could be justified;
- Optimum mix of affordable housing tenure type that can be justified;
- The level of affordable housing provision that could be viable with and without public subsidy.

The study will make recommendations as to the appropriate level, form and type of affordable housing that could be supported in new housing schemes in each local authority, perhaps with different targets and thresholds in different housing market area.

## **Key Stakeholder Engagement**

The advice and opinions of house builders, registered social landlords, land agents and other relevant key stakeholders are crucial to make sure the study approach is appropriate and robust. Any assistance you can provide Levvel will be gratefully received. Should you have any questions or queries regarding this work, please do not hesitate to contact Levvel through the details provided at the end of the questionnaire.

The Consortium Officers with whom to liaise should you have any general queries are Amanda Wintle, Principal Planning Officer, Epping Forest District Council Tel 01992 564543

<u>awintle@eppingforestdc.gov.uk</u> OR John Careford, Senior Planning Policy Officer, East Herts District Council, Tel 01992 531623 <u>john.careford@eastherts.gov.uk</u>

We would be very grateful if you could return this questionnaire by Tuesday 12<sup>th</sup> January 2010 or bring it with you if you are attending the stakeholders' meeting scheduled to take place in two sessions on 14<sup>th</sup> January 2010.

If you wish to attend the meeting on 14<sup>th</sup> January can you please confirm to Amanda Wintle or John Careford by Friday 8<sup>th</sup> January 2009 stating which time you would prefer. A return slip is included with the covering letter to this questionnaire.

# LOCAL AUTHORITY AREA(s)

Can you indicate within which local authority area or areas you have experience of working or have interests in:
BRENTWOOD BOROUGH COUNCIL
EAST HERTFORDSHIRE DISTRICT COUNCIL
EPPING FOREST DISTRICT COUNCIL
HARLOW DISTRICT COUNCIL
UTTLESFORD DISTRICT COUNCIL
PLEASE TICK ALL THAT APPLY

## **SCHEME TYPOLOGY**

As part of the study, we will choose a number of notional schemes on which to carry out development appraisals. The effect of the imposition of affordable housing will then be assessed to ensure that future policy does not reduce land values to a level which will prevent land being brought forward for development.

Our aim is to assess a range of development types which are likely to come forward in each housing market area throughout the sub-region. In this regard, your views are sought on the following;

Q1 Do the following development types adequately cover the range of
schemes coming forward in the District?
A – Flatted Development – flats/apartments up to 100 dwellings per hectare
B - Mixed Development – flats and houses up to 70 dwellings per hectare
B – Estate Housing – Town Houses, Semi-Detached and Detached dwellings of circa 50 dwellings per hectare
C – Lower Density Estate Housing – Semi Detached and Detached dwellings of circa 40 dwellings per hectare
D – Low Density Estate Housing - Semi Detached and Detached dwellings of circa 30 dwellings per hectare
YES NO
If NO, please include details of scheme types we have not considered in terms of development mix and density and, if appropriate, to which local authority area they should be applied;

These development types will each be assessed as if they were being developed on parcels of land throughout each housing market area in order to account for geographical variations in the value of housing which have an effect on development viability.

# **POLICY TESTS - PERCENTAGE AND THRESHOLD**

Initially, we will test a range of percentage targets and thresholds for affordable housing to include the following:

On all new development on sites in the towns and other centres of population we will test a range of targets between 20% and 50% affordable housing requirement

Q2 Are there any other affordable housing percentages we should consider?
YES NO
The number of dwellings above which affordable housing is required has been 15 dwellings. It may be that sites of fewer than 15 dwellings could contribute to affordable housing. We will test sites as low as 5 units to see if they could contribute an element of affordable housing.
Q3 Are there any other thresholds you think we should consider?
YES NO  Please provide any comments you may have on the range of thresholds and percentages we will be testing.

## **LAND VALUES**

Planning policy seeks to secure a proportion of land value for the community benefit. It is important to ensure that too much is not sought or it may threaten the prospects of the land coming forward.

We are therefore interested to know at what value land will be brought forward for development in the sub-region and specifically in each housing market area.

Q4 What values can be assumed to be sufficient to bring land forward for development in the sub-region? Please express this on a per hectare basis if possible.

Greenfield/Agricultural land
Brentwood -
East Herts -
Epping Forest -
Harlow -
Uttlesford -
Brownfield land
Brentwood -
East Herts -
Epping Forest -
Harlow -
Uttlesford -

Industrial land
Brentwood -
East Herts -
Epping Forest -
Harlow -
Uttlesford -

# Q5 Do you have a view as to the value of land expressed as a percentage of the development value (all areas)?

Greenfield/Agricultural land
Brownfield land
Industrial land

#### **DEVELOPER PROFIT**

Profit levels can be affected by the level of risk attached to a particular development. Current housing market conditions mean development is risky and therefore may require a higher profit to make it worthwhile for a developer to build. However, the policy that this study is to inform will endure for the life of each local authority's Core Strategy which, it is to be assumed, will also cover less risky housing market conditions.

We will test viability at the following base profit level;

17% of Gross Development Value

Q6 Are we assessing an acceptable profit level?

YES	NO			
If no, please provide justification and an alternative acceptable profit rate.				

Q7: Should we Internal Ra	be assessing profit/retuate of Return?	ırn on a different bas	sis e.g. profit	on cost,
YES				NO
If Yes, pleas	se provide details below	<i>t</i> ;		

#### **BUILD COSTS**

We will assume basic build costs aligned to the appropriate measure from the Royal Institute of Chartered Surveyors Build Cost Information Service (BCIS) as a baseline build cost for each local authority area plus 15% as an allowance for external areas.

Q8 In order to compare this to "on the ground" costs, we would appreciate your views on a per m<sup>2</sup> build cost below (on the basis of Gross Internal Floor Area)

Development type	Build Cost per m2 GIFA (private housing)	Build cost per m <sup>2</sup> GIFA (public housing)
Flatted Development		
Terraced Housing/Town Houses		
Semi-Detached		
Detached		

### **DWELLING SIZES**

# Q9 What dwelling sizes should we assume for the following flat and house types (ft<sup>2</sup> or m<sup>2</sup>)?

TYPE	AFFORDABLE	MARKET
1 BED FLAT		
2 BED FLAT		
2 BED HOUSE		
3 BED (Semi) HOUSE		
3 BED (Detached) HOUSE		
4 BED (Detached) HOUSE		

#### **RENT**

In order to ensure we are properly assessing the value of the affordable housing to the developer it would be helpful if we had real values for assumed rents and costs of social rented housing.

Q10 This question is aimed mainly at RSLs – What rent levels should we allow for (we are currently using DATASPRING values but would like to ensure up-to-date information is used). Can you also give an indication on management, maintenance, void levels and major repairs allowances from gross rent (expressed as a percentage or as an amount).

TYPE	GROSS RENT	MANAGEMENT	MAINTENANCE	VOIDS	MAJOR REPAIRS
1 BED FLAT					
2 BED FLAT					
2 BED HOUSE					
3 BED HOUSE					
4 BED HOUSE					

## **CAPITALISATION OF RENTS**

	tly assuming a y ties. Is this corre		the capital receipt f	rom social
YES		NO		
If NO, please give	some indication	n of an alternat	iive;	
PUBLIC SUBSI				
instance and vaffordable hou	will then test the using units. In yo basis) should w	effect of apply our experience	bsidy baseline in the ving public subsidy to what levels of pub g (if appropriate, ind	to the lic subsidy

any that we here. The a and we war	have not men above question at to make sur account are clential develop	ntioned abovens do not core that the part of the notes of the part	ve, please fee ver every as arameters an	ur assumptions el free to includ sumption we a d principles tha table to local si the process to	le them re making at we are

You may choose to remain anonymous although, even if you give us your details, we will not attribute your name to the views expressed within this questionnaire or provide them to any other party without your express permission. We would like to follow up this questionnaire with telephone discussions where we feel further clarification is necessary. Your help is very much appreciated.

I wish to remain anonymous	YES			NO	
Name					
Position					
Company					
Address					
	POST (	CODE _			
Contact telephone					
Email address			@		
May we contact you further?	YES		]	NO	

PLEASE RETURN THIS QUESTIONNAIRE BY TUESDAY 12<sup>TH</sup> JANUARY 2010 TO:

Levvel, 147 Leigh Road, Wimborne BH21 2AD

Telephone 01202 639444

www.levvel.co.uk

gail.percival@levvel.co.uk, simon.mitchell@levvel.co.uk

## Follow up report sent by email 22 January 2010

## **Stakeholder Engagement - LCB East Affordable Housing Viability Assessment**

January 2010

#### Introduction

Levvel has been appointed by the London Commuter Belt East Sub Region comprising Brentwood Borough Council, East Herts 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 broad assessment of development viability that will inform planning policy over the lifetime of each Local Planning Authority's Core Strategy. The study will be undertaken in the context of Planning Policy Statement (PPS) 3: Housing (November 2006).

This study was commissioned to supplement the LCB East Sub Regional Strategic Housing Market Assessment undertaken by Opinion Research Services.

#### **Background - Stakeholder Engagement**

#### Stakeholder Questionnaire

It was identified at the inception of the project the importance of ensuring stakeholder engagement therefore a questionnaire and covering letter were forwarded to a range of appropriate stakeholders identified by each Local Authority in December 2009. This included an invitation to two stakeholder events held in the morning and afternoon of 14 January 2010.

#### Stakeholder Meetings

Sixteen stakeholders attended the events on the 14 January 2010. A short presentation on the purpose of, and background to the study was provided by Levvel. This was followed by discussions with attendees regarding the nature and range of assumptions that would be used for the purposes of undertaking a study of this nature.

A précis of issues discussed at the stakeholder events is outlined in the following section.

One of the key aspects raised by stakeholders was a desire for a further opportunity to comment further regarding the study methodology. The timetable for delivery of the project has been altered to enable this.

We invite stakeholders (those who attended the stakeholder events on 14 January 2010 and/or returned a completed stakeholder questionnaire and/or notified Levvel they were unable to attend the event) to comment further if they should wish, by Monday February 1<sup>st</sup> 2010, using the contact information in Section 5 of this report.

#### Stakeholder Events – Summary of Feedback and Comments

Key feedback and comments received are summarised below:

- Assumptions used for the purposes of viability modelling should be explicit within the report;
- The range of affordable housing policy percentages to be assessed, proposed as (20% 50% with a starting position of 35%) may not be sufficient and that percentages below 20% may need to be assessed;
- Build costs should reflect notional scheme density and unit types;
- An affordable housing tenure mix of 50% social rent 50% intermediate was unlikely to be acceptable to RSLs currently;
- The intermediate rented market in certain areas is currently excessive and some units are being switched back to low cost home ownership;
- Current affordability of low cost home ownership products reflects generally an initial equity purchase of 35%;
- Profit at 17% of GDV for market housing may be too low;
- Profit at 6% of GDV for affordable housing may be too low;
- A definition of developer profit should be provided within the report
- Although assessments should assume nil grant as a baseline position, the impact
  of public subsidy at current levels (and levels below this), should be assessed;
- Public subsidy levels for the LCB East sub region have generally reflected the East of England position notwithstanding the sub regions proximity to London;
- Development finance costs at 6.5% per annum over the lifetime of the Plan may not reflect the current position in securing finance;
- Testing of thresholds as low as 1 unit may not be PPS3 compliant;
- The mandatory timescales for Code for Sustainable Homes should ensure the different timescale for affordable housing is reflected;
- Alternative land use values should reflect the differences between net and gross land values and be realistic.

#### Methodology

We will take on board the specific elements that have been identified through this stakeholder engagement process using both the feedback from the stakeholder meetings and the stakeholder questionnaires returned. The questionnaire is an important element in refining the final assumptions that will be made.

The assumptions used within the study will be based upon best practice, our further analysis and feedback from this stakeholder engagement process and experience in undertaking studies of this nature. Where practicable and necessary, sensitivity testing will be undertaken against certain elements.

We will ensure that a range of notional development schemes varying in scale and nature will be assessed across the sub region to reflect development that is likely to come forward within the lifetime of each authorities Plan.

In order to maintain consistency, the methodology used to assess viability for policy setting purposes will be compatible with general practice nationally. It will take into account realistic development economics in order to test policy requirements at a District wide level.

We are aware that development economics may be assessed differently between organisations and between different site types.

A residual value methodology will be used which incorporates a discounted cash flow analysis. This is especially relevant to larger schemes with longer development periods. The outcome of this analysis will then be assessed against the level which is required to bring these sites forward for development. This is undertaken through two main tests of viability:

- The residual land value will be assessed against the existing/alternative use value of the site;
- The relationship between residual value and Gross Development Value will also be assessed. This will be based upon analysis of the long term historic relationship between these two factors.

#### Profit

Different organisations will have different methods of assessing profit. We will use the convention of a percentage of gross development value as well as a reasonable level of internal overheads in order to achieve a gross profit level.

#### **Build costs**

Current BCIS costs will be used (to reflect the built form of each notional site) plus an additional uplift in respect of external works and a further contingency in order to allow additional comfort against those figures. Build costs will also reflect the additional costs likely to be incurred in achieving the relevant Code for Sustainable Homes requirements.

#### **Professional Fees**

These will be a percentage of build costs.

#### Lifetime Homes

Additional costs will be incorporated in order to achieve Lifetime Homes Standards should the Council's seek to achieve this.

#### Sales and marketing costs

These will be a proportion of the sales values and number of sales units and will take into account legal fees.

#### Finance costs

These are assessed using a monthly cashflow. Finance arrangement fees will also be included.

#### Costs of disposal

This will be set as a proportion of the value of all affordable units (rent and sale).

#### **Tenure mixes**

A range of affordable housing tenure mixes will be assessed within each District.

#### S106 costs

Full Section 106 costs at both a District and County level will be included as costs. This may be an area where sensitivity testing is undertaken to reflect any potential future increases to these sums.

#### Infrastructure costs

It is likely that a range of infrastructure costs will be assessed, particularly against notional site typologies that are more likely to be associated with the delivery of new infrastructure.

#### **Ground rent**

Ground rents on flats will be assumed and capitalised.

#### **Acquisition costs**

Residual value takes into account the cost of acquiring land including legal fees, agents fees and stamp duty at the prevailing rate.

#### Planning fees

These will be incorporated at the prevailing rate.

#### Other miscellaneous costs

Additional items such as valuation fees and site investigation fees will be allowed for where appropriate.

#### **Summary**

Although some of these items have been outlined previously in the stakeholder questionnaire we invite further comment on any of the aspects outlined above by emailing comments to simon.mitchell@levvel.co.uk or gail.percival@levvel.co.uk

## Appendix Ten – Brentwood Additional Sensitivity Testing

Figure B1

	Brentwo	ood - CM4			
AH Mix:	H Mix: 50-50 Social rent:Intermediate				
	35% Afford	lable Housing	1		
		06 allowance			
	Nil Grant Lowe	r EUV sensitivity.			
	19% Gross P	rofit sensitivity.			
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Figure B2

	Brentwo	od - CM4			
	10% Affordable Housing				
AH Mix:		) Social rent:Interm			
		Space Only S106 all			
		ant Higher EUV Sen			
	1	.9% Profit sensitivi	ty.		
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Figure B3

	Brentwo	od - CM13				
	35% Affordable Housing					
AH Mix:		0 Social rent:Interm				
		Space Only S106 all				
		I Grant Lower EUV se				
	19	% Gross Profit sensit	tivity.			
		VIABILITY				
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Figure B4

	Brentwo	od - CM13	
	10% Afford	able Housing	<b>.</b>
AH Mix:		70 Social rent:Interm	
	Open	Space Only \$106 all	lowance
		Grant Higher AUV se	
	19	% Gross Profit sensi	tivity.
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Figure B5

	Brentwo	od - CM14	
	20% Afford	able Housing	
AH Mix:	Open Norma	O Social rent: Interme Space Only S106 allov I Grant Lower EUV sen: % Gross Profit sensitiv	vance sitivity.
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Figure B6

	Brentwoo	od - CM15	
	35% Afford	able Housing	1
AH Mix:		0 Social rent:Interm	
		Space Only \$106 all	
		rant Lower EUV sens	
	199	% Gross Profit sensit	tivity.
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Figure B7

	Brentwo	od - RM4		
	35% Afford	able Housing		
AH Mix:	50-50 Social rent:Intermediate Open Space Only Normal Grant Lower EUV sensitivity.			
		% Gross Profit sensiti		
		VIABILITY		
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Figure B8

	Brentwo	ood - RM4			
	10% Afford	able Housing	1		
AH Mix:		70 Social Rent:Interm			
		S106 100%			
		rant Higher AUV sens			
	19'	% Gross Profit sensit	ivity.		
		VIABILITY			
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Figure B9

	Brer	ntwood - CM4				
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AH Mix:						
	100% S106 allowance					
		ant Lower EUV sensit				
	199	⁄o Gross profit sensitiv	vity.			
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Figure B10

	Brentwo	ood - CM4	
	35% Afford	able Housing	
AH Mix:		0 Social Rent:Interme	diate
		Space Only \$106 allow	
		rant Higher AUV sensit	
	19	% Gross Profit sensitiv	rity.
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Figure B11

	Brentwo	od - CM13	
	35% Afford	able Housing	
AH Mix:		0 Social Rent:Interme	diate
		Space Only \$106 allow	
		rant Lower EUV sensit	
	19'	% Gross Profit sensitiv	rity.
		VIABILITY	
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Figure B12



Figure B13

	Brentwo	od - CM14		
	10% Afford	able Housing	1	
AH Mix:		'O Social rent:Interm		
	100% S106 allowance Nil Grant Higher AUV sensitivity.			
	199	% Gross profit sensit	ivity.	
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Figure B14



Figure B15

	Brentwo	od - CM15	
	10% Afford	able Housing	
AH Mix:		100% Social Rent	
	Open	Space Only \$106 allo	owance
		Grant Higher EUV se	
	199	% Gross profit sensiti	ivity.
		VIABILITY	
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Figure B16

	Brentwo	od - RM4			
	40% Afford	able Housin	a		
AH Mix:	Social rent to Inter				
		100% S106 allowance			
	Nil G	rant Lower EUV sen	sitivity.		
	199	% Gross Profit sens	itivity.		
		VIABILITY			
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Figure B17

		Brentwoo	d - RM4		
AH Mix:		50-50 Social rent:Intermediate			
	35º	∕₀ Afforda	ble Housing	1	
		100% \$106			
	Norma	l Grant Higher	Land AUV sensitivit	y.	
		19% Gross Pro	fit sensitivity.		
			VIABILITY		
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Figure B18

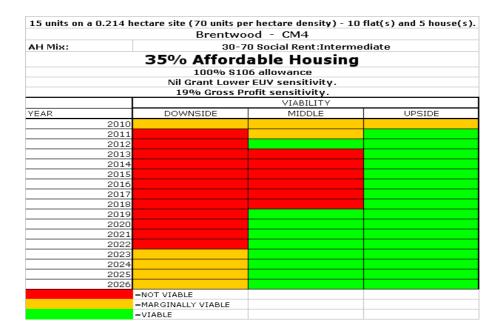


Figure B19

	Brentwo	od - CM13	
	35% Afford	able Housing	3
AH Mix:		O Social Rent:Intern	
	Open	Space Only \$106 all	owance
	Norma	l Grant Lower EUV se	ensitivity.
	199	% Gross Profit sensit	tivity.
		VIABILITY	
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Figure B20

	Brentwo	od - CM13	
	20% Afford	able Housing	
AH Mix:	30-70 Social Rent:Intermediate		
	Open	Space Only \$106 allo	wance
	Norma	l Grant Lower EUV sen	sitivity.
	19'	% Gross Profit sensitiv	/ity.
		VIABILITY	
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Figure B21

	Brentwo	od - CM14		
	35% Afford	able Housing		
AH Mix:	50-50 Social rent:Intermediate Open Space Only S106 allowance			
		l Grant Lower EUV sens		
	19	% Gross Profit sensitiv	ity.	
		VIABILITY		
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Figure B22

	Brentwo	od - CM15		
20% Affordable Housing				
AH Mix:		0 Social Rent:Intern		
	100% S106 allowance			
		Grant Lower AUV s		
	199	% Gross profit sensi	tivity.	
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Figure B23



Figure B24

	Brentwo	od - CM4	
	20% Afforda	able Housin	a
AH Mix:	30-7	O Social rent:Intern	nediate
		100% S106 allowar	nce
		r AUV Nil Grant sen	
	19%	o Gross Profit sensi	itivity.
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Figure B26



Figure B27

		od - CM14	flat(s) and 50 house(s).
	10% Afford	able Housing	]
AH Mix:		Social rent to Interi	
	100% S106 allowance		
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	199	% Gross Profit sensit	tivity.
		VIABILITY	
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Figure B28

	Brentwo	od - CM15	
	20% Afford	able Housing	
AH Mix:		) Social rent to Interm	ediate
		100% S106 allowance	•
		rant Lower AUV sensit	
	19'	% Gross Profit sensitiv	rity.
		VIABILITY	
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Figure B29

	Brentwo	od - RM4		
AH Mix:	50-5	50-50 Social rent:Intermediate		
	35% Afford	able Housing		
		06 allowance		
	Nil Grant Lowe	r EUV sensitivity.		
	19% Gross P	rofit sensitivity.		
		VIABILITY		
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Figure B30

	Brentwo	od - RM4	
	20% Afford	able Housing	1
AH Mix:		Social Rent to Inter	
		100% S106 allowan	ce
		ormal Grant Higher A	
	199	6 Gross Profit sensit	ivity.
		VIABILITY	
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Figure B31

	Brentwo	od - CM4	
	45% Afford	able Housing	1
AH Mix:		.5 Social rent:Interm	
		100% S106 allowan	
		rant Lower AUV sens	
	199	% Gross Profit sensit	ivity.
		VIABILITY	
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Figure B32

	Brentwo	od - CM4		
20% Affordable Housing				
AH Mix:		Social rent to Inter		
	100% S106 allowance			
		ant Higher AUV sen		
	199	% Gross Profit sensi	tivity.	
		VIABILITY		
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Figure B33

	Brentwo	od - CM13	
	25% Afford	able Housing	
AH Mix:	30-7	0 Social Ren:Interm	ediate
		100% S106 allowand	-
		rant Lower AUV sens	
	199	% Gross profit sensit	ivity.
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Figure B34

		od - CM14	lat(s) and 50 house(s).
	30% Afford	able Housing	
AH Mix:		) social rent to intern	
		100 S106 allowance	9
		er AUV nil grant sensi	
	199	% Gross Profit sensit	ivity.
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	Brentwo	od - RM4	
	40% Afford	able Housing	
AH Mix:		5 Social Rent:Interm	
		100% S106 allowand	e
		rant Lower EUV sens	
	199	% Gross Profit sensit	ivity.
		VIABILITY	
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Figure B36

	Brentwo	od - RM4	
AH Mix: 50-50 Social rent:Intermediate			te
	35% Afford	able Housing	
		)6 allowance	
	Normal Grant Hig	her AUV sensitivity.	
		rofit sensitivity.	
		VIABILITY	
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Figure B37

	Brentwoo	od - CM4	
AH Mix:	50-50 Social rent:Intermediate		
	35% Afforda	able Housing	
		5 allowance	
	Nil Grant Lower	EUV sensitivity.	
	19% Gross Pro	ofit sensitivity.	
		VIABILITY	
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Figure B38



Figure B39



Figure B40

Brentwood - CM4				
AH Mix:	H Mix: 50-50 Social rent:Intermediate			
	35% Afford	able Housing		
		06 allowance		
	Normal Grant Hig	her AUV sensitivity.		
	19% Gross P	rofit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
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	=NOT VIABLE			
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	=VIABLE			

Figure B41

	Brentwo	ood - CM4	
AH Mix:	ix: 50-50 Social rent:Intermediate		
	35% Afford	able Housing	
		06 allowance	
	Normal Grant Hig	her AUV sensitivity.	
	19% Gross P	rofit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
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2022			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure B42

	Brentwoo	od - CM13	
AH Mix:	lix: 50-50 Social rent:Intermediate		
	35% Afford	able Housing	
		6 allowance	
	Normal Grant High	ner AUV sensitivity.	
		ofit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
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2023 2024			
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2025			
2026	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure B43

50 units on a 0.82 f	ectare site (61 units per Brentwo	nectare density) - 24 t od - CM14	iat(s) and ∠6 house(s).		
		able Housing			
AH Mix:	30-70 social rent to intermediate 100 S106 allowance Normal Grant Lower EUV sensitivity				
		% Gross Profit sensiti			
		VIABILITY	•		
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
201					
201					
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	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Figure B44

	Brentwo	od - CM13	
	10% Afford	lable Housing	
AH Mix:		70 social rent:intermed	liate
		100 \$106 allowance	
		l Grant Higher EUV sen	
	19	% Gross Profit sensitiv	ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
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	=NOT VIABLE		
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Figure B45

		Brentwo	od - RM4	
AH Mix:	50-50 Social rent:Intermediate			
		35% Afford	able Housing	1
			06 allowance	
			ver AUV sensitivity.	
		19% Gross P	rofit sensitivity.	
			VIABILITY	
YEAR		DOWNSIDE	MIDDLE	UPSIDE
	2010			
	2011			
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	2026			
		=NOT VIABLE		
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		=VIABLE		

Figure B46



Figure B47

	Brentwo	od - CM4		
	35% Afford	able Housing	1	
AH Mix:	30-70 Social	Rent:Intermediate (	@50% Equity)	
		100% \$106 allowan	ce	
		rant Lower EUV sens		
	199	% Gross Profit sensit	ivity.	
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
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	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure B48



Figure B49

	Brentwo	od - RM4			
	40% Afforda	able Housing			
AH Mix:	30-70	) Social Rent:Interm	ediate		
	100 S106 allowance				
		ant Lower AUV sens			
	199	6 Gross Profit sensit	ivity.		
		VIABILITY	_		
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
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Figure B50

	Brentwo	od - CM4	
	45% Afford	able Housing	3
AH Mix:		0 Social Rent:Intern	
		100 S106 allowanc	e
		rant Lower AUV sens	
	199	% Gross profit sensi	tivity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
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	Brentw	ood - CM4	
	30% Afford	lable Housing	
AH Mix:	30-	70 Social rent:Interme	diate
		100 S106 allowance	
		ıl Grant Higher AUV sen	
	19	1% Gross Profit sensitiv	rity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
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20	and the same of th		
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Figure B52

	Brentwo	od - CM13	
	30% Afford	able Housing	l
AH Mix:		Social rent to intern	
		100 S106 allowance	•
		Grant Lower AUV se	
	199	% Gross Profit sensit	ivity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
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	=NOT VIABLE		
:	=MARGINALLY VIABLE		
-	=VIABLE		

Brentwood - CM14					
AH Mix:	30-70	) Social Rent:Interme	diate		
	35% Afforda	able Housing			
		6 allowance			
	Nil Grant Lower	EUV sensitivity.			
		ofit sensitivity.			
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
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Figure B54

	Brentwo	od - RM4	
	25% Afford	able Housing	3
AH Mix:		30-70 SR:I	
		100 S106 allowanc	e
		ant Higher AUV sen:	
	199	6 Gross profit sensit	tivity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
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	=NOT VIABLE		
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	=VIABLE		

Figure B55

	Brentwo	od - RM4			
50% Affordable Housing					
AH Mix:	30-70	Social Rent to Inter	mediate		
		100 S106 allowance			
		rant Lower AUV sens			
	199	% Gross Profit sensit	ivity.		
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
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	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Figure B56

	Brentwo	od - CM4	
	40% Afford	able Housin	g
AH Mix:		0 Social rent:Intern	
		100 S106 allowand	e
		ant Lower EUV sen	
	199	6 Gross profit sensi	tivity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
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	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure B57



Figure B58



	Brentwo	od - RM4			
AH Mix:	Mix: 85-15 Social Rent to Intermediate				
	35% Afforda	able Housing			
		6 allowance			
	Normal Grant Low	er AUV sensitivity.			
	19% Gross Pr	ofit sensitivity.			
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
	10				
	11				
	12				
	13				
	14				
	15				
	16 17				
	18				
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20	26				
	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Figure B60

	Brentwo	ood - RM4			
15% Affordable Housing					
AH Mix:	30-70	) Social rent to Interi	mediate		
		100 S106 allowanc	e		
		Grant Higher AUV se			
	199	% Gross profit sensit	ivity.		
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
201	O. T. C.				
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202	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Figure B61

		Brentwo	od - CM4	
AH Mix:	100% Social Rent			
		10% Afford	able Housin	a
			06 allowance	•
		Normal Grant Hig	her EUV sensitivity	
		19% Gross p	rofit sensitivity.	
			VIABILITY	
YEAR		DOWNSIDE	MIDDLE	UPSIDE
	2010			
	2011			
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	=1	IOT VIABLE		
	= N	IARGINALLY VIABLE		
	=\	'IABLE		

Figure B62



Figure B63



Figure B64

		Brentwo	od - CM15		
AH Mix:		100% Intermediate (25% Initial Share)			
	2	0% Afford	able Housing	1	
			36 allowance		
			r EUV sensitivity.		
		19% Gross P	rofit sensitivity.		
			VIABILITY		
YEAR		DOWNSIDE	MIDDLE	UPSIDE	
	2010				
	2011				
	2012				
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	2016				
	2017 2018				
	2019				
	2020				
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	2022				
	2023				
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	2025				
2	2026				
	=NC	T VIABLE			
	=MA	RGINALLY VIABLE			
	=VI	ABLE			

Appendix Eleven – Epping Forest Additional Sensitivity Testing

Figure EP1

	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					
		100% S106 allowance	•		
		rant Lower EUV sensit			
	199	% Gross Profit sensitiv	vity.		
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
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2022 2023					
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2025					
2020	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Figure EP2

SCHEME TYPE 2 (50/50)		Epping Forest EN9/CM5			
15 units on a 0.5 he	ctare site (30 units per	hectare density) - O flat(s) and 15 house(s).			
AH Mix:	70:30 Social Rent:Intermediate				
35% Affordable Housing					
		6 allowance			
	Normal Grant Low	ver EUV sensitivity.			
	19% Gross Pr	ofit sensitivity.			
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
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	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Figure EP3

	Epping	Forest EN9/CM5	
15 :		ınits per hectare densit <b>y)</b> - 0 fla	
	40% Aff	ordable Housi	ing
AH Mix:	50:50	3 Social Rent:Interme	diate
		100% \$106 allowance	•
		rant Lower EUV sensit	
	199	% Gross Profit sensitiv	/ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017 2018			
2018			
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2021			
2022			
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2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EP4

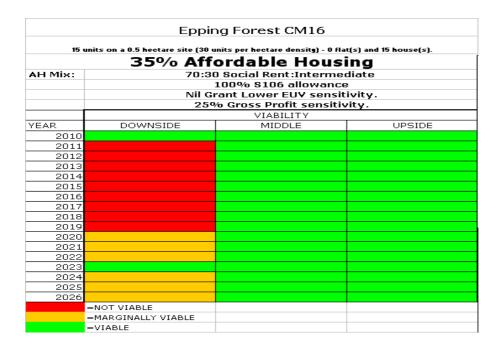


Figure EP5

		ng Forest CM16	
15 :		ınits per hectare densit <b>y)</b> - 0 fla	
	40% Aff	ordable Housi	ing
AH Mix:	70:30	D Social Rent:Interme	diate
		100% S106 allowance	
		rant Lower EUV sensit	
	199	% Gross Profit sensitiv	vity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
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	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EP6

	Eppir	ng Forest CM16	
15 un	its on a 0.5 hectare site (30 c	ınits per hectare density) - O fla	t(s) and 15 house(s).
	14% Aff	ordable Hous	ing
AH Mix:		D Social Rent/Interme	
		100% \$106 allowance	•
	Normal	Grant Higher EUV sen	sitivity.
	199	% Gross Profit sensitiv	vity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011	<u> </u>		
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=	NOT VIABLE		
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_	VIABLE		

Figure EP7

	Eppir	ng Forest CM17	
15 un	nits on a 0.5 hectare site (30 u	inits per hectare density) - 0 fla	t(s) and 15 house(s).
	14% Aff	ordable Housi	ng
AH Mix:		) Social Rent:Intermed	
		100% S106 allowance	
		Grant Lower EUV sens	
	199	⁄o Gross Profit sensitiv	ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	<u> </u>		
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2018 2019			
2019			
2020	<u> </u>		
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2026			
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Figure EP8



Figure EP9

	Ерр	ing Forest IG7	
15	units on a 0.5 hectare site (30 u	ınits per hectare density) - 0 fla	t(s) and 15 house(s).
	47% Aff	ordable Housi	ing
AH Mix:	70:30	0 Social Rent:Interme	diate
		100% S106 allowance	•
		rant Lower EUV sensit	
	199	% Gross Profit sensitiv	vity.
		VIABILITY	· · ·
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
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	=NOT VIABLE		
	=MARGINALLY VIABLE =VIABLE		
	= AIWDFC		

Figure EP10



Figure EP11

	Eppii	ng Forest IG10	
15	units on a 0.5 hectare site (30 u	nits per hectare density) - 0 fla	it(s) and 15 house(s).
	47% Aff	ordable Hous	ing
AH Mix:		) Social Rent:Interme	
		100% S106 allowance	
		rant Lower EUV sensit	
	199	o Gross Profit sensitiv	vity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
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	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EP12



Figure EP13

	Epping F	orest IG10	
AH Mix:	50:	50 Social rent:Intermed	iate
	35% Afford	lable Housing	
		06 allowance	
	Normal Grant His	gher EUV sensitivity.	
	19% Gross F	rofit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
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Figure EP14

	Epping Fo	rest RM4	
AH Mix:	50:50	Social Rent:Interme	diate
	35% Afforda	ble Housina	
		allowance	
	Normal Grant Low	er EUV sensitivity.	
	19% Gross Pro	ofit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
201	0		
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202	3		
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	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EP15

	Epping	Forest EN9/CM5	
15 unit	s on a 0.3 hectare site (50 c	units per hectare density) - 0 fla	t(s) and 15 house(s).
AH Mix:	70:3	0 Social Rent:Intermed	diate
	35% Aff	ordable Housi	na
		6 S106 allowance	
	Nil Grant I	Lower EUV sensitivity.	
	19% Gr	oss Profit sensitivity.	
	-	VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
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-	OT VIABLE		
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Figure EP16

	-	Forest EN9.CM5	
15 (	units on a 0.3 hectare site (50 un		
AH Mix:	7% Affordable Housing  Mix: 100% Intermediate 100% \$106 allowance  Nil Grant Higher EUV sensitivity. 19% Gross Profit sensitivity.		e tivity.
1		VIABILITY	•
YEAR	DOWNSIDE	MIDDLE	UPSIDE
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2026	=NOT VIABLE	<u> </u>	
	=MARGINALLY VIABLE		
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Figure EP17

	Eppir	ng Forest CM16	
15 u	ınits on a 0.3 hectare site (50 u	ınits per hectare density) - 0 fla	t(s) and 15 house(s).
	40% Aff	ordable Housi	ing
AH Mix:		O Social Rent:Interme	
		100 % S106 allowance	
		rant Lower EUV sensit	
	259	% Gross Profit sensitiv	vity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
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2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EP18



Figure EP19

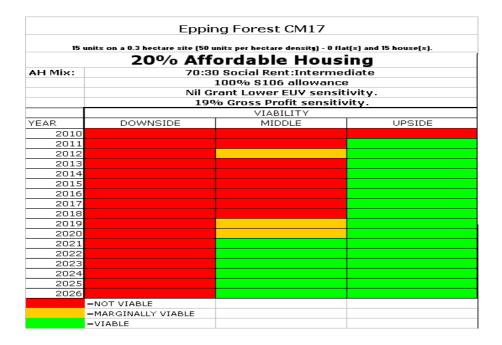


Figure EP20

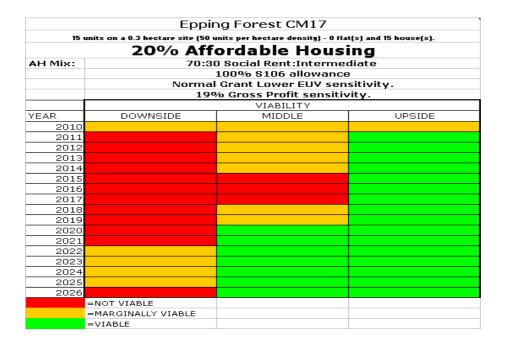


Figure EP21

15 units on a 0.3 hectare site (50 units per hectare density) - 0 flat(s) and 15 hectare 40% Affordable Housing  AH Mix: 70:30 Social Rent:Intermediate 100% S106 allowance Nill Grant Lower EUV sensitivity.  19% Gross Profit sensitivity.  VIABILITY  YEAR DOWNSIDE MIDDLE U  2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2020 2021 2022 2023 2024 2025 2026 =NOT VIABLE	
## AH Mix: 10:30 Social Rent:Intermediate 100% \$106 allowance	house(s).
### AH Mix: 70:30 Social Rent:Intermediate 100% \$106 allowance	
Nil Grant Lower EUV sensitivity. 19% Gross Profit sensitivity.   VIABILITY	
19% Gross Profit sensitivity.	
VIABILITY  YEAR DOWNSIDE MIDDLE U  2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2020 2021 2022 2023 2024 2025 2026	
YEAR DOWNSIDE MIDDLE U 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2021 2022 2023 2024 2025 2026	
2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2021 2022 2023 2024 2025 2026	
2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026	UPSIDE
2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026	
2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026	
2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026	
2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026	
2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026	
2018 2019 2020 2021 2022 2023 2024 2025 2026	
2019 2020 2021 2022 2023 2024 2025 2026	
2020 2021 2022 2023 2024 2025 2026	
2021 2022 2023 2024 2025 2026	
2022 2023 2024 2025 2026	
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2025 2026	
2026	
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=VIABLE	

Figure EP22



Figure EP23

	Ерр	ing Forest IG7	
15	units on a 0.3 hectare site (50 t	ınits per hectare density) - 0 fla	t(s) and 15 house(s).
	20% Aff	ordable Housi	ing
AH Mix:		O Social Rent/Interme	
		100% \$106 allowance	•
		ant Higher EUV sensit	
	199	% Gross Profit sensitiv	/ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
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	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EP24



Figure EP25

	Eppi	ng Forest IG10	
15 u	ınits on a 0.3 hectare site (50 ı	units per hectare density) - 0 fla	t(s) and 15 house(s).
	20% Aff	ordable Hous	ing
AH Mix:		0 Social Rent/Interme	
		100% \$106 allowance	
		rant Higher EUV sensit	
	190	% Gross Profit sensitiv	/ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
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2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EP26



Figure EP27

	Eppi	ing Forest RM4	
15 unit	s on a 0.3 hectare site (50 m	units per hectare density) - 0 fla	t(s) and 15 house(s).
	7% Aff	ordable Housii	ng
AH Mix:		100% Intermediate	
		100% \$106 allowance	•
		rant Higher EUV sensit	
	199	% Gross Profit sensitiv	rity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026	1071171815		
	NOT VIABLE		
	MARGINALLY VIABLE		
=\	/IABLE		

Figure EP28

15 u	nits on a 0.214 hectare site (70	units per hectare density) - 10 f	lat(s) and 5 house(s).
	20% Aff	ordable Housi	na
AH Mix:			
		100% S106 allowance	!
		ant Lower EUV sensit	
	199	o Gross Profit sensitiv	rity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015 2016			
2016			
2017			
2019			
2019			
2021			
2022			
2023			
2024			
2025			
2026			
	=NOT VIABLE	·	·
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EP29

	Epp	oing Forest CM16			
15 units on a 0.214 hectare site (70 units per hectare density) - 10 flat(s) and 5 house(s).					
AH Mix:	H Mix: 70:30 Social Rent:Intermediate				
35% Affordable Housing					
		1% S106 allowance	3		
	Nil Grant	t Lower EUV sensitivity.			
	19% G	ross Profit sensitivity.			
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
2011					
2012					
2013					
2014					
2015					
2016					
2017					
2018					
2019					
2020					
2021					
2022					
2023					
2025					
2026					
	OT VIABLE				
=14	IARGINALLY VIABLE				
=V	IABLE				

Figure EP30

SCHEME TYPE 2 (50/50)		Epping Forest CM16		
15 units on a 0.214 hectare site (70 units per hectare density) - 10 flat(s) and 5 hou				
AH Mix:	70:30	Social Rent:Interme	ediate	
	35% Afforda	able Housing		
		6 allowance		
	Normal Grant Low	er EUV sensitivity.		
	19% Gross Pr	ofit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
2013				
2014				
2015				
2016				
2017				
2018				
2019 2020				
2020				
2021				
2023				
2024				
2025				
2026				
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure EP31

	Eppir	ng Forest CM16	
15 ur	nits on a 0.214 hectare site (70	units per hectare density) - 10 f	lat(s) and 5 house(s).
	7% Affo	rdable Housii	ng
AH Mix:		100% Intermediate	
		100% S106 allowance	
		ant Higher EUV sensit	
	199	6 Gross Profit sensitiv	rity.
YEAR	DOWNSIDE	VIABILITY MIDDLE	UPSIDE
YEAK 2010	DOMNSIDE	MIDDLE	UPSIDE
2010			
2011			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2022	<u> </u>		
2023 2024			
2025			
2025			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EP32



Figure EP33

	Eppir	ng Forest CM17			
15 units	s on a 0.214 hectare site (70	units per hectare density) - 10 (	flat(s) and 5 house(s).		
14% Affordable Housing					
AH Mix:		) Social Rent:Interme			
		100% S106 allowance			
		ant Lower EUV sensit			
	199	⁄o Gross Profit sensiti	vity.		
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
2011					
2012					
2013					
2014 2015					
2015					
2017					
2018					
2019					
2020					
2021					
2022					
2023					
2024					
2025					
2026					
	NOT VIABLE				
	MARGINALLY VIABLE				
= 1	VIABLE				

Figure EP34

	Epping Fo	rest IG7	
AH Mix: 50:50 Social Rent:Intermediate			
	35% Afforda	ble Housina	
	100% S106		
	Nil Grant Lower	EUV sensitivity.	
	19% Gross Pro	fit sensitivity.	
		VIABILITY	
/EAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026	NOTURADIE		
	=NOT VIABLE		
	=MARGINALLY VIABLE		

	Eppine	g Forest IG7		
AH Mix:				
	35% Affor	dable Housing		
		3106 allowance		
	Normal Grant I	ower EUV sensitivity.		
	19% Gross	Profit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2	2010			
2	2011			
	2012			
2	2013			
- 2	2014			
	2015			
	2016			
	2017			
	2018			
	2019			
	2020			
	2021			
	2022			
	2023			
	2024			
	2025			
2	2026			
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure EP36

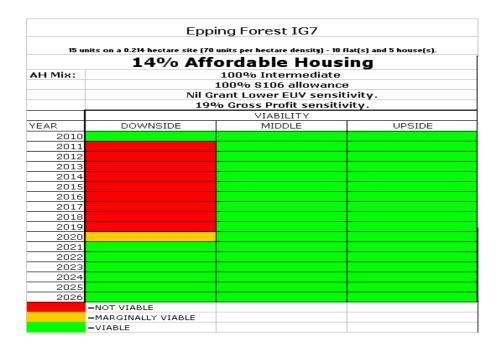


Figure EP37

	Eppi	ng Forest IG7			
15 units	15 units on a 0.214 hectare site (70 units per hectare density) - 10 flat(s) and 5 house(s).				
AH Mix:	H Mix: 70:30 Social Rent:Intermediate				
	35% Aff	ordable Housi	na		
		S106 allowance	9		
		ower EUV sensitivity.			
	19% Gro	ss Profit sensitivity.			
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
2011					
2012					
2013					
2014					
2015					
2016					
2017					
2018					
2019					
2020					
2021					
2022	· ·				
2023	· ·				
2024					
2025					
2026					
	OT VIABLE				
	1ARGINALLY VIABLE				
=\	/IABLE				

Figure EP38



Figure EP39

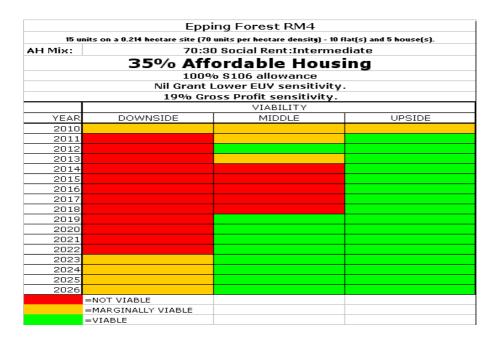


Figure EP40

SCHEME TYPE 2 (50/50)		Epping Forest RM4		
15 units on a 0.214 hectare site (70 units per hectare density) - 10 flat(s) and 5				
AH Mix:	70:30 Social Rent:Intermediate			
	35% Afford	able Housing		
		6 allowance		
	Normal Grant Low	er EUV sensitivity.		
	19% Gross Pr	ofit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
2013				
2014				
2015				
2016 2017				
2017				
2019				
2020				
2021				
2022				
2023				
2024				
2025				
2026				
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure EP41

Epping Forest RM4					
15 un	15 units on a 0.214 hectare site (70 units per hectare density) - 10 flat(s) and 5 house(s).				
	7% Affo	rdable Housii	ng		
AH Mix:					
		100% \$106 allowance			
		ant Higher EUV sensit			
	199	o Gross Profit sensitiv	ity.		
VEAR	DOMINOTES	VIABILITY	LIBOTE		
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010 2011					
2011					
2012					
2013					
2014					
2016					
2017					
2018					
2019					
2020					
2021					
2022					
2023					
2024					
2025					
2026					
	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Figure EP42

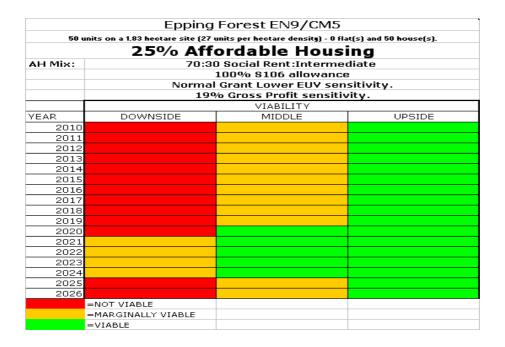


Figure EP43

Epping Forest EN9/CM5				
50 u	nits on a 1.83 hectare site (27	units per hectare density) - O fla	at(s) and 50 house(s).	
	25% Aff	ordable Housi	ing	
AH Mix:				
		100% S106 allowance	_	
		rant Lower EUV sensit		
	199	∕o Gross Profit sensitiv	vity.	
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011 2012				
2012				
2013				
2014				
2015				
2017				
2018				
2019				
2020				
2021				
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2024				
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2026				
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure EP44



Figure EP45

	Eppi	ing Forest CM16	
50 unit	s on a 1.83 hectare site (27	' units per hectare density) - 0 fla	it(s) and 50 house(s).
	40% Af	fordable Housi	ing
AH Mix:			
		100% S106 allowance	•
		Grant Lower EUV sensit	
	19	% Gross Profit sensitiv	vity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015 2016			
2016			
2017			
2018			
2020			
2021			
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2023			
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2026			
=1	NOT VIABLE		
=1	MARGINALLY VIABLE		
= 1	VIABLE		

Figure EP46

	Eppir	ng Forest CM16	
50 uni		units per hectare density) - 0 fla	
	10% Aff	ordable Housi	ing
AH Mix:	60:40	D Social Rent/Interme	diate
		100% \$106 allowance	9
		Grant Higher EUV sen	
	199	% Gross Profit sensitiv	/ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	<u> </u>		
2011			
2012			
2013			
2014			
2015 2016			
2016			
2017			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
=	NOT VIABLE		
=	MARGINALLY VIABLE		
=	VIABLE		

Figure EP47

	Eppir	ng Forest CM17		
50 unit	ts on a 1.83 hectare site (27 t	units per hectare density) - 0 fla	at(s) and 50 house(s).	
10% Affordable Housing				
AH Mix:				
		100% S106 allowance	9	
	Normal	Grant Lower EUV sen	sitivity.	
	199	⁄o Gross Profit sensitiv	/ity.	
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
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2013				
2014				
2015				
2016				
2017				
2018				
2019				
2020				
2021				
2022				
2024				
2025				
2026				
	NOT VIABLE			
=1	MARGINALLY VIABLE			
	VIABLE			

Figure EP48



Figure EP49

	Срр	ing Forest IG7	
50 u		units per hectare density) - 0 fla	
	10% Aff	ordable Housi	ing
AH Mix:	60:40 Social Rent/Intermediate		
		100% S106 allowance	
		Grant Higher EUV sen	
	190	% Gross Profit sensitiv	/ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011 2012			
2012			
2013			
2015			
2015			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EP50



Figure EP51

Epping Forest IG10				
50 units on a 1.83 hectare site (27 units per hectare density) - 0 flat(s) and 50 house(s).				
	10% Aff	ordable Hous	ing	
AH Mix:		D Social Rent/Interme		
		100% \$106 allowance		
		ant Higher EUV sensit To Gross Profit sensitiv		
	190	VIABILITY	zity.	
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010			3. 3152	
2011				
2012				
2013				
2014				
2015				
2016				
2017				
2018				
2019				
2020 2021				
2021				
2022				
2024				
2025				
2026				
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure EP52

	Epping F	Forest RM4	
AH Mix: 50:50 Social Rent:Intermediate			
	35% Afford	lable Housing	
		06 allowance	
	Normal Grant Lo	wer EUV sensitivity.	
	19% Gross P	rofit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
201:			
2012			
2013			
2014			
201			
2016 201			
201			
2010			
2020			
202:			
2022			
2023			
2024	4		
202	5		
2026	5		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EP53

	Eppi	ng Forest RM4	
50 t	ınits on a 1.83 hectare site (27	units per hectare density) - 0 fla	nt(s) and 50 house(s).
	20% Aff	ordable Housi	ing
AH Mix:		0 Social Rent:Interme	
		100% S106 allowance	-
		rant Lower EUV sensit	
	190	% Gross Profit sensitiv	/ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012 2013			
2013			
2014			
2016			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EP54

SCHEME TYPE 2 (	SCHEME TYPE 2 (50/50)		Epping Forest EN9/CM5	
50 units on a 1.1 hectare site (45 units per hectare density) - 0 flat(s) and 50 house(			t(s) and 50 house(s).	
AH Mix:	70:30 Social Rent:Intermediate			
	35% Afford	able Housing		
		6 allowance		
		ver EUV sensitivity.		
	19% Gross Pr	ofit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
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2014 2015				
2015				
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2019				
2020				
2021				
2022				
2023				
2024				
2025				
2026	=NOT VIABLE			
	=NOT VIABLE =MARGINALLY VIABLE			
	=MARGINALLT VIABLE			
	- * 10000	1		

	SCHEM	E TYPE 4	
50 units on a 1.1 he	ctare site (45 units per	hectare density) - 0 fla	it(s) and 50 house(s).
	Epping For	est EN9/CM5	
AH Mix:			
	35% Afford	able Housing	
		6 allowance	
	Normal Grant Lov	ver EUV sensitivity.	
	19% Gross Pi	rofit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015 2016			
2010			
2017			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EP56



Figure EP57

	Eppir	ng Forest CM16				
50 ui		nits per hectare density) - 0 fla				
40% Affordable Housing						
AH Mix:		D Social Rent:Interme				
		100% S106 allowance	_			
		rant Lower EUV sensit				
	199	% Gross Profit sensitiv	/ity.			
		VIABILITY				
YEAR	DOWNSIDE	MIDDLE	UPSIDE			
2010						
2011						
2012						
2013						
2014						
2015						
2016						
2017						
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2019						
2020						
2021						
2022						
2023						
2024						
2025						
	NOT VIABLE					
	=MARGINALLY VIABLE					
	=VIABLE					

Figure EP58



Figure EP59

50	units on a 11 hootare site (45 c	ınits per hectare density) - 0 flat	(c) and 50 house(s)
30		ordable Housi	• • • • • • • • • • • • • • • • • • • •
AH Mix:		0 Social Rent/Interme	
		100% S106 allowance	
	Normal	Grant Higher EUV sen	sitivity.
	199	% Gross Profit sensitiv	ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017	·		
2018 2019			
2019			
2020			
2021			
2023			
2023			
2025			
2026			
2020	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EP60



Figure EP61

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:							
		100% \$106 allowance					
		rant Lower EUV sensit					
	190	<b>% Gross Profit sensitiv</b> ∀IABILITY	nty.				
YEAR	DOWNSIDE	MIDDLE	UPSIDE				
2010			3. 3102				
2011							
2012							
2013							
2014							
2015							
2016							
2017							
2018 2019							
2019							
2021							
2022							
2023							
2024							
2025							
2026							
	=NOT VIABLE						
	=MARGINALLY VIABLE						
	=VIABLE						

Figure EP62



		Epping F	orest IG7	
AH Mix:		50:50	D Social Rent:Interme	ediate
		35% Afford	able Housing	
			6 allowance	
		Nil Grant Lower	r EUV sensitivity.	
		19% Gross Pr	ofit sensitivity.	
			VIABILITY	
YEAR		DOWNSIDE	MIDDLE	UPSIDE
	2010			
	2011			
	2012			
	2013			
	2014			
	2015			
	2016			
	2017			
	2018			
	2019			
	2020			
	2021			
	2022			
	2023			
	2025			
	2025			
		NOT VIABLE		
		MARGINALLY VIABLE		
		VIABLE		

Figure EP64

	Ерр	ing Forest IG7	
50 u	units on a 1.1 hectare site (45 u	nits per hectare density) - 0 fla	t(s) and 50 house(s).
	10% Aff	ordable Housi	ing
AH Mix:	60:40	D Social Rent/Interme	diate
		100% \$106 allowance	
		Grant Higher EUV sen	
	199	% Gross Profit sensitiv	/ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013 2014			
2014			
2015			
2017			
2017			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		



Figure EP66



Figure EP67

		ng Forest IG10	
50 ui		nits per hectare density) - 0 flat	
	10% Aff	ordable Housi	ing
AH Mix:		3 Social Rent/Interme	
		100% \$106 allowance	
		Grant Higher EUV sen	
	199	% Gross Profit sensitiv	vity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	·		
2011			
2012			
2013			
2014			
2015			
2016 2017			
2017			
2018			
2019			
2020			
2022			
2023			
2024			
2025			
2026			
=	NOT VIABLE		
=	MARGINALLY VIABLE		
_	-VIABLE		

Figure EP68



Figure EP69

	Ерр	ing Forest RM4	
50 u		ınits per hectare densit <b>y)</b> - 0 fla	
	40% Aff	ordable Hous	ing
AH Mix:		0 Social Rent:Interme	
		100% \$106 allowance	9
		rant Lower EUV sensit	
	199	% Gross Profit sensitiv	vity.
		VIABILITY	1
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	·		
2011			
2012			
2013			
2014			
2015			
2016 2017			
2017			
2018			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
-	=NOT VIABLE		
=	=MARGINALLY VIABLE		
-	=VIABLE		

Figure EP70



Figure EP71



Figure EP72

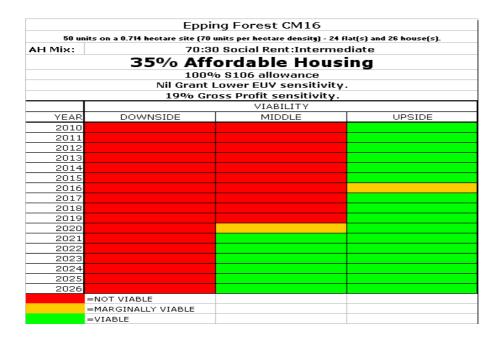


Figure EP73

		ng Forest CM16	
50 units	•	units per hectare density) - 24 f	
	20% Aff	ordable Hous	ing
AH Mix:	70:30	) Social Rent:Interme	diate
		100% S106 allowance	9
		rant Lower EUV sensit	
	199	⁄o Gross Profit sensitiv	vity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017 2018			
2018			
2019			
2021			
2022			
2023			
2024			
2025			
2026			
=	NOT VIABLE		
=	MARGINALLY VIABLE		
	VIABLE		

Figure EP74

Epping Forest CM16  50 units on a 0.714 hectare site (70 units per hectare density) - 24 flat(s) and 26 house(s).						
		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 EP75

	Eppin	ng Forest CM17	
50 units		ınits per hectare density) - 24 f	
	10% Aff	ordable Housi	ing
AH Mix:		) Social Rent:Interme	
	1	100% S106 allowance	•
		Grant Lower EUV sen	
	19%	o Gross Profit sensitiv	vity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2022			
2024			
2025			
2026			
	OT VIABLE		
	MARGINALLY VIABLE		
	/IABLE		

Figure EP76

50 units on a 0.714 hectare site (70 units per hectare density) - 24 flat(s) and 26 house(s).					
	20% Aff	ordable Housi	ing		
AH Mix:		) Social Rent:Interme			
		100% S106 allowance			
		rant Lower EUV sensit			
	199	6 Gross Profit sensitiv	/ity.		
	50000005	VIABILITY	Luborne		
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
2011					
2012					
2013					
2014 2015					
2015					
2010					
2017					
2018					
2019					
2021					
2022					
2023					
2024					
2025					
2026					
	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

		Epping Fo	orest IG10		
AH Mix:					
		35% Afford	able Housing	1	
			6 allowance	•	
			ver EUV sensitivity.		
		19% Gross Pi	ofit sensitivity.		
			VIABILITY		
YEAR		DOWNSIDE	MIDDLE	UPSIDE	
	2010	<u> </u>			
	2011				
	2012				
	2013				
	2014				
	2015				
	2016				
	2017				
	2018				
	2019				
	2020				
	2021				
	2022				
	2023 2024	<u> </u>			
	2024				
	2025				
	2020	=NOT VIABLE			
		=MARGINALLY VIABLE			
		=VIABLE			

Figure EP78

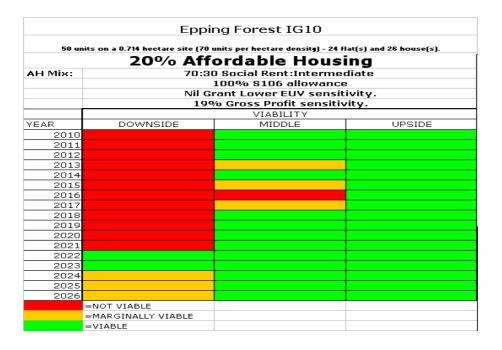


Figure EP79

	Еррп	ng Forest IG10	
50 uni		units per hectare density) - 24 í	
	10% Aff	ordable Hous	ing
AH Mix:		) Social Rent/Interme	
		100% S106 allowance	
		Grant Higher EUV ser	
	199	6 Gross Profit sensitiv	vity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
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	=NOT VIABLE		
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	=VIABLE		

Figure EP80

	Epping Fo	orest RM4	
AH Mix: 50:50 Social Rent:Intermediate			
	35% Afforda	able Housing	
		6 allowance	
	Normal Grant Low	er EUV sensitivity.	
	19% Gross Pr	ofit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
	010		
	011		
	012		
	013		
	014		
	015		
	016 017		
	018		
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	020		
	021		
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	123		
	024		
20	025		
20	026		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EP81

	Eppi	ing Forest RM4	
50 unit	s on a 0.714 hectare site (70	units per hectare density) - 24 f	lat(s) and 26 house(s).
	20% Aff	ordable Hous	ing
AH Mix:		0 Social Rent:Interme	
		100% \$106 allowance	
		rant Lower EUV sensit	
	199	% Gross Profit sensitiv	/ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
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-	-VIABLE		

Figure EP82

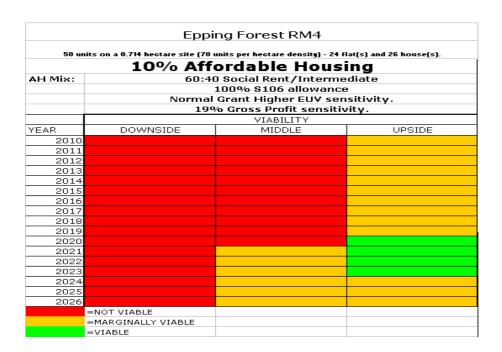


Figure EP83



Figure EP84





Figure EP86



Figure EP87

50		g Forest CM16	atic) and 10 houses(s)
AH Mix:	50 units on a 0.5 hectare site (100 units per hectare density) - 40 flat(s) and 10 house(s) H Mix: 70:30 Social Rent:Intermediate		
AIT MIA.			
		rdable Housi	ng
		S106 allowance	
		ower EUV sensitivity.	
	19% Gro	ss Profit sensitivity.  VIABILITY	
VE.15	BOULDOTE I		LIBOTE
YEAR	DOWNSIDE	MIDDLE	UPSIDE
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2022			
2023 2024			
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2025			
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure EP88



Figure EP89

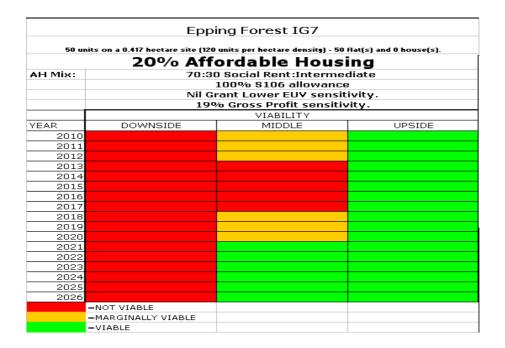


Figure EP90



Figure EP91

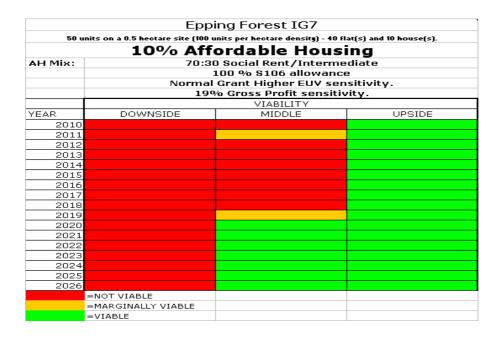


Figure EP92

	Epping F	orest IG10	
		able Housing	
AH Mix:	50:5	O Social Rent:Interme	diate
		100% \$106 allowance	9
		rant Lower EUV sensit	
	199	% Gross Profit sensitiv	/ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
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2019 2020			
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2023			
2025			
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2020	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

		orest IG10	
	20% Afford	able Housing	
AH Mix:		0 Social Rent:Interm	ediate
		100% \$106 allowand	-
		l Grant Lower EUV se	
	199	% Gross Profit sensit	ivity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
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	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EP94



Figure EP95

	Eppir	ng Forest CM16	
50 unit	ts on a 0.5 hectare site (100 u	ınits per hectare densit <b>y) - 4</b> 0 fl	at(s) and 10 house(s).
	10% Aff	ordable Housi	ing
AH Mix: 60:40 Social Rent/Intermediate			
		100% \$106 allowance	
		Grant Higher EUV sen	
	199	6 Gross Profit sensitiv	rity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010 2011			
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2022		· ·	
2023			
2024			
2025			
2026	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure EP96



Figure EP97

Epping Forest CM5 EN9					
150 units on a 5.5 hectare site (27 units per hectare density) - 0 flat(s) and 150 house(s).					
	25% Aff	ordable Housi	ing		
AH Mix:					
		100% S106 allowance			
		Grant Lower EUV sen			
	199	∕o Gross Profit sensitiv	/ity.		
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
2011					
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2015 2016					
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2021					
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-	=NOT VIABLE				
=	=MARGINALLY VIABLE				
-	=VIABLE				

Figure EP98

	Epping For	est CM5 EN9	
		able Housing	
AH Mix:		0 Social Rent:Interme	diate
		100% \$106 allowance	
		l Grant Lower EUV sen	
	199	% Gross Profit sensiti	vity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
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2013 2014			
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	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

130 Units on a 5.5 h	ectare site (27 units per Epping Ed		u(s) and 150 nouse(s).		
	Epping Forest CM16				
AH Mix:					
	35% Afford	able Housing			
	100% 810	6 allowance			
		ver EUV sensitivity.			
	19% Gross Pi	ofit sensitivity.			
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
201:					
2012					
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2014					
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2017 2018					
2018					
2019					
2020					
2022					
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2026	5				
	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Figure EP100

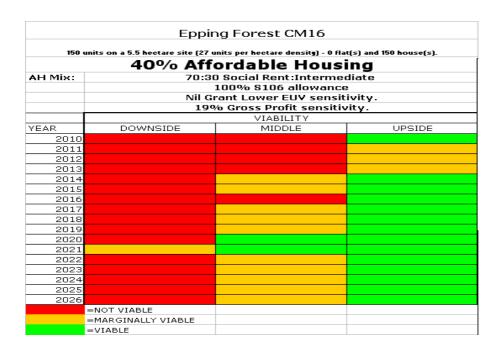


Figure EP101

1E0	ita an a E E baatasa sita (27 .	it	1(=) and 150 house(=)	
190 uiii	150 units on a 5.5 hectare site (27 units per hectare densits) - 0 flat(s) and 150 house(s).  10% Affordable Housing			
AH Mix:		O Social Rent/Interme		
ALI ITIIX.		100% S106 allowance		
		Grant Higher EUV sen		
		6 Gross Profit sensitiv		
		VIABILITY	•	
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
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2015				
2016				
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2019	·			
2020	<u> </u>			
2021				
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2024	<u> </u>			
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2026				
	NOT VIABLE			
	MARGINALLY VIABLE			
=	VIABLE			

Figure EP102



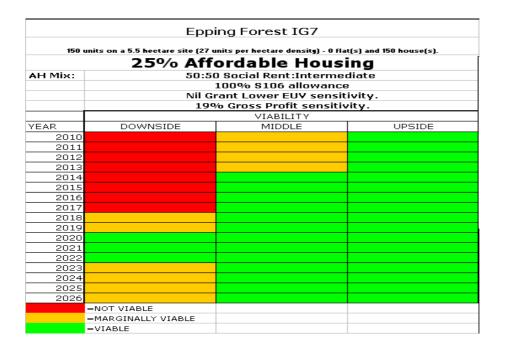


Figure EP104



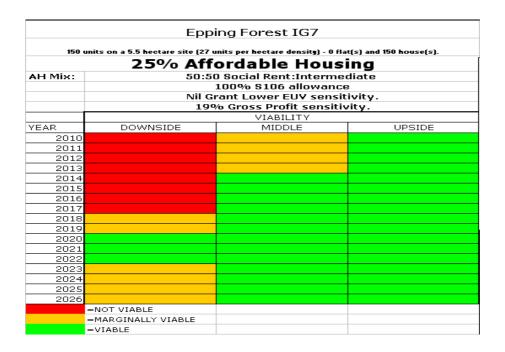


Figure EP106

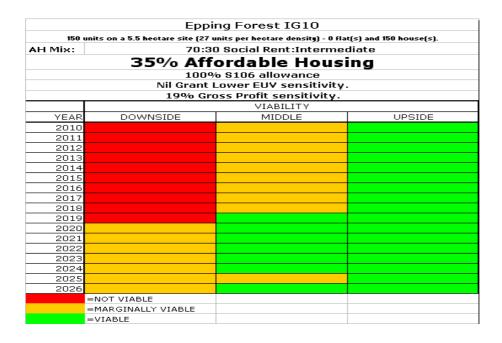


Figure EP107

	Еррі	ng Forest IG10	
150 un		units per hectare density) - 0 fla	
	40% Aff	ordable Housi	ing
AH Mix:		0 Social Rent:Interme	
		200% \$106 allowance	•
		rant Lower EUV sensit	
	199	% Gross Profit sensitiv	/ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
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2015 2016			
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2021			
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2024			
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2026			
=	NOT VIABLE		
	MARGINALLY VIABLE		
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Figure EP108



150 units on a 5.5	hectare site (27 units pe		t(s) and 150 house(s).	
Epping Forest RM4 AH Mix: 50:50 Social Rent:Intermediate				
AH Mix:			diate	
	35% Afford	lable Housing		
	100% S1	06 allowance		
		wer EUV sensitivity.		
	19% Gross F	Profit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
	10			
	11			
	112			
	113			
	014			
	15			
	117			
	118			
	119			
	120			
	21			
	122			
20	123			
20	124			
	25			
20	26			
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure EP110

	Epping F	orest RM4	
	20% Afford	able Housing	g
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			
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2025			
2020	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

150 units on a 3.3 h	ectare site (45 units per		t(s) and 150 house(s).	
Epping Forest EN9 CM5				
AH Mix:				
	35% Afford	able Housing		
	100% \$10	)6 allowance		
		ver EUV sensitivity.		
	19% Gross P	rofit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
201				
201				
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201 201				
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202				
202	1			
202	2			
202	3			
202	4			
202				
202				
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure EP112

	Epping For	rest EN9 CM5		
AH Mix:	50:5	50:50 Social Rent:Intermediate		
	35% Afford	lable Housing		
		06 allowance		
	Nil Grant Lowe	er EUV sensitivity.		
	19% Gross P	rofit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
	10			
	11			
	12			
	13			
	14			
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	16			
20	18			
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	=MARGINALLY VIABLE			
	=VIABLE			

Figure EP113

150 u	mits on a 3.3 hectare site (45	units per hectare density) - 0 fla	t(s) and 150 house(s).
	20% Aff	ordable Housi	ng
AH Mix:		0 Social Rent:Intermed	
		100% \$106 allowance	
		rant Lower EUV sensit	
	19	% Gross Profit sensitiv	ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
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2025	<u> </u>		
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EP114

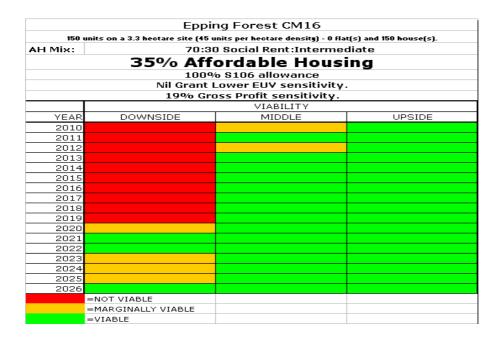


Figure EP115

Epping Forest CM16				
150 u		inits per hectare density) - 0 fla		
	40% Aff	ordable Housi	ing	
AH Mix:		) Social Rent:Interme		
		200% S106 allowance		
		rant Lower EUV sensit		
	190	o Gross Profit sensitiv	vity.	
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
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2019 2020				
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	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure EP116

150	units on a 3.3 hectare site (45	units per hectare density) - 0 fla	t(s) and 150 house(s)
	10% Aff	ordable Hous	ina
AH Mix:		O Social Rent/Interme	
		100% S106 allowance	
		l Grant Higher EUV sen	
	19	% Gross Profit sensitiv	ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
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	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EP117

150 uni	ts on a 3.3 hectare site (45 u	nits per hectare densit <b>y</b> ) - 0 fla	at(s) and 150 house(s)
100 4		ordable Hous	
AH Mix:		) Social Rent:Interme	
		100% S106 allowanc	e
		Grant Lower EUV ser	
	199	6 Gross Profit sensiti	vity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
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=1	NOT VIABLE		
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Figure EP118

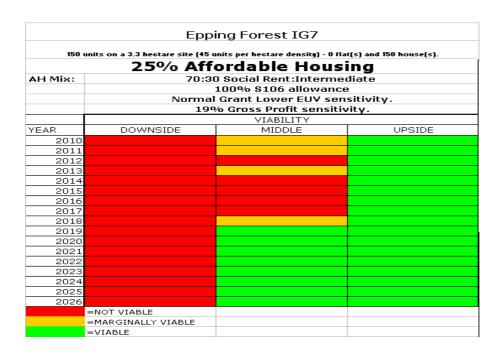


Figure EP119

	Ерр	ing Forest IG7		
150 u	ınits on a 3.3 hectare site (45 u	ınits per hectare density) - O fla	t(s) and 150 house(s).	
15% Affordable Housing				
AH Mix: 70:30 Social Rent:Intermediate				
		100% S106 allowance		
		rant Lower EUV sensit		
	199	6 Gross Profit sensitive	vity.	
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
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	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure EP120

150 units on a 3.3 hec	tare site (45 units per	hectare density) - O fla	t(s) and 150 house(s).
	Epping Fo	orest IG10	
AH Mix:	50:50 Social Rent:Intermediate		
	35% Afford	able Housing	
		6 allowance	
	Normal Grant Lov	ver EUV sensitivity.	
	19% Gross Pr	ofit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
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	NOT VIABLE		
	MARGINALLY VIABLE		
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Figure EP121

	Eppii	ng Forest IG10		
150 u	nits on a 3.3 hectare site (45 u	ınits per hectare density) - 0 fla	t(s) and 150 house(s).	
25% Affordable Housing				
AH Mix: 70:30 Social Rent:Intermediate				
		100% S106 allowance	•	
		rant Lower EUV sensit		
	199	% Gross Profit sensitiv	rity.	
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
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2026				
	=NOT VIABLE			
-	=MARGINALLY VIABLE			
-	=VIABLE			

Figure EP122

	Ерріі	ng Forest IG10	
150 uni		nits per hectare density) - 0 fla	
	10% Aff	ordable Housi	ing
AH Mix:		Social Rent/Interme	
		L00% S106 allowance	
		Grant Higher EUV sen	
	19%	o Gross Profit sensitiv	/ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
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2019 2020			
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2025			
2026			
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure EP123

	Eppi	ng Forest RM4												
150 units on a 3.3 hectare site (45 units per hectare density) - 0 flat(s) and 150 house(s).														
AH Mix:	70:30 Social Rent:Intermediate													
35% Affordable Housing 100% \$106 allowance Nil Grant Lower EUV sensitivity. 19% Gross Profit sensitivity.														
									VIABILITY					
								YEAR	DOWNSIDE	MIDDLE	UPSIDE			
								2010						
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2016														
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2025														
2026														
	NOT VIABLE													
	=MARGINALLY VIABLE													
=	=VIABLE													

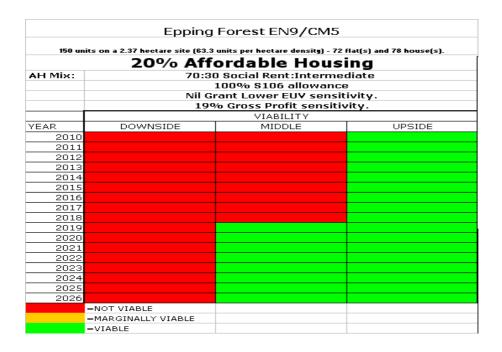
Figure EP124



Figure EP125

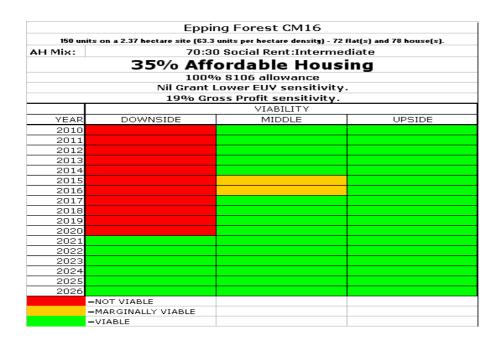
	Eppi	ng Forest RM4				
150 un		ınits per hectare density) - 0 fla				
10% Affordable Housing						
AH Mix:	70:30 Social Rent/Intermediate					
100% S106 allowance Normal Grant Higher EUV sensitivity.						
YEAR	DOWNSIDE	MIDDLE	UPSIDE			
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2026						
=	NOT VIABLE					
=	MARGINALLY VIABLE					
=	=VIABLE					

Figure EP126



		est EN9/CM5	2 flat(s) and 78 house(s).				
15% 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							
2011							
2012							
2013							
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2025							
2026	=NOT VIABLE						
	=NOT VIABLE =MARGINALLY VIABLE						
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Figure EP128



150 unit	s on a 2 37 hectare site (63 3	units per hectare density) - 72	flat(c) and 78 house(c)
iso dine		ordable Hous	
AH Mix:		0 Social Rent:Interme	
		100% \$106 allowance	9
		rant Lower EUV sensit	
	199	% Gross Profit sensitiv	vity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
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2015 2016			
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2022			
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2025			
2026			
-	NOT VIABLE		
-	MARGINALLY VIABLE		
	-VIABLE		

Figure EP130



	<u> </u>	ng Forest CM16	
150 unit		units per hectare density) - 72	
		ordable Hous	
AH Mix:		) Social Rent/Interme	
		100% \$106 allowance	
		Grant Higher EUV sen	
	190	6 Gross Profit sensitiv	vity.
VE 1 5	50000000	VIABILITY	Luporpe
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	<u> </u>		
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2026			
	NOT VIABLE		
	=MARGINALLY VIABLE		
=	=VIABLE		

Figure EP132

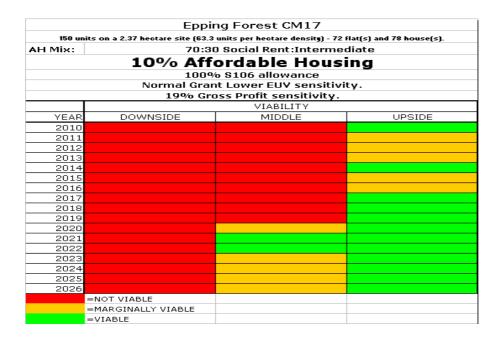


Figure EP133

	Eppi	ing Forest IG7	
150 unit:	s on a 2.37 hectare site (63.3	units per hectare density) - 72	flat(s) and 78 house(s).
	25% Aff	ordable Hous	ing
AH Mix:		) Social Rent:Interme	
		100% S106 allowance	9
	Nil Gı	rant Lower EUV sensit	ivity.
	199	% Gross Profit sensitiv	/ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
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2024			
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2026			
	NOT VIABLE		
	MARGINALLY VIABLE		
=	-VIABLE		

Figure EP134

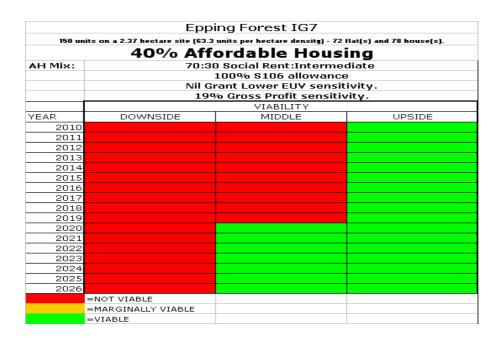


Figure EP135

	Eppii	ng Forest IG7	
150 units	on a 2.37 hectare site (63.3 u	nits per hectare density) - 72 (	flat(s) and 78 house(s).
AH Mix:	Mix: 70:30 Social Rent/Intermediate		
	10% Affo	rdable Housi	ina
		S106 allowance	
	Normal Grant	Higher EUV sensitivi	tv.
		ss Profit sensitivity.	•
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
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=14	MARGINALLY VIABLE		
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Figure EP136



Figure EP137

150 ur	its on a 2 37 hectare site (63 3	units per hectare density) - 72	flat(s) and 78 house(s)
		ordable Hous	
AH Mix:		0 Social Rent:Interme	
		100% \$106 allowance	В
		l Grant Lower EUV sen	
	199	% Gross Profit sensiti	vity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
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2016 2017			
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2021			
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2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EP138



	Ерр	ing Forest IG10	
150 unit	s on a 2.37 hectare site (63.3	3 units per hectare density) - 72 (	flat(s) and 78 house(s).
	10% Aff	ordable Housi	ing
AH Mix:		0 Social Rent/Interme	
		100% \$106 allowance	
		l Grant Higher EUV sen	
	19	% Gross Profit sensitiv	rity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011	<u> </u>		
2012			
2013			
2014			
2015			
2016			
2017 2018			
2018			
2019			
2020			
2021			
2023			
2024			
2025			
2026			
	NOT VIABLE		
=	MARGINALLY VIABLE		
_	-VIABLE		

Figure EP140

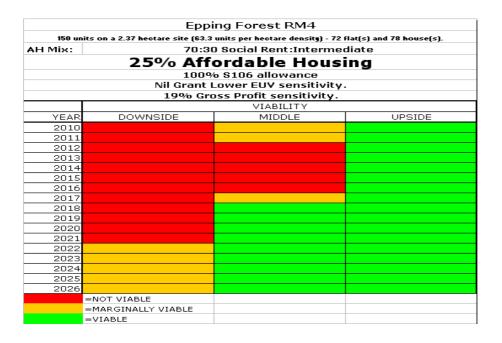


Figure EP141

	Eppi	ing Forest RM4	
150 uı	nits on a 2.37 hectare site (63.3	units per hectare density) - 72	flat(s) and 78 house(s).
	35% Aff	ordable Hous	ing
AH Mix:		0 Social Rent:Interme	
		100% \$106 allowance	9
		l Grant Lower EUV sen	
	199	% Gross Profit sensitiv	vity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015 2016			
2016			
2017			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EP142

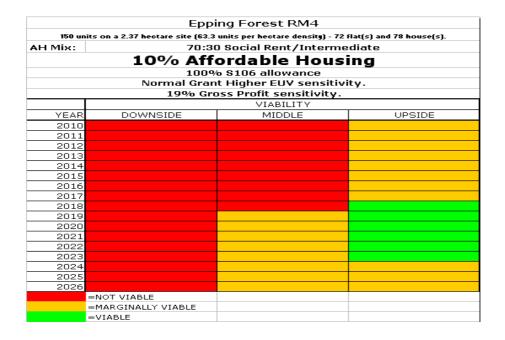


Figure EP143

Epping Forest CM16				
10 un		0 units per hectare density) - 0		
AH Mix:	30% Affordable Housing  AH Mix: 100% Social Rented 100% S106 allowance			
		rant Lower EUV sensit % Gross Profit sensitiv		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
2013				
2014				
2015				
2016				
2017				
2018				
2019				
2020				
2021				
2022				
2023				
2024				
2025				
2026	=NOT VIABLE			
	=NOT VIABLE =MARGINALLY VIABLE			
	=MARGINALLY VIABLE =VIABLE			
	= ATADEC			

Figure EP144

	SCHEN	/IE TYPE 3	
10 units on a 0.33	333 hectare site (30 units	per hectare density) - 0 f	flat(s) and 10 house(s).
	Epping Fo	rest EN9 CM5	
AH Mix:		100% Shared Ownersh	ip
	20% Afford	lable Housing	
	100% S1	06 allowance	
	Nil Grant Lowe	er EUV sensitivity.	
	19% Gross F	Profit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
	010		
	011		
	012		
	013		
	014 015		
	016		
	017		
	018		
	19		
	020		
20	021		
20	022		
20	023		
	024		
	025		
20	026		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EP145

	Epping Fo	orest CM17	
	10% Afford	able Housing	
AH Mix:	1	00% Shared Ownersh	
		100% S106 allowanc	_
		rant Lower EUV sensi	
	194	6 Gross Profit sensiti	vity.
YEAR	DOWNSIDE	VIABILITY MIDDLE	UPSIDE
2010	DOWNSIDE	INIDDLE	OPSIDE
2010			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2022 2023			
2023			
2024			
2026			
2020	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EP146

		orest CM16	
	10% Afford	able Housing	
AH Mix:		.00% Shared Ownersl	hip
		100% \$106 allowanc	
		l Grant Higher EUV sei	
	199	% Gross Profit sensiti	ivity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
201			
201			
201			
201			
201			
201 201			
201			
201			
201			
202			
202			
202			
202			
202			
202	5		
202	6		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EP147

	Eppir	ng 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% Aff	ordable Housi	na	
		s S106 allowance		
	Nil Grant L	ower EUV sensitivity.		
	19% Gra	ss 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 EP148

	Epping F	orest IG7		
10% Affordable Housing				
AH Mix:	100% Shared Ownership 100% S106 allowance Nil Grant Lower EUV sensitivity.			
	19%	6 Gross Profit sensit	ivity.	
YEAR	DOWNSIDE	VIABILITY MIDDLE	UPSIDE	
7EAK 2010		MIDDLE	OPSIDE	
2010				
2011				
2012				
2014				
2015				
2016				
2017				
2018				
2019				
2020				
2021				
2022				
2023				
2024				
2025				
2026				
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure EP149

	Eppina F	orest CM16	
		able Housing	
AH Mix:		.00% Shared Ownersh 100% S106 allowance	
	Nil G	rant Lower EUV sensit	
		% Gross Profit sensiti	
		VIABILITY	•
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021 2022			
2022			
2023			
2025			
2026			
2020	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Appendix Twelve – Harlow Additional Sensitivity Testing

Figure H1

	Н	arlow 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								
							6 S106 allowance	
						Nil Grant I	ower EUV sensitivity.	
	19% Gro	oss Profit sensitivity.						
		VIABILITY						
YEAR	DOWNSIDE	MIDDLE	UPSIDE					
2010								
2011								
2012								
2013								
2014								
2015								
2016								
2017 2018								
2018								
2020								
2021								
2022								
2023								
2024								
2025								
2026								
=N	IOT VIABLE							
=M	IARGINALLY VIABLE							
=V	IABLE							

Figure H2

	Harlo	w CM17	
	13% Afford	able Housing	
AH Mix:	70-30 Social Rent to Intermediate 100% S106 allowance Higher Value AUV sensitivity.		
	199	% Gross Profit sensitiv	/ity.
YEAR	DOWNSIDE	VIABILITY MIDDLE	UPSIDE
2010		MIDDEE	OI SIDE
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2022 2023			
2023			
2024			
2025			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure H3

SCHEME TYPE 2 (	(50/50)	Harlow	CM18
15 units on a 0.5 he	ctare site (30 units per	hectare density) - O flat(s) and 15 house(s).	
AH Mix:	70-30 Social Rent:Intermediate		
	35% Afford	able Housing	
		6 allowance	
	Normal Grant Lov	ver EUV sensitivity.	
	19% Gross Pi	rofit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015 2016			
2016			
2017			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure H4

	Harlov	w CM19		
45% Affordable Housing				
AH Mix:		O Social rent Intermed	diate	
	100% \$106 allowance			
		rant Lower AUV sensit		
	199	% Gross Profit sensitiv	ity.	
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
2013				
2014				
2015				
2016				
2017				
2018				
2019				
2020				
2021				
2022				
2023				
2024				
2025				
2026	MOTUMBLE			
	=NOT VIABLE			
	=MARGINALLY VIABLE			

Figure H5

	Harlo	ow CM19		
	25% Afford	dable Housing		
AH Mix:		30 Social Rent: Interm		
	100% \$106 allowance			
		Nil Grant Lower AUV sensitivity.		
	19	1% Gross profit sensiti	ivity.	
		VIABILITY		
/EAR	DOWNSIDE	MIDDLE	UPSIDE	
	010			
	011			
	012			
	013			
	014			
	015 016			
	017			
	018			
	019			
	020			
	021			
	022			
2	023			
2	024			
2	025			
2	026			
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure H6



Figure H7

15 unit	ts on a 0.5 hectare site (30 u	nits per hectare density) - 0 fla	t(s) and 15 house(s).
	20% Aff	ordable Housi	ina
AH Mix:		0 Social Rent:Interme	
		100% S106 allowance	)
		ant Lower EUV sensit	
	199	o Gross Profit sensitiv	vity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024 2025			
2025			
	NOT VIABLE		
	MARGINALLY VIABLE		
=1	MARGINALLY VIABLE		

Figure H8

	Harlo	w CM17		
35% Affordable Housing				
AH Mix:		0 Social rent:Interm		
	50% S106 allowance			
		rant Lower EUV sens		
	199	% Gross Profit sensi	tivity.	
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012	_			
2013				
2014				
2019				
2016				
2017				
2018				
2019				
2020				
2021				
2022				
2023				
2024				
2025				
2026				
_	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure H9

	Harlo	w CM17		
	7% Afforda	ble Housing		
AH Mix:		iO social rent:interm		
	100% S106 allowance			
		Higher AUV sensitivi		
	199	% Gross profit sensi	tivity.	
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
201				
201				
201				
201				
201				
201				
201				
201				
201 201				
201				
202				
202				
202				
202				
202				
202				
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure H10

	Harlov	/ CM18		
25% Affordable Housing				
AH Mix:	Nil Gra	100% Social rent 50% S106 allowance ant Lower AUV sensit o Gross Profit sensitiv	ivity.	
	23.1	VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
2013				
2014				
2015				
2016				
2017				
2018				
2019				
2020				
2021				
2022				
2023				
2024 2025				
2025 2026				
2026	=NOT VIABLE	<u> </u>		
	=MARGINALLY VIABLE			
	=VIABLE			

Figure H11

	Harlov	w CM18		
7% Affordable Housing				
AH Mix:	70-3	0 social rent:interm	ediate	
	100% S106 allowance			
		Higher AUV sensitivit		
	199	⁄o Gross profit sensit	ivity.	
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
	010			
	011			
	012			
	013			
	014			
	015		+	
	D16 D17		+	
	018			
	019			
	020			
	021			
	022			
	023			
	024			
2	025			
2	026			
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure H12

SCHEME TYPE 2	(50/50)	Harlo	w CM19
15 units on a 0.3 h	ectare site (50 units pe	hectare density) - O flat(s) and 15 house(s).	
AH Mix:	70-30 Social Rent:Intermediate		
	35% Afford	able Housing	1
		06 allowance	
	Normal Grant Lo	wer EUV sensitivity.	
	19% Gross P	rofit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
201	0		
201	1		
201	2		
201			
201			
201			
201			
201			
201			
201			
202			
202			
202			
202			
202			
202			
202			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure H13

	Harlo	w CM19		
7% Affordable Housing				
AH Mix:		100% social rent		
		1 S106 allowance		
		Higher AUV sensitivit		
	19	% Gross Profit sensit	ivity.	
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
	010			
	011			
	012			
	013			
	014			
	015			
	016			
	017			
	018 019			
	020			
	021			
	022			
	023			
	024			
	025			
	026			
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure H14

	Harlov	v CM17	
	25% Afforda	able Housing	
AH Mix:	70-30 Social Rent:Intermediate 100% S106 allowance Normal Grant Lower EUV sensitivity.		
		6 Gross Profit sensiti	
	194	VIABILITY	vicy.
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024 2025			
2025			
2028	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure H15

	Harlo	w CM17	
AH Mix:	Mix: 50-50 Social rent:Intermediate		
	35% Afford	able Housing	
		06 allowance	
	Nil Grant Lowe	r EUV sensitivity.	
	19% Gross P	rofit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
201			
201:			
2013			
201· 201			
201			
201			
201			
201			
2021			
202	1		
202:	2		
202:	3		
202			
202			
202			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure H16

	Harlov	w CM17		
20% Affordable Housing				
AH Mix:	70-30	social rent to inter	mediate	
		100 S106 allowand	e	
		ant higher AUV sen		
	199	⁄o Gross profit sensi	tivity.	
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
2013				
2014				
2015				
2016				
2017				
2018				
2019				
2020				
2021 2022				
2022				
2023				
2024				
2025				
2020	=NOT VIABLE			
	=MARGINALLY VIABLE			

Figure H17

SCHEME TYPE 2 (50/50)		Harlow CM18		
50 units on a 1.67 he	ctare site (30 units per	hectare density) - 0 fl	at(s) and 50 house(s).	
AH Mix:	70-30 Social Rent:Intermediate			
	35% Afforda	able Housing		
		6 allowance		
	Normal Grant Low	er EUV sensitivity.		
	19% Gross Pr	ofit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
2013				
2014				
2015 2016				
2010				
2018				
2019				
2020				
2021				
2022				
2023				
2024				
2025				
2026				
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure H18

	Harlov	v CM19		
42% Affordable Housing				
AH Mix:		Social rent to Inter		
		100 \$106 allowand		
		_ower AUV sensitivi		
	199	6 Gross profit sensi	tivity.	
		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 H19

	Harlo	w CM19		
AH Mix:	50-8	50-50 Social rent:Intermediate		
	35% Afford	lable Housing		
		06 allowance		
	Nil Grant Highe	er EUV sensitivity.		
	19% Gross P	rofit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
	010			
	011			
	012			
	013			
	014			
	015			
	016 017			
	017			
	018			
	020			
	021			
	022			
	023			
21	024			
21	025			
21	026			
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure H20



Figure H21

	Harlo	w CM20		
25% Affordable Housing				
AH Mix:	50-50	Social rent to Intern		
		0.5 S106 allowance		
		Higher AUV sensitivit		
	190	% Gross Profit sensit	ivity.	
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
	10			
	11			
	112			
	113			
	114			
	115			
	116 117			
	118			
	119			
	20			
	21			
	122			
	123			
	124			
20	25			
20	26			
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

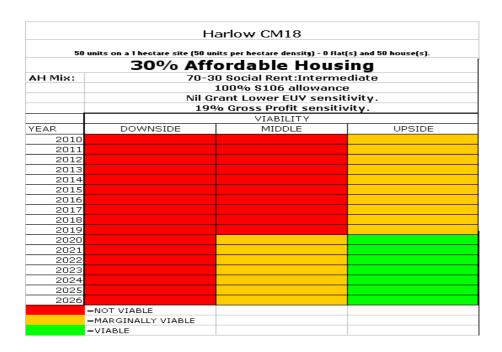
Figure H22

	Harlov	v CM17	
AH Mix:	50-50 Social rent:Intermediate		
	25% Afforda	able Housing	
		6 allowance	
	Nil Grant Lower	EUV sensitivity.	
	19% Gross Pr	ofit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017 2018			
2018			
2019			
2021			
2022			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure H23

	Harlo	w CM20		
25% Affordable Housing				
AH Mix:	70-30 Social Rent:Intermediate 50% S106 allowance Normal Grant Higher EUV sensitivity.			
	199	% Gross Profit sensitiv	rity.	
		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 H24



SCHEME TYPE 2 (	(50/50)	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% Afford	able Housing		
		06 allowance		
	Normal Grant Lov	ver EUV sensitivity.		
	19% Gross P	rofit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
2013				
2014				
2015				
2016 2017				
2017				
2019				
2020				
2021				
2022				
2023				
2024				
2025				
2026				
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure H26

	Harlo	w CM19		
40% Affordable Housing				
AH Mix:		O Social Rent to Interm	ediate	
		100 S106 allowance		
		Lower AUV sensitivity		
	19	1% Gross Profit sensitiv	ity.	
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
20:				
20:				
20:				
20:				
20:				
20:				
20:				
20:				
20: 20:				
20.				
20				
202				
202				
202				
202				
202				
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure H27

	Harlo	w CM19		
20% Affordable Housing				
AH Mix:		50 social rent:interm		
		50 S106 allowance		
		Higher AUV sensitivit		
		19% Profit sensitivit	у.	
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
	10			
	11			
	12			
	13			
	14			
	15			
	16			
	17			
	18			
	19 20			
	21			
	22			
	23			
	24			
	25			
	26			
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure H28

SCHEME TYPE 2		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% Afford	able Housing		
		6 allowance		
	Normal Grant Lov	ver EUV sensitivity.		
	19% Gross Pr	ofit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
2013				
2014				
2015				
2016 2017				
2017				
2019				
2020				
2021				
2022				
2023				
2024				
2025				
2026	i e			
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure H29

	Harlo	w CM17			
25% Affordable Housing					
AH Mix:	100% Social rent 100% S106 allowance Nil Grant Lower AUV sensitivity. 19% Gross Profit sensitivity.				
	19-	VIABILITY	vicy.		
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
2011					
2012					
2013					
2014					
2015					
2016					
2017					
2018					
2019					
2020					
2021					
2022					
2023					
2024 2025					
2025					
2028	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Figure H30

	Harlov	v CM17		
20% Affordable Housing				
AH Mix:	50:50 Social Rent to Intermediate 100% S106 allowance Lower AUV sensitivity.			
	19%	o Gross profit sensitiv	ity.	
		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 H31

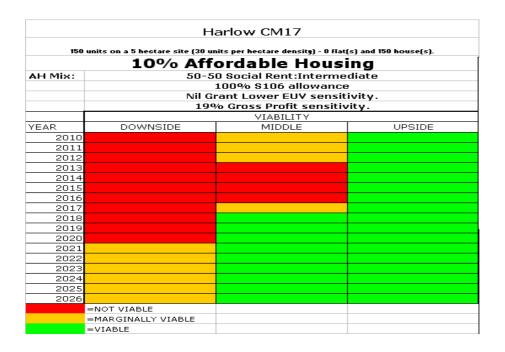


Figure H32

Harlow CM19				
AH Mix:		100% Social rent		
	35% Afford	able Housing		
		6 allowance		
	Normal Grant Lov	ver AUV sensitivity.		
	19% Gross Pr	ofit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
	010			
	011			
	012			
	013			
	014			
	015			
	016 017			
	018			
	019			
	020			
	021			
	022			
	023			
20	024			
20	025			
20	026			
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure H33

	Harlo	w CM19	
	20% Afford	able Housing	I
AH Mix:	50-5	0 Social rent:Interm	ediate
		100% \$106 allowand	ce
		Grant Higher AUV se	
	199	% Gross Profit sensit	ivity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
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2017 2018			
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2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure H34

	Harlo	w CM17		
35% Affordable Housing				
AH Mix:		0 Social rent:Interme		
		50% S106 allowance		
		rant Lower EUV sensi		
	199	% Gross Profit sensiti	vity.	
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
2013				
2014				
2015				
2016				
2017				
2018				
2019				
2020				
2021 2022				
2022				
2023				
2024				
2025				
2020	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure H35

	Harlo	w CM17		
30% Affordable Housing				
AH Mix:	50-50 Social rent to Intermediate 50% S106 allowance Higher AUV 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				
2024				
2025				
2020	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure H36

	Harlo	w CM18		
35% Affordable Housing				
AH Mix:	70-3	70-30 Social Rent:Intermediate		
		50% S106 allowance		
		Grant Lower EUV sen		
	199	% Gross Profit sensitiv	/ity.	
		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 H37

	Harlo	w CM18		
10% Affordable Housing				
AH Mix:	50-5	O Social rent to inter	mediate	
		50% \$106 allowand	ce	
		rant Higher AUV sen		
	19	% Gross Profit sensi	tivity.	
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
20				
20				
20				
20				
20				
20				
20				
20 20				
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	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure H38

SCHEME TYPE 2 (5	50/50)	Harlow CM19		
150 units on a 3 hectare site (50 units per hectare density) - 0 flat(s) and 150 hous				
AH Mix:	x: 70-30 Social Rent:Intermediate			
	35% Afford	able Housing		
		6 allowance		
	Normal Grant Low	er EUV sensitivity.		
	19% Gross Pr	ofit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
2013				
2014 2015				
2015				
2017				
2018				
2019				
2020				
2021				
2022				
2023				
2024				
2025				
2026				
	NOT VIABLE			
	=MARGINALLY VIABLE =VIABLE			
	- AIMDEE			

Figure H39

	Harlo	w CM19	
	15% Afford	able Housing	
AH Mix:	70-30 social rent to intermediate		
		100% S106 allowance	
	Higher AUV Normal grant 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			
2025			
2026			
2027			
2029			
2030			
2031			
	NOT VIABLE		
	MARGINALLY VIABLE		
	VIABLE		

Figure H40

SCHEME TYPE 2 (50/50)		Harlow CM17	
150 units on a 2.142 l	hectare site (70 units pe	er hectare density) - 72	flat(s) and 78 house(s).
AH Mix:	70-30 Social Rent:Intermediate		
	25% Afford	able Housing	
		6 allowance	
	Normal Grant Lov	ver EUV sensitivity.	
	19% Gross Pr	ofit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014 2015			
2015			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024			
2025 2026			
2026	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure H41

	Harlo	w CM17		
	10% Afford	able Housing		
AH Mix:	50-50	) Social rent to intern	nediate	
		50 S106 allowance		
		Higher AUV sensitivit		
	199	19% Gross Profit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
201				
201				
201				
201				
201				
201 201				
201				
201				
201				
202				
202				
202				
202	23			
202	24			
202	25			
202	26			
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure H42

	Harlo	w CM18	
	10% Afford	able Housing	
AH Mix:	50-50	) social rent to interm	ediate
		50 S106 allowance	
		AUV normal grant ser	
	199	% Gross profit sensiti	vity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017 2018			
2018			
2019			
2020			
2022			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure H43

	Harlo	w CM19		
	10% Afford	able Housing		
AH Mix:	50-50	Social rent to Interm	ediate	
		100% \$106 allowance	•	
		Grant Lower AUV sen		
	199	19% Gross profit sensitivity.		
		VIABILITY	UPSIDE	
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
201:				
2012	2			
2013				
2014				
2019				
2016				
2017				
2018				
2019				
2020				
202:				
2022				
2023				
2024 2025				
2025				
2020	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure H44

	Harlo	w CM20	
	10% Afford	able Housing	3
AH Mix:		Social Rent to Inter	
		50 S106 allowance	)
		AUV Normal Grant se	
	19	% Gross Profit sensit	tivity.
	VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			_
2018			_
2019 2020			
2020			_
2021			
2022			
2023			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure H45



Figure H46

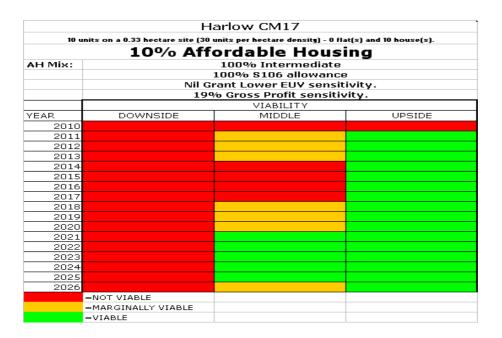


Figure H47

	Н	arlow CM18		
10 units on a 0.333 hectare site (30 units per hectare density) - 0 flat(s) and 10 house(s).				
AH Mix:	Mix: 100% Intermediate			
20% Affordable Housing				
	19% Gro	ss Profit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
2013				
2014				
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2016				
2017				
2018				
2019				
2020				
2021				
2022				
2023	<u> </u>			
2024				
2025 2026				
2026	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			
	- **DOFF			

Figure H48



Figure H49



Figure H50



Appendix Thirteen – Uttlesford Additional Sensitivity Testing

Figure U1

Uttlesford CB10					
40% Affordable Housing					
AH Mix:		Social Rent:Intern			
	1	100% S106 allowan	ce		
		ant Lower EUV sens			
	199	6 Gross Profit sensi	tivity.		
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
2011					
2012					
2013					
2014					
2015					
2016 2017					
2017					
2019					
2019					
2021					
2022	_				
2023					
2024					
2025					
2026					
	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Figure U2

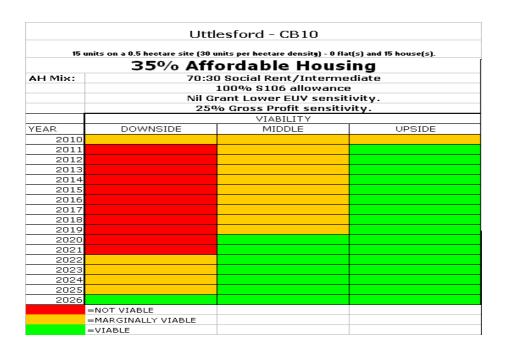


Figure U3

	Uttlesfor	rd - CB10			
13% Affordable Housing					
AH Mix:		Social Rent:Interm			
	1	100% <b>S1</b> 06 allowan	ce		
		Grant Higher EUV se			
	199	6 Gross Profit sensit	tivity.		
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
	010				
	011				
	012				
	013				
	014				
	015				
	016				
	017				
	018				
	019				
	020				
	021				
	022				
	023				
	024	<u> </u>			
	025				
20	026	<u>'</u>			
	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Figure U4

		esford - CB11			
15 u		units per hectare density) - 0 fla			
40% Affordable Housing					
AH Mix: 70:30 Social Rent/Intermediate					
		100% S106 allowance			
		rant Lower EUV sensit			
	199	% Gross Profit sensitiv	/ity.		
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
2011					
2012					
2013					
2014					
2015 2016					
2016					
2017					
2019					
2020					
2021					
2022					
2023					
2024					
2025					
2026					
	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Figure U5

	Uttle	esford - CB11			
15 u		ınits per hectare density) - 0 fla			
40% Affordable Housing					
AH Mix: 70:30 Social Rent/Intermediate					
		1 S106 allowance			
		rant Lower EUV sensit			
	259	% Gross Profit sensitiv	ity.		
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
2011					
2012 2013					
2013					
2015					
2016					
2017					
2018					
2019					
2020					
2021					
2022					
2023					
2024					
2025					
2026					
	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Figure U6

	Uttl	esford - CB11			
15 units on a 0.5 hectare site (30 units per hectare density) - 0 flat(s) and 15 house(s).					
13% Affordable Housing					
AH Mix: 50:50 Social Rent/Intermediate					
100% \$106 allowance					
Normal Grant Higher EUV sensitivity.					
	199	% Gross Profit sensitiv	/ity.		
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
2011					
2012					
2013					
2014					
2015					
2016					
2017					
2018 2019					
2019					
2020					
2021					
2023					
2024					
2025					
2026					
	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Figure U7

Uttlesford - CM6					
AH Mix:	30:7	O Social rent:Interme	diate		
35% Affordable Housing					
		6 allowance			
		r EUV sensitivity.			
	19% Gross Pi	ofit sensitivity.			
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
201					
201					
201					
201					
201					
201					
201					
201					
201					
201					
202					
202					
202					
202					
202					
202					
202	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Figure U8



Figure U9

	Littlesfor	d - CM22	
		able Housing	1
AH Mix:	30:70	0 Social rent:Interm 100% S106 allowan	ediate ce
		rant Lower EUV sens	
	259	6 Gross Profit sensit	ivity.
VE + B	DOMNOTOR	VIABILITY	LIBOTOF
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021 2022			
2022			
2023			
2024			
2025			
	=NOT VIABLE		
	=NOT VIABLE =MARGINALLY VIABLE		
	=VIABLE		

Figure U10

	SCHEME TYP	E 2 (30/30)	
	Uttlesford	l - CM22	
15 units on a 0.5 ho	ectare site (30 units per h	ectare density) - 0 flat	t(s) and 15 house(s).
	35% Afforda	ble Housing	
AH Mix:	70:30 Social Rent/Intermediate		
	_	00% S106 allowance	
		Grant Lower EUV sen:	
	25%	Gross Profit sensitiv	ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011 2012			
2012			
2013			
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024			
2025 202 <i>6</i>			
2026	=NOT VIABLE		
	=MARGINALLY VIABLE		
	-INMEGRIAMENT ATMORE		

Figure U11

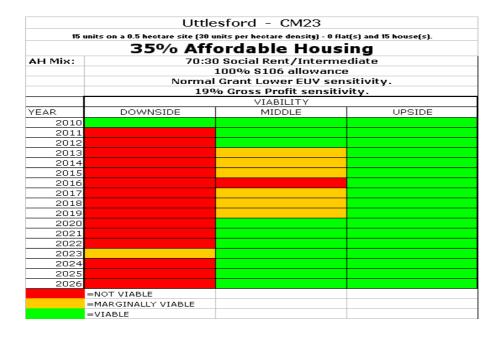


Figure U12



Figure U13



Figure U14

Uttlesford CB10					
AH Mix:	50-5	O Social rent:Interme	diate		
35% Affordable Housing					
		6 allowance			
		r EUV sensitivity.			
	19% Gross Pi	rofit sensitivity.			
VIABILITY					
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
2011					
2012					
2013					
2014					
2015					
2016					
2017					
2018					
2019 2020					
2020					
2021					
2022					
2023					
2025					
2026					
	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Figure U15

	Uttle	esford - CB10			
15 ur	nits on a 0.3 hectare site (50 u	nits per hectare density) - 0 fla	t(s) and 15 house(s).		
14% Affordable Housing					
AH Mix: 50:50 Social Rent/Intermediate					
100% \$106 allowance					
		Grant Higher EUV sen			
	199	o Gross Profit sensitiv	rity.		
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
2011					
2012					
2013					
2014					
2015					
2016 2017					
2017					
2018					
2020					
2021					
2022					
2023					
2024					
2025					
2026					
-	NOT VIABLE				
	=MARGINALLY VIABLE				
=	=VIABLE				

Figure U16



Figure U17

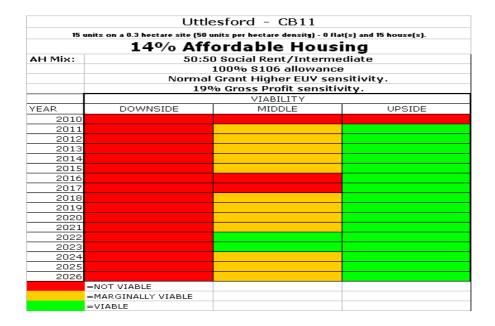


Figure U18

		Uttlesfo	rd - CM6	
AH Mix: 30:70 Social rent:Intermediate				liate
		35% Afford	able Housing	
			6 allowance	
		Nil Grant Lowe	r EUV sensitivity.	
		19% Gross Pi	ofit sensitivity.	
			VIABILITY	
YEAR		DOWNSIDE	MIDDLE	UPSIDE
	2010		е	
	2011			
	2012			
	2013			
	2014			
	2015			
	2016			
	2017			
	2018			
	2019			
	2020 2021			
	2021			
	2023			
	2023			
	2025			
	2026			
		=NOT VIABLE		
		=MARGINALLY VIABLE		
		=VIABLE		

Figure U19

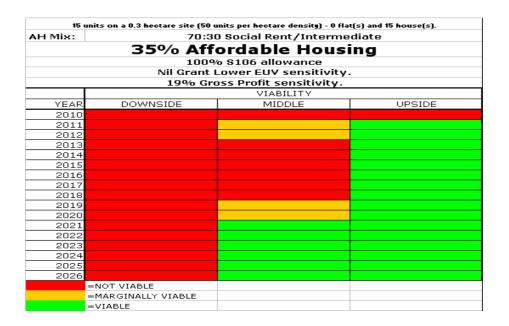


Figure U20

YEAR 2010 2011 2012 2013	70:30 <b>35% Aff</b> 100%	<sub>inits per hectare densitg) - 0 flat D Social Rent/Interme <b>ordable Housi</b> o S106 allowance</sub>	diate
YEAR 2010 2011 2012 2013	35% Aff	ordable Housi	
2010 2011 2012 2013	100%		ing
2010 2011 2012 2013	100%		
2010 2011 2012 2013	Nil Crant I		
2010 2011 2012 2013	Wil Grafft L	ower EUV sensitivity.	
2010 2011 2012 2013	19% Gra	ss Profit sensitivity.	
2010 2011 2012 2013		VIABILITY	
2011 2012 2013	DOWNSIDE	MIDDLE	UPSIDE
2012 2013			
2013			
2014 2015			
2015			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
	NOT VIABLE		
=M =V	MARGINALLY VIABLE		

Figure U21

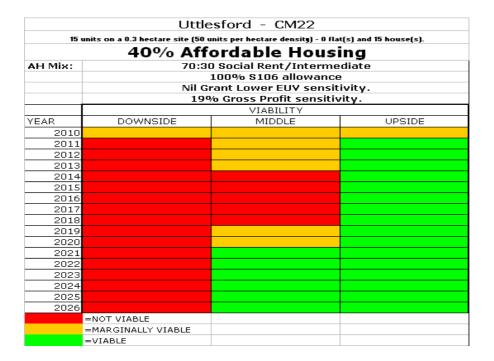


Figure U22



Figure U23



Figure U24

	Uttlesfor	rd - CB10		
35% Affordable Housing				
AH Mix:	50:5	0 Social Rent:Interm	ediate	
		0.5 S106 allowance	•	
		l Grant Lower EUV se		
	199	% Gross Profit sensit	ivity.	
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
2013				
2014				
2015				
2016				
2017				
2018				
2019				
2020				
2021				
2022 2023				
2023				
2024				
2025				
2020	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure U25

Uttlesford - CB10					
15 units on a 0.223 hectare site (67 units per hectare density) - 9 flat(s) and 6 house(s).					
	14% Affordable Housing				
AH Mix:					
		100% S106 allowance			
		rant Lower EUV sensit			
	199	% Gross Profit sensitiv	vity.		
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
2011					
2012					
2013					
2014					
2015					
2016					
2017 2018					
2018					
2019					
2020					
2022					
2023					
2024					
2025					
2026					
	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Figure U26

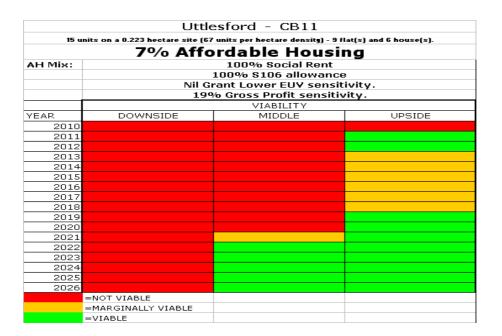


Figure U27

	Uttl	lesford - CM6			
15 units on a 0.223 hectare site (67 units per hectare density) - 9 flat(s) and 6 house(s).					
AH Mix:		100% Social Rent			
	7% Affordable Housing				
		s S106 allowance			
	Nil Grant L	ower EUV sensitivity.			
	19% Gro	ss Profit sensitivity.			
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
2011					
2012					
2013					
2014					
2015					
2016					
2017 2018					
2018					
2019					
2020					
2022					
2023					
2024					
2025					
2026					
=	NOT VIABLE				
	MARGINALLY VIABLE				
=	VIABLE				

Figure U28

	Uttlesford	- CM22	
AH Mix: 50:50 Social Rent:Intermediate			
	35% Afforda	ble Housina	
	100% \$106		
	Normal Grant Lowe	er EUV sensitivity.	
	19% Gross Pro	fit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024 2025			
2025			
2020	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure U29

Uttlesford - CM22			
15 units on a 0.223 hectare site (67 units per hectare density) - 9 flat(s) and 6 house(s).			
7% Affordable Housing			
AH Mix:		100% Social Rent	
		100% \$106 allowance	
		rant Lower EUV sensit	
	199	6 Gross Profit sensitiv	nty.
VE 4 B	DOWNSIDE	VIABILITY MIDDLE	LIBOTE
YEAR	DOMNSIDE	MIDDLE	UPSIDE
2010 2011			
2011			
2012			
2013			
2014			
2015			
2017			
2017			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure U30

Uttlesford - CM23				
AH Mix:	H Mix: 50:50 Social Rent:Intermediate			
	35% Afford	able Housing		
		6 allowance		
	Normal Grant Low	er EUV sensitivity.		
	19% Gross Pr	ofit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
2013				
2014				
2015				
2016				
2017 2018				
2018				
2019				
2020				
2021				
2023				
2024				
2025				
2026				
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure U31

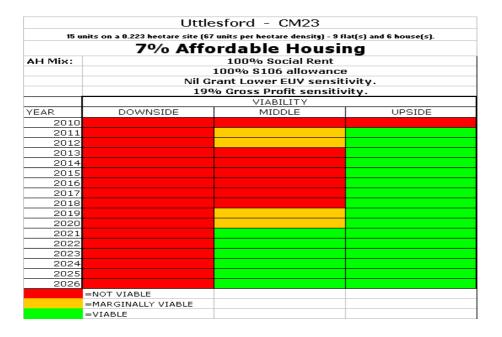


Figure U32

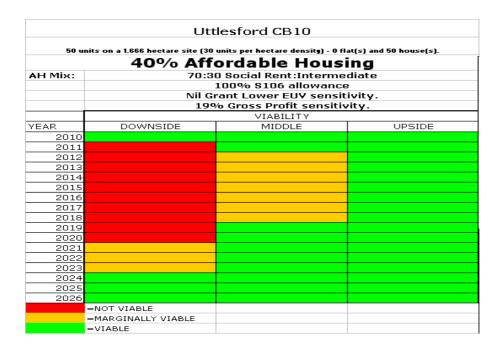


Figure U33

		desford CB10	
50 ur	-	units per hectare density) - 0 fl	
	45% Aff	ordable Housi	ing
AH Mix:	70:3	0 Social Rent:Interme	diate
		1 S106 allowance	
		rant Lower EUV sensit	
	199	% Gross Profit sensitiv	rity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010	<u> </u>		
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019	<u> </u>		
2020	<u> </u>		
2021 2022			
2022			
2023			
2024			
2025			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure U34

	Utt	lesford CB10		
50 unit		units per hectare density) - 0 fl		
	10% Aff	ordable Housi	ing	
AH Mix:	70:30 Social Rent/Intermediate 100% \$106 allowance			
		Grant Higher EUV sen		
		6 Gross Profit sensitiv		
		VIABILITY	•	
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
2013				
2014				
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2016				
2017				
2018				
2019				
2020				
2021				
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2023				
2024				
2025				
2026				
=	NOT VIABLE			
=	MARGINALLY VIABLE			
=	VIABLE			

Figure U35

	Utt	lesford CB11		
50 units on a 1.666 hectare site (30 units per hectare density) - 0 flat(s) and 50 house(s). 45% Affordable Housing				
		100% S106 allowance	)	
		rant Lower EUV sensit		
	199	% Gross Profit sensitiv	rity.	
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
2013				
2014				
2015				
2016				
2017				
2018				
2019 2020				
2020				
2021				
2022				
2023				
2025				
2026				
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure U36

50 units on a 1.666 hectare site (30 units per hectare density) - 0 flat(s) and 50 house(s).				
30 di				
AH Mix:	Mix: 70:30 Social Rent/Intermediate 100% S106 allowance Nil Grant Lower EUV sensitivity. 25% Gross Profit sensitivity.			
f		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
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2018				
2019				
2020				
2021				
2022				
2023				
2024				
2025				
2026				
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure U37

	Utt	lesford CB11			
50 units on a 1.666 hectare site (30 units per hectare densit <b>y</b> ) - 0 flat(s) and 50 house(s).					
6% Affordable Housing					
AH Mix:					
	127	VIABILITY	ricy.		
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
2011					
2012					
2013					
2014					
2015					
2016					
2017					
2018					
2019					
2020					
2021					
2022					
2023 2024					
2024					
2025					
	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Figure U38



	Uttles	ford CM6	
H Mix: 50:50 Social Rent:Intermediate			
	35% Afford	lable Housing	
		06 allowance	
		wer EUV sensitivity.	
	19% Gross F	rofit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
20			
20			
20			
20			
20			
20			
20 20			
20			
20			
20:			
20:			
20:			
20:			
20:	24		
20:	25		
20:	26		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure U40

	Ut	tlesford CM6			
50 units on a 1.666 hectare site (30 units per hectare density) - 0 flat(s) and 50 house(s).  6% Affordable Housing					
		100% S106 allowance	•		
		Grant Higher EUV sen			
	199	∕o Gross Profit sensitiv	/ity.		
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
2011					
2012					
2013					
2014					
2015					
2016					
2017					
2018					
2019					
2020					
2021 2022					
2022					
2023					
2024					
2025					
2020	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Figure U41

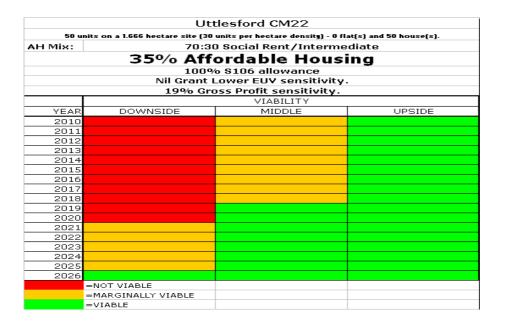


Figure U42



Figure U43



Figure U44

	Uttlesfor	d CB10		
H Mix: 30:70 Social rent:Intermediate				
	35% Afforda	ble Housina		
	100% S106			
	Nil Grant Lower E	UV sensitivity.		
	19% Gross Prof	it sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
2013				
2014				
2015 2016				
2016				
2017				
2019				
2020				
2021				
2022				
2023				
2024				
2025				
2026				
	NOT VIABLE			
	=MARGINALLY VIABLE			
=	=VIABLE			

Figure U45



Figure U46

	Utt	lesford CB10					
50	units on a 1 hectare site (50 ur	nits per hectare density) - 0 flat	(s) and 50 house(s).				
	10% Affordable Housing						
AH Mix:		D Social Rent/Interme					
		100% S106 allowance					
		Grant Higher EUV sen					
	190	% Gross Profit sensitiv	/ity.				
		VIABILITY					
YEAR	DOWNSIDE	MIDDLE	UPSIDE				
2010							
2011							
2012							
2013							
2014							
2015							
2016							
2017							
2018							
2019							
2020							
2021							
2022							
2023							
2024 2025							
2025							
2026	=NOT VIABLE						
	=MARGINALLY VIABLE =VIABLE						

Figure U47

	Uttles	ford CB11			
AH Mix:					
	35% Afford	lable Housing			
		.06 allowance	,		
		er EUV sensitivity.			
	19% Gross I	Profit sensitivity.			
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
	10				
	11				
	12				
	13				
	14				
	15				
	16				
	17				
	18				
	19				
	20				
	22				
	23				
	24				
	25				
	26				
2.0	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Figure U48

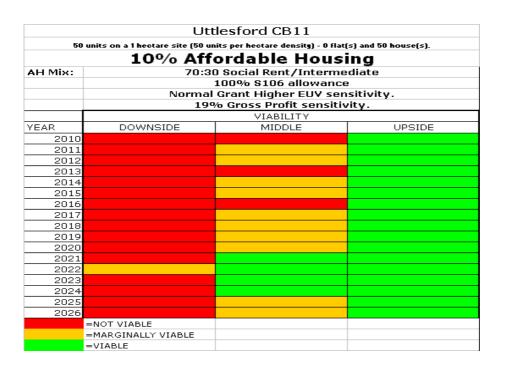


Figure U49



Figure U50

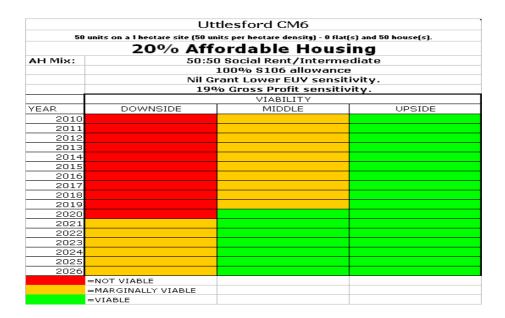


Figure U51

2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2021 2022 2023 2024 2025 2026 =NOT VIABLE	Uttlesford CM22				
100% \$106 allowance   Nil Grant Lower EUV sensitivity.   19% Gross Profit sensitivity.   19%	AH Mix:	HMix: 50-50 Social rent:Intermediate			
100% \$106 allowance   Nil Grant Lower EUV sensitivity.   19% Gross Profit sensitivity.		35% Afford	lable Housing		
19% Gross Profit sensitivity.  VIABILITY  YEAR DOWNSIDE MIDDLE UPSIDE  2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2020 2020 2021 2022 2023 2024 2024 2025 2026 =NOT VIABLE					
YEAR DOWNSIDE MIDDLE UPSIDE  2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2020 2021 2022 2023 2024 2025 2026 =NOT VIABLE					
YEAR DOWNSIDE MIDDLE UPSIDE  2010  2011  2012  2013  2014  2015  2016  2017  2018  2019  2020  2021  2022  2023  2024  2025  2026  =NOT VIABLE		19% Gross P			
2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2021 2022 2023 2024 2025 2026 =NOT VIABLE					
2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2020 2021 2022 2023 2024 2025 2026 =NOT VIABLE			MIDDLE	UPSIDE	
2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 =NOT VIABLE					
2013 2014 2015 2016 2017 2018 2019 2020 2021 2021 2022 2023 2023 2024 2025 2026 =NOT VIABLE					
2014 2015 2016 2017 2018 2019 2020 2021 2021 2022 2023 2024 2025 2026 =NOT VIABLE					
2015 2016 2017 2018 2019 2020 2021 2021 2022 2023 2024 2025 2026 =NOT VIABLE					
2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 =NOT VIABLE					
2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 =NOT VIABLE					
2018 2019 2020 2021 2022 2023 2024 2025 2026 =NOT VIABLE					
2019 2020 2021 2022 2023 2024 2025 2026 =NOT VIABLE					
2020 2021 2022 2023 2024 2025 2026 =NOT VIABLE					
2021 2022 2023 2024 2025 2026 =NOT VIABLE					
2022 2023 2024 2025 2026 =NOT VIABLE					
2023 2024 2025 2026 =NOT VIABLE					
2024 2025 2026 =NOT VIABLE					
2025 2026 =NOT VIABLE					
2026 = NOT VIABLE					
=NOT VIABLE					
	204				
-MADCINALLY VIABLE		=MARGINALLY VIABLE			
=MARGINALLY VIABLE =VIABLE					

Figure U52

	Uttlesfor	d CM22		
AH Mix: 50:50 Social Rent:Intermediate				
	35% Afforda	ble Housina		
	100% \$106			
	Normal Grant Lowe	r EUV sensitivity.		
	19% Gross Pro	fit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
2013				
2014				
2015				
2016 2017				
2017				
2018				
2019				
2021				
2022				
2023				
2024				
2025				
2026				
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure U53

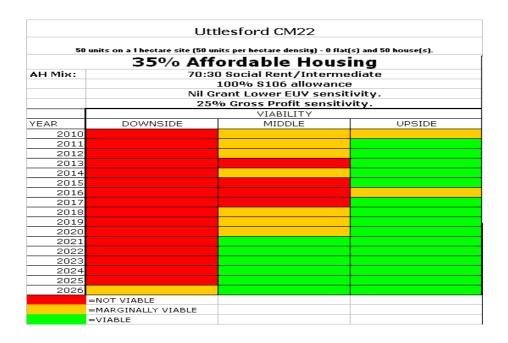


Figure U54

	Utt	lesford CM22					
50	50 units on a 1 hectare site (50 units per hectare density) - 0 flat(s) and 50 house(s).  10% Affordable Housing						
AH Mix:		) Social Rent/Interme					
		100% S106 allowance					
		Grant Higher EUV sen					
	190	% Gross Profit sensitiv	ity.				
		VIABILITY					
YEAR	DOWNSIDE	MIDDLE	UPSIDE				
2010							
2011							
2012							
2013							
2014 2015							
2015							
2017							
2018							
2019							
2020							
2021							
2022							
2023							
2024							
2025							
2026							
	=NOT VIABLE						
	=MARGINALLY VIABLE						
	=VIABLE						

50 units on a 1 hectare site (50 units per hectare density) - 0 flat(s) and 50 house( Uttlesford CM23					
AH Mix: 50:50 Social Rent:Intermediate					
	35% Afforda	able Housing			
		6 allowance			
	Normal Grant Low	er EUV sensitivity.			
	19% Gross Pr	ofit sensitivity.			
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
	010				
	011				
	012				
	013				
	014				
	015				
	016 017				
	018				
	019				
	020				
	021				
	122				
20	123				
20	024				
	125				
20	126				
	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Figure U56

	Uttlesf	ord 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					
		6 allowance			
		ver EUV sensitivity.			
		rofit 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 U57

50 ui	nits on a 0.746 hectare site (67	units per hectare density) - 24 f	lat(s) and 26 house(s).
	10% Aff	ordable Housi	ina
AH Mix:		0 Social Rent/Interme	
		100% S106 allowance	•
		l Grant Higher EUV sen	
	19	% Gross Profit sensitiv	rity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
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2018			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure U58

	Uttlesfo	rd CB11			
AH Mix:	AH Mix: 50:50 Social Rent:Intermediate				
	35% Afforda	ble Housina			
		allowance			
	Normal Grant Low	er EUV sensitivity.			
	19% Gross Pro	ofit sensitivity.			
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
2011					
2012					
2013					
2014					
2015 2016					
2010					
2017					
2019					
2020					
2021					
2022					
2023					
2024					
2025					
2026					
	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

		Uttlesf	ord CB11		
AH Mix:	AH Mix: 30:70 Social rent:Intermediate				
		35% Afford	able Housing	1	
			6 allowance	•	
		Nil Grant Lower	r EUV sensitivity.		
		19% Gross Pr	ofit sensitivity.		
			VIABILITY		
YEAR		DOWNSIDE	MIDDLE	UPSIDE	
	2010				
	2011				
	2012				
	2013				
	2014				
	2015				
	2016				
	2017				
	2018				
	2019				
	2020				
	2021				
	2022				
	2023				
	2024				
	2025				
2	2026				
		=NOT VIABLE			
		=MARGINALLY VIABLE			
		=VIABLE			

Figure U60

	Utt	tlesford CB11		
50 u	nits on a 0.746 hectare site (67	units per hectare density) - 24 (	lat(s) and 26 house(s).	
	10% Aff	ordable Hous	ina	
AH Mix:	70:30 Social Rent/Intermediate			
		100% S106 allowance		
	Normal	Grant Higher EUV sen	sitivity.	
	199	19% Gross Profit sensitivity.		
	VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
2013				
2014				
2015				
2016 2017				
2017				
2010				
2019				
2020				
2022				
2023				
2024				
2025				
2026				
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure U61

	Ut	tlesford CM6	
50 units	on a 0.746 hectare site (67 u	ınits per hectare density) - 24 fl	at(s) and 26 house(s)
AH Mix:	70:30 Social Rent/Intermediate		
	35% Aff	ordable Housi	na
		S106 allowance	<b>-</b>
	Nil Grant L	ower EUV sensitivity.	
	19% Gro	ss Profit sensitivity.	
	VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
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2013			
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2021			
2022			
2023			
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2025			
2026			
=1	IOT VIABLE		
	1ARGINALLY VIABLE		
=\	/IABLE		

Figure U62



Figure U63

	Uttlesfe	ord CM22	
50 units on a 0.746 h	ectare site (67 units pe	r hectare density) - 24 fla	at(s) and 26 house(s).
AH Mix:		O Social Rent/Intermed	diate
	35% Afford	able Housing	
		06 allowance	
	Normal Grant Lov	ver EUV sensitivity.	
	19% Gross P	rofit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016 2017			
2017			
2018			
2019			
2021			
2022			
2023			
2024			
2025			
2026			
	=NOT VIABLE		•
	=MARGINALLY VIABLE		
	=VIABLE		

Figure U64

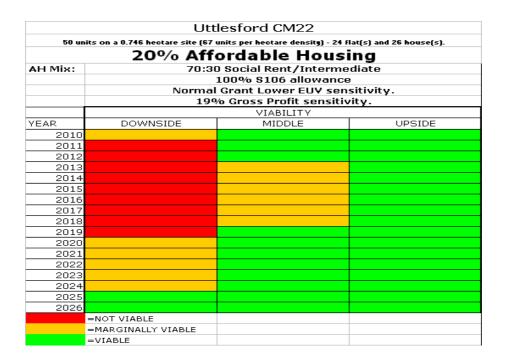


Figure U65

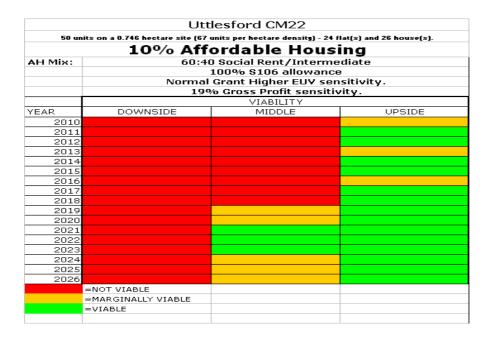


Figure U66

	Uttlesf	ord CM23	
50 units on a 0.746	nectare site (67 units pe	r hectare density) - 24 f	lat(s) and 26 house(s).
AH Mix:	70:3	0 Social Rent/Interme	ediate
	35% Afford	able Housing	
		6 allowance	
	Normal Grant Lov	ver EUV sensitivity.	
	19% Gross P	rofit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
<u> </u>	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure U67

		lesford CM23		
50 ui	nits on a 0.746 hectare site (67 t			
		ordable Housi		
AH Mix:		60:40 Social Rent/Intermediate 100 % S106 allowance Normal 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 U68

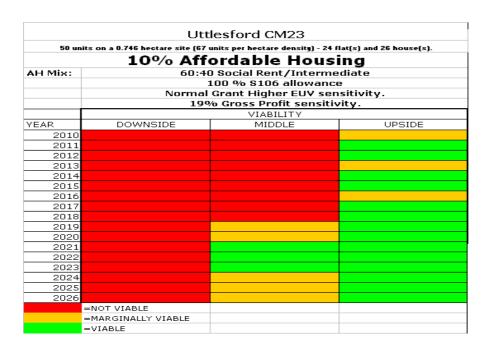


Figure U69

	Uti	tlesford CB10					
250 u	nits on a 8.333 hectare site (30	units per hectare density) - 0 fl	at(s) and 250 house(s).				
	35% Affordable Housing						
AH Mix:							
		200 % \$106 allowanc	В				
		rant Lower EUV sensit					
	199	% Gross Profit sensitiv	/ity.				
		VIABILITY					
YEAR	DOWNSIDE	MIDDLE	UPSIDE				
2010							
2011							
2012							
2013							
2014 2015							
2015							
2010							
2017							
2019							
2020							
2021							
2022							
2023							
2024							
2025							
2026							
	=NOT VIABLE						
	=MARGINALLY VIABLE						
	=VIABLE						

Figure U70

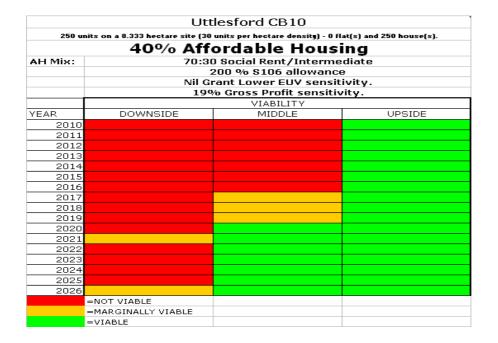


Figure U71

	Uti	lesford CB10			
250 u	inits on a 8.333 hectare site (30	units per hectare density) - 0 fl	at(s) and 250 house(s).		
10% Affordable Housing					
AH Mix: 70:30 Social Rent/Intermediate					
		100 % \$106 allowance	В		
	Normal	Grant Higher EUV sen	isitivity.		
	199	% Gross Profit sensitiv	vity.		
		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 U72



Figure U73

	Utt	lesford CB11				
250 u	250 units on a 8.333 hectare site (30 units per hectare density) - 0 flat(s) and 250 house(s).					
40% Affordable Housing						
AH Mix:						
		200% S106 allowance				
		rant Lower EUV sensit				
	199	% Gross Profit sensitiv	rity.			
VEAD	DOMINICIDE	VIABILITY	LIBOTE			
YEAR	DOWNSIDE	MIDDLE	UPSIDE			
2010						
2011 2012						
2012						
2013						
2015						
2016						
2017						
2018						
2019						
2020						
2021						
2022						
2023						
2024						
2025						
2026						
	=NOT VIABLE					
	=MARGINALLY VIABLE					
	=VIABLE					

Figure U74

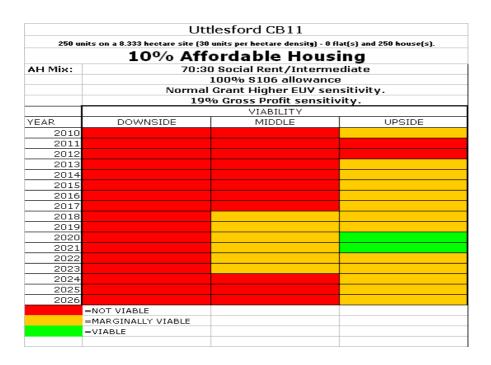


Figure U75

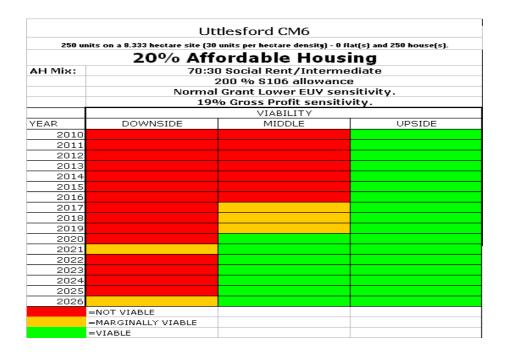


Figure U76

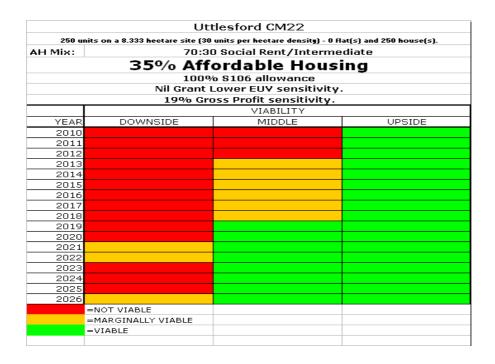


Figure U77

	Utt	lesford CM22			
250 unit	s on a 8.333 hectare site (30	units per hectare density) - 0 fl	at(s) and 250 house(s).		
10% Affordable Housing					
AH Mix:	70:30	O Social Rent/Interme	diate		
		200 % S106 allowance			
		rant Lower EUV sensit			
	199	% Gross Profit sensitiv	rity.		
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
2011					
2012					
2013					
2014					
2015 2016					
2016					
2017					
2019					
2020					
2021					
2022					
2023					
2024					
2025					
2026					
_	NOT VIABLE				
=	MARGINALLY VIABLE				
=	VIABLE				

Figure U78

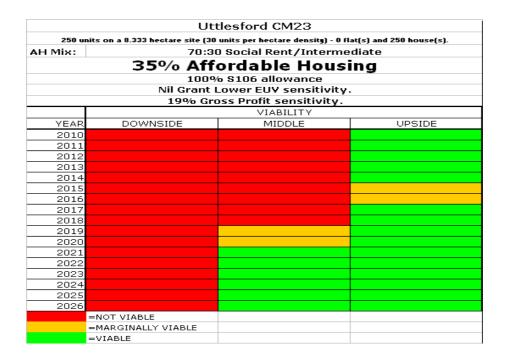


Figure U79

	Utt	lesford CM23				
250 un	its on a 8.333 hectare site (30	units per hectare density) - 0 fl	at(s) and 250 house(s).			
20% Affordable Housing						
AH Mix: 50:50 Social Rent/Intermediate						
		200% S106 allowance	9			
		ant Lower EUV sensit				
	199	6 Gross Profit sensitiv	/ity.			
		VIABILITY				
YEAR	DOWNSIDE	MIDDLE	UPSIDE			
2010						
2011						
2012						
2013						
2014						
2015						
2016 2017						
2017						
2018						
2019						
2020						
2022						
2023						
2024						
2025						
2026						
	=NOT VIABLE					
	=MARGINALLY VIABLE					
	=VIABLE					

Figure U80

Uttlesford CB10					
AH Mix:	30:70 Social rent:Intermediate				
	35% Afforda	able Housing			
		6 allowance			
	Nil Grant Lower	EUV sensitivity.			
	19% Gross Pr	ofit sensitivity.			
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
2011					
2012					
2013					
2014					
2019					
2016					
2017					
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2019 2020					
2020			+		
2023					
2023					
2024					
2025					
2026					
	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Figure U81

	Uti	desford CB10				
250		nits per hectare density) - 0 flat(				
	40% Affordable Housing					
AH Mix:						
		100 % S106 allowance	•			
		rant Lower EUV sensit				
	199	% Gross Profit sensitiv	rity.			
		VIABILITY				
YEAR	DOWNSIDE	MIDDLE	UPSIDE			
2010						
2011						
2012						
2013						
2014						
2015						
2016						
2017						
2018						
2019 2020						
2020						
2021						
2023						
2024						
2025						
2026						
	=NOT VIABLE					
	=MARGINALLY VIABLE					
	=VIABLE					

Figure U82

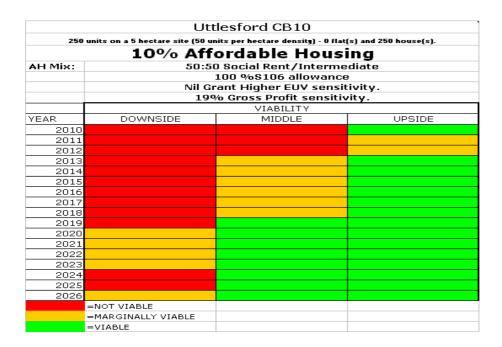


Figure U83

	Uttles	ford CB11			
AH Mix:	ł Mix: 50-50 Social rent:Intermediate				
	35% Afford	dable Housing			
		.06 allowance			
		er EUV sensitivity.			
	19% Gross I	Profit sensitivity.			
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
	10				
20					
	12				
	13				
	14				
	15				
	16				
20					
	18				
	19	_			
	20	_			
20					
	24				
20					
	26				
20	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Figure U84



	Utt	desford CB11				
250 uni	its on a 5 hectare site (50 ui	nits per hectare density) - O flat	(s) and 250 house(s).			
	40% Affordable Housing					
AH Mix: 70:30 Social Rent/Intermediate						
		200 % S106 allowance				
	Nil G	rant Lower EUV sensit	ivity.			
	199	% Gross Profit sensitiv	vity.			
		VIABILITY				
YEAR	DOWNSIDE	MIDDLE	UPSIDE			
2010						
2011						
2012						
2013						
2014						
2015						
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2018 2019						
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2022						
2023						
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2025						
2026						
1=	NOT VIABLE					
=1	MARGINALLY VIABLE					
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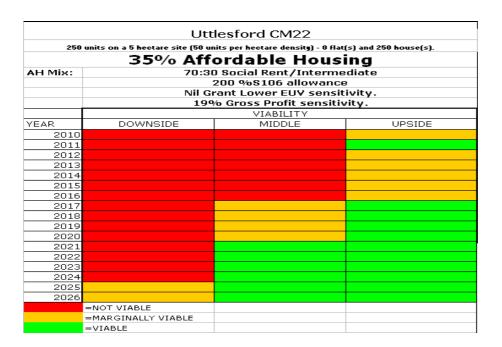
Figure U86



Figure U 87

	SCHE	ME TYPE 5			
250 units on a 5	hectare site (50 units pe	r hectare density) - 0 flat(s	) and 250 house(s).		
Uttlesford CM6					
AH Mix:	50	50:50 Social Rent:Intermediate			
	35% Affor	dable Housing			
		106 allowance			
	Normal Grant L	ower EUV sensitivity.			
		Profit sensitivity.			
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
	010				
	011				
	012				
	013				
	014				
	015				
	016				
	017				
	018				
	019				
	020				
	021				
	022				
	023				
	024				
	025				
2	026				
	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Figure U 88



Uttlesford CM22					
AH Mix:	Mix: 50:50 Social Rent:Intermediate				
	3.	5% Afforda	able Housing		
			6 allowance		
	P		er EUV sensitivity.		
		19% Gross Pr	ofit sensitivity.		
			VIABILITY		
YEAR		DOWNSIDE	MIDDLE	UPSIDE	
	2010				
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	2021				
	2022		<u></u>		
	2023				
	2024				
	2025				
	2026				
		VIABLE			
		GINALLY VIABLE			
	=VIAE	3LE			

Figure U90

	Utt	lesford CM22				
250	units on a 5 hectare site (50 ur	nits per hectare density) - O flat	(s) and 250 house(s).			
10% Affordable Housing						
AH Mix:						
	:	200 %\$106 allowance	•			
		Grant Higher EUV sen				
	199	∕o Gross Profit sensitiv	vity.			
		VIABILITY				
YEAR	DOWNSIDE	MIDDLE	UPSIDE			
2010						
2011						
2012						
2013						
2014						
2015						
2016 2017						
2017						
2018						
2019						
2020						
2022						
2023						
2024						
2025						
2026						
	=NOT VIABLE					
	=MARGINALLY VIABLE					
	=VIABLE					

Figure U91

		Uttlesf	ord CM23		
AH Mix:		50:50 Social Rent:Intermediate			
		35% Afford	able Housing		
			)6 allowance		
			ver EUV sensitivity.		
		19% Gross P	rofit sensitivity.		
			VIABILITY		
YEAR		DOWNSIDE	MIDDLE	UPSIDE	
	2010				
	2011				
	2012				
	2013				
	2014				
	2015				
	2016				
	2017				
	2018				
	2019				
	2020				
	2021				
	2022				
	2023				
	2025				
	2026				
		=NOT VIABLE			
		=MARGINALLY VIABLE			
		=VIABLE			

Figure U92

	Uttlesfo	ord CB10		
250 units on a	3.731 hectare site (67 units pe	r hectare density) - 120 flat(s) an	nd 130 house(s).	
AH Mix: 70:30 Social Rent/Intermediate				
	35% Afford	able Housing		
		6 allowance		
	Normal Grant Lov	ver EUV sensitivity.		
	19% Gross Pr	ofit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
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2017				
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2019				
2020				
2021 2022				
2022				
2023				
2024				
2025				
2020	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure U93



Figure U94

250 units	on a 3.731 hectare site (67 units po	ord CB11	anu isv nouse(S).	
		lable Housing		
AH Mix:	50:5	50:50 Social Rent:Intermediate 200% S106 allowance		
		ıl Grant Lower EUV sen % Gross Profit sensiti		
		VIABILITY	vicy.	
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
20	010			
20	011			
20	012			
20	013			
20	014			
	015			
	016			
	017			
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21	=NOT VIABLE			
	=MARGINALLY VIABLE =VIABLE			
	- ATWOLE			

	Uttle	esford CB11			
250 unit	s on a 3.731 hectare site (67 un				
10% Affordable Housing					
AH Mix:		Social Rent/Interme			
		00% S106 allowance	_		
		Grant Higher EUV ser			
	19%	Gross Profit sensitiv	vity.		
YEAR	DOMNICIDE	VIABILITY MIDDLE	UPSIDE		
	DOWNSIDE	MIDDLE	OPSIDE		
2010 2011					
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2018					
2019					
2020	· · · · · · · · · · · · · · · · · · ·				
2021					
2022					
2023					
2024					
2025					
2026	NOT UTABLE	·			
	NOT VIABLE MARGINALLY VIABLE				
	-VIABLE				

Figure U96

		per hectare density) - 120 flat(s) and sford CM6	• •	
AH Mix: 50:50 Social Rent:Intermediate				
	35% Afford	dable Housing		
		06 allowance		
		ower EUV sensitivity.		
		Profit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
	2010			
	2011			
	2012			
	2013			
	2014			
2	2015			
	2016			
	2017			
2	2018			
	2019			
	2020			
	2021			
2	2022			
	2023			
2	2024			
2	2025			
2	2026			
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure U97

		tlesford CM6	
250 uni		units per hectare density) - 120 (	
	10% Aff	ordable Housi	ing
AH Mix:	50:50	0 Social Rent/Interme	diate
		2 S106 allowance	
		Grant Lower EUV sen	
	190	% Gross Profit sensitiv	rity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013 2014			
2014			
2015			
2017			
2017			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure U98

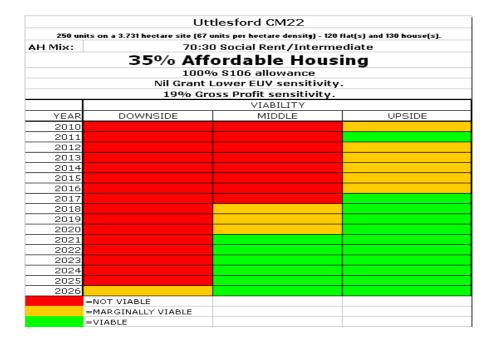


Figure U99

	Uttlesf	ord CM22			
250 units o	n a 3.731 hectare site (67 units p	er hectare density) - 120 flat(s) and	130 house(s).		
AH Mix:	70:30 Social Rent/Intermediate				
	35% Afford	lable Housing			
		06 allowance			
	Normal Grant Lo	wer EUV sensitivity.			
	19% Gross P	rofit sensitivity.			
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
201					
201					
201					
201					
201					
201 201					
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202					
202	1				
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	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Figure U100

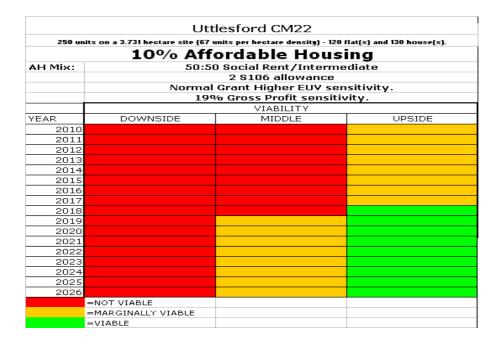
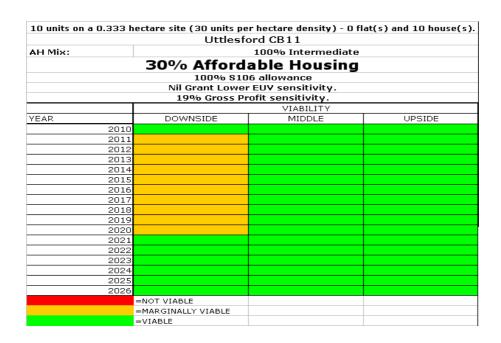


Figure U101

Uttlesford CM23					
AH Mix:		50:50 Social Rent:Intermediate			
		35% Afford	able Housing		
			6 allowance		
			ver EUV sensitivity.		
		19% Gross Pr	ofit sensitivity.		
			VIABILITY		
YEAR		DOWNSIDE	MIDDLE	UPSIDE	
	2010				
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	2015				
	2016				
	2017				
	2018	<u> </u>			
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	2021				
	2022				
	2023				
	2024				
	2025				
	2026				
		=NOT VIABLE			
		=MARGINALLY VIABLE			
		=VIABLE			

Figure U102



	Uttle	esford CB10			
AH Mix:		100% Intermediate			
	30% Affo	rdable Housing			
		S106 allowance			
	Nil Grant Lo	wer EUV sensitivity.			
	19% Gros	s Profit sensitivity.			
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
	2010				
	2011				
	2012				
	2013				
	2014				
	2015				
	2016				
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	2021				
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	2025				
	2026				
	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Figure U104

	Uttlesf	ord CB10	
		able Housing	
AH Mix:	100% Intermediate 100% S106 allowance Nil Grant Lower EUV sensitivity. 25% Gross Profit sensitivity.		
	23	VIABILITY	nty.
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
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2014			
2015			
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2019			
2020			
2021 2022			
2022			
2023			
2025			
2025			
2020	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

	Utt	tlesford CB10			
10 (	units on a 0.2 hectare site (50	units per hectare density) - 4 fla	at(s) and 6 house(s).		
10% Affordable Housing					
AH Mix:		100% Intermediate			
		100% \$106 allowance	9		
	Nil Gı	rant Higher EUV sensit	tivity.		
	199	% Gross Profit sensitiv	/ity.		
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
2011					
2012	<u> </u>				
2013					
2014					
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2016					
2017					
2018					
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2021 2022					
2022					
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2024					
2025					
	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Appendix Fourteen – East Hertfordshire Additional Sensitivity Testing

Figure EH1

	East H	lerts CM23	
	15% Affor	dable Housing	
AH Mix:		:75 Social Rent:Interme	diate
		0.5 S106 allowance	
		Grant Lower EUV sensi	
	1	9% Gross Profit sensiti	vity.
		VIABILITY	_
/EAR	DOWNSIDE	MIDDLE	UPSIDE
	010		
	011		
	012		
	013 014		
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	016		
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2	019		
2	020		
2	021		
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21	026		
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	=VIABLE		

Figure EH2

	East I	Herts SG9		
25% Affordable Housing				
AH Mix:	25:	75 Social Rent: Intermed	diate	
		50% S106 allowance		
		Normal Grant sensitivity		
		Lower EUV sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
	010			
	011			
	012			
	013			
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	015			
	016			
	017 018			
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	024			
2	025			
2	026			
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure EH3

	East H	erts SG11	
	40% Afford	lable Housing	1
AH Mix:	75:2	5 Social Rent to Interr	nediate
		1 S106 allowance	
		Grant Lower AUV sens	
	19	% Gross profit sensit	ivity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
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	=VIABLE		

Figure EH4

	East H	erts SG11	
	40% Afford	lable Housing	
AH Mix:	75:23	Social Rent to Interm	ediate
		23,000 per unit S106 al	
		rant Lower AUV sensit	
	19	% Gross Profit sensitiv	ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
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2025			
2025			
2020	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EH5

	East H	erts SG11	
	20% Afford	lable Housing	3
AH Mix:	25:7:	5 Social rent to Interi	mediate
		0.5 S106 allowance	е
		Higher AUV sensitivi	
	19	% Gross Profit sensit	tivity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
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	=NOT VIABLE		
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	=VIABLE		

Figure EH6

	East He	erts SG12		
45% Affordable Housing				
AH Mix:	75:23	5 social rent to inter	nediate	
		0.5 S106 allowance	e	
		rant Lower EUV sens		
	19	% Gross Profit sensi	tivity.	
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
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2014				
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2020 2021				
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2022				
2023				
2025				
2026				
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure EH7

	East He	erts SG12	
	20% Afford	lable Housing	
AH Mix:	25:73	5 Social rent to Intern	
		50% \$106 allowanc	
		Higher EUV sensitivit	
	19	% Gross Profit sensiti	ivity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
201			
201	- No.		
201			
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201 201			
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202	2		
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202	4		
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202			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EH8

	East Herts	SG13/SG14		
50% Affordable Housing				
AH Mix:	75:25	Social Rent to Intern	nediate	
		100% \$106 allowanc	e	
		Lower EUV sensitivity		
	19	% gross profit sensiti	vity.	
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
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	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure EH9

	East Hert	s SG13/SG14	
		lable Housing	I
AH Mix:	50:	50 Social Rent:Interm	ediate
	50% S106 allowance		
		ıl Grant Higher EUV se	
	19	1% Gross Profit sensit	ivity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
	010		
	011		
	012		
	013		
	014		
	015		_
	016		
	017 018		
	018		
	020		
	021		
	022		
	023		
	024		
	025		
2	026		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EH10

	East He	rts CM23	
	35% Afford	able Housing	
AH Mix:		5 Social Rent:Interme	diate
		0.5 S106 allowance	
		Grant Lower EUV sen	
	199	% Gross Profit sensitiv	rity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021 2022			
2022			
2023 2024			
2025			
2025			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EH11

	East He	erts CM23	
	7% Afford	able Housing	
AH Mix:		25:75	
		0.5 S106 allowance	•
		l Grant Higher EUV se	
	19	% Gross Profit sensit	ivity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
	10		
20			
	12		
	13		
	14		
	15		
	16		
	17		
	18		
	19		
20	20		
	22		
	23		<del>                                     </del>
	24		
	25		
	26		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EH12

	East He	erts SG9	
	47% Afford	able Housing	1
AH Mix:	25:75	Social Rent to interr	nediate
		1 S106 allowance	
		Lower EUV sensitivit	
	199	⁄o Gross Profit sensit	ivity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
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2016			
2017 2018			
2018			
2020			
2021			
2022			
2023			
2024			
2025			
2026	5		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EH13

		r hectare density) - 0 flat lerts SG9	
	UNENC	UMBERED	
AH Mix:		No S106 allowance	
		No other sensitivity	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2022 2023			
2023			
2029			
2026			
2020	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EH14



Figure EH15

	East H	lerts SG11			
20% Affordable Housing					
AH Mix:	25:7	75 social rent to interm			
		0.5 S106 allowance			
		r EUY, Normal Grant se			
	19	9% Gross profit sensiti	vity.		
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
	010				
	011				
	012				
	013				
	014				
	015				
	016				
	017				
	018				
	019				
	020				
	021				
	022				
	023				
	024				
	025				
21	026				
	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Figure EH16



Figure EH17

	East H	erts SG12			
7% Affordable Housing					
AH Mix:	25:7	5 Social Rent to Interi	mediate		
		0.5 S106 allowance			
		· EUV, normal grant se			
	19	1% Gross Profit sensit	ivity.		
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
	010				
	011				
	012				
	013				
	014				
	015				
	016				
	017				
	018				
	019				
	020				
	021				
	022				
	023				
	024				
	025				
21	026				
	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Figure EH18

	East Herts	SG13/SG14			
40% Affordable Housing					
AH Mix:	50:50	Social Rent to Inter	mediate		
		1 S106 allowance			
		er EUV, Nil Grant sens			
	199	% Gross profit sensit	tivity.		
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
2011					
2012					
2013					
2014					
2015					
2016			_		
2017 2018					
2018					
2019					
2020					
2022					
2023					
2024					
2025					
2026					
	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Figure EH19

	East Herts	s SG13/14			
AH Mix:	25:73	25:75 Social Rent:Intermediate			
	35% Afforda	able Housing	1		
		6 allowance			
	Normal Grant High	er EUV sensitivity.			
	19% Gross Pr	ofit sensitivity.			
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
	010				
	011				
	012				
	013				
	014				
	015 016		_		
	017				
	1018				
	019				
	020				
	021				
2	022				
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2	024				
	025				
2	026				
	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Figure EH20

	East Hert	s SG13/14		
20% Affordable Housing				
AH Mix:		5 Social Rent:Intern		
		1 S106 allowance	•	
		Grant Higher EUV s		
	199	⁄o Gross Profit sensi	tivity.	
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
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2020				
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	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure EH21

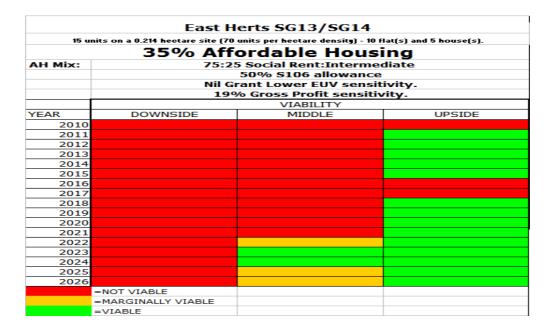
		East He	erts CM23	
	7	% Afford	able Housin	g
AH Mix:			5 social rent to inte	
			0.5 \$106 allowan	
			EUV, normal grant	
		19	% Gross profit sen:	sitivity.
			VIABILITY	
YEAR		DOWNSIDE	MIDDLE	UPSIDE
	2010			
	2011			
	2012			
	2013			
	2014			
	2015			
	2017			
	2017		+	
	2019		+	
	2020			
	2021			
	2022			
	2023			
	2024			
	2025			
	2026			
	=NOT	VIABLE		
	=MAR	GINALLY VIABLE		
	=VIA	BLE		

Figure EH22

	East H	erts SG9	
	7% Afforda	ble Housing	
AH Mix:		5 Social Rent:Interm	ediate
		0.5 \$106 allowance	
		Grant Lower EUV se	
	199	% Gross Profit sensit	ivity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
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2019 2020			
2020			
2021			
2022			
2023			
2025			
2026			
2020	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

		rts SG11	LO flat(s) and 5 house(s).
	35% Afford	able Housin	g
AH Mix:		Social Rent:Intern	
		50% S106 allowan	ce
		Grant Lower EUV s	
	199	∕o Gross Profit sensi	tivity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021 2022			
2022			
2023			
2024			
2025			
2020	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EH24



	East Herts	SG13/SG14				
	35% Affordable Housing					
AH Mix:	75:25	Social Rent:Interme	diate			
		50% S106 allowance	•			
		Grant Lower EUV ser				
	19%	6 Gross Profit sensiti	vity.			
		VIABILITY				
YEAR	DOWNSIDE	MIDDLE	UPSIDE			
2010						
2011						
2012						
2013						
2014						
2015						
2016 2017						
2017						
2018						
2019						
2020						
2022						
2023						
2024						
2025						
2026						
	=NOT VIABLE					
	=MARGINALLY VIABLE					
	=VIABLE					

Figure EH26

	East Her	ts SG13/14			
7% Affordable Housing					
AH Mix:	25:75 Higher	25:75 Social rent to Intermediate 50% S106 allowance Higher EUV, Normal Grant sensitivity. 19% Gross Profit sensitivity.			
	13	VIABILITY	vicy.		
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2	010				
2	011				
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	East He	rts CM23	
	10% Afford	able Housing	
AH Mix:	50:50	) Social Rent:Interme	
		100% S106 allowanc	
		Grant Lower EUV sen	
	100	% Gross Profit sensiti	vity.
	BOULE OF BE	VIABILITY	Luporpe
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011 2012			
2012			
2013			
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
	=NOT VIABLE =MARGINALLY VIABLE		

Figure EH28

	East H	lerts SG9		
H Mix: 25:75 Social Rent:Intermediate				
	35% Afford	lable Housing		
		06 allowance		
	Normal Grant Lo	wer EUV sensitivity.		
	19% Gross P	rofit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
201				
201				
20:				
201				
201				
201				
201				
201				
201				
201 202				
202				
202				
202				
202				
202				
202				
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

50:5 Norma	able Housing 0 Social Rent:Intermo 100% S106 allowand I Grant Lower EUV se % Gross Profit sensit VIABILITY MIDDLE	ediate ce nsitivity.
50:5 Norma 199	0 Social Rent:Intermo 100% S106 allowand I Grant Lower EUV se % Gross Profit sensit VIABILITY	ediate ce nsitivity. ivity.
Norma 199	l Grant Lower EUV se % Gross Profit sensit VIABILITY	nsitivity. ivity.
199	% Gross Profit sensiti VIABILITY	ivity.
	VIABILITY	
DOWNSIDE		UPSIDE
DOWNSIDE	MIDDLE	OPSIDE
	OT VIABLE ARGINALLY VIABLE IABLE	ARGINALLY VIABLE

Figure EH30

50 units on a 1.666 hectare site (30 units per hectare density) - 0 flat(s) and 50 house(s)  East Herts SG9							
30% Affordable Housing							
AH Mix: 50:50 Social Rent:Intermediate							
AH MIX: 50:50 Social Rent:Intermediate  10 \$106 allowance							
	Nil Grant Lower EUV sensitivity.						
19% Gross Profit sensitivity.							
T T	VIABILITY						
YEAR	DOWNSIDE	MIDDLE	UPSIDE				
2010							
2011							
2012							
2013							
2014							
2015							
2016 2017							
2017							
2019							
2020							
2021							
2022							
2023							
2024							
2025							
2026							
	=NOT VIABLE						
	=MARGINALLY VIABLE						
	=VIABLE						

Figure EH31

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% \$106 allowance							
	Nil Grant Lower EUV sensitivity.						
	19% Gross Profit sensitivity.						
<u> </u>	VIABILITY						
YEAR	DOWNSIDE	MIDDLE	UPSIDE				
2010							
2011							
2012							
2013							
2014							
2015							
2016							
2017							
2018							
2019							
2020							
2021							
2022 2023							
2023							
2024							
2025							
2020	=NOT VIABLE						
	=MARGINALLY VIABLE						
	=VIABLE						

Figure EH32



Figure EH33

	Eas	st Herts SG11			
50 un		units per hectare density) - 0 f			
40% Affordable Housing					
AH Mix:		5 Social Rent:Interme			
		100% S106 allowance			
		rant Lower EUV sensit			
	199	⁄o Gross Profit sensitiv	vity.		
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
2011					
2012					
2013					
2014					
2015					
2016 2017					
2017					
2019					
2019					
2021					
2022					
2023					
2024					
2025					
2026					
=	=NOT VIABLE				
=	=MARGINALLY VIABLE				
-	=VIABLE				

Figure EH34

	East He	erts SG11	
	10% Afford	able Housing	
AH Mix:		75 Social Rent:Interme	
		100% S106 allowance	
		l Grant Higher EUV ser	
	19	% Gross Profit sensitiv	vity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015 2016			
2010			
2017			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

	East H	erts SG12	
	10% Afford	lable Housing	
AH Mix:	25:75 Social Rent:Intermediate 100% \$106 allowance Normal Grant Higher 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 EH36



Figure EH37

	Eas	st Herts SG12			
50 u		units per hectare density) - 0 fl			
35% Affordable Housing					
AH Mix:		5 Social Rent:Interme			
		CIL			
		rant Lower EUV sensit			
	199	% Gross Profit sensitiv	vity.		
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
2010					
2011					
2012					
2013					
2014					
2015					
2016					
2017					
2018 2019					
2019					
2020					
2021					
2022					
2023					
2025					
2026					
2020	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Figure EH38

	East He	erts SG12	
	50% Afford	able Housing	
AH Mix:	25:75 Social Rent:Intermediate 100% S106 allowance Normal 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			
2026	=NOT VIABLE		
	=NOT VIABLE =MARGINALLY VIABLE		
	=MARGINALLT VIABLE		

Figure EH39

East Herts SG13/14						
50 units on a 1.666 hectare site (30 units per hectare density) - 0 flat(s) and 50 house(s).						
	50% Aff	ordable Hous	ing			
AH Mix:		D Social Rent:Interme				
		100% S106 allowance				
		rant Lower EUV sensit				
	190	% Gross Profit sensitiv	vity.			
ve i e	50000000	VIABILITY	Luborne			
YEAR	DOWNSIDE	MIDDLE	UPSIDE			
2010						
2011						
2012						
2013						
2014						
2015						
2016						
2017 2018						
2018						
2019						
2020						
2021						
2023						
2023						
2025						
2026						
2020	=NOT VIABLE					
	=MARGINALLY VIABLE					
	=VIABLE					

Figure EH40

	East Heri	ts SG13/14	
	10% Afford	able Housing	
AH Mix:	25:7	5 Social Rent:Interme	
		100% \$106 allowance	
		Grant Higher EUV sen	
	190	% Gross Profit sensitiv	/ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2019			
2016			
2017 2018			
2018			
2019			
2020			
2022			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EH41

		East He	rts CM23	
AH Mix: 25:75 Social Rent:Intermediate				
		35% Afford	able Housing	
			6 allowance	
		Normal Grant Lov	ver EUV sensitivity.	
		19% Gross Pr	ofit sensitivity.	
			VIABILITY	
YEAR		DOWNSIDE	MIDDLE	UPSIDE
	2010	<u> </u>		
	2011			
	2012			
	2013			
	2014			
	2015			
	2016			
	2017			
	2018			
	2019 2020			
	2020			
	2021			
	2022			
	2023			
	2025			
	2026			
		=NOT VIABLE		
		=MARGINALLY VIABLE		
		=VIABLE		

Figure EH42

	East He	rts CM23	
	10% Afford	able Housing	
AH Mix:	25:7	5 Social Rent:Interm	ediate
		100% \$106 allowand	
		Grant Higher EUV se	
	190	% Gross Profit sensiti	ivity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
201			
201			
201			
201			
201 201			
201			
201			
201			
201			
202			
202			
202			
202	3		
202	4		
202	5		
202	6		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

	SCHEMI	TYPE 4		
50 units on a 1 hec	tare site (50 units per h	ectare density) - O fla	t(s) and 50 house(s).	
		erts SG9		
AH Mix: 25:75 Social Rent:Intermediate				
	35% Afforda	able Housing		
		6 allowance		
		EUV sensitivity.		
	19% Gross Pr	ofit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
2013				
2014 2015				
2015				
2010				
2017				
2019				
2020				
2021				
2022				
2023				
2024				
2025				
2026				
	=NOT VIABLE			
	=MARGINALLY VIABLE =VIABLE			
	= AIMDFC			

Figure EH44



	East H	erts SG9	
	10% Afford	able Housing	
AH Mix:		5 Social Rent:Interme	
		100% S106 allowanc	
		Grant Higher EUV se	
	190	% Gross Profit sensiti	vity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016 2017			
2017			
2018			
2019			
2021			
2021			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EH46



Figure EH47

		East He	erts SG11	
AH Mix: 25:75 Social Rent:Intermediate				
		35% Afford	able Housing	
			06 allowance	
		Normal Grant Hig	her EUV sensitivity.	
		19% Gross P	rofit sensitivity.	
			VIABILITY	
YEAR		DOWNSIDE	MIDDLE	UPSIDE
	2010	<u> </u>		
	2011			
	2012			
	2013			
	2014			
	2015			
	2016			
	2017			
	2018			
	2019			
	2020			
	2021			
	2022			
	2023			
	2024			
	2025			
	2026			
		=NOT VIABLE		
		=MARGINALLY VIABLE		
		=VIABLE		

Figure EH48

SCHEME TYPE 2	(50/50)	East He	rts SG12	
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			
			araco	
		able Housing		
		06 allowance		
		ver EUV sensitivity. rofit sensitivity.		
	1940 GIBSS P	VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010		HIDDEL	0, 0102	
2011				
2012				
2013				
2014				
2015				
2016				
2017				
2018				
2019				
2020				
2021				
2022				
2023 2024				
2024				
2025				
2020	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

		East He	erts SG12	
AH Mix:	25:75 Social Rent:Intermediate			
		35% Afford	able Housing	
			D6 allowance	
			her EUV sensitivity.	
		19% Gross P	rofit sensitivity.	
			VIABILITY	
YEAR		DOWNSIDE	MIDDLE	UPSIDE
	2010			
	2011			
	2012			
	2013			
	2014			
	2015			
	2016			
	2017			
	2018			
	2019			
	2020			
	2021			
	2022			
	2023			
	2024			
	2025			
		NOT VIABLE		
		MARGINALLY VIABLE		
		VIABLE		

Figure EH50



30 dints 011 d 1	hectare site (50 units per East Her	rts SG13/14	ita) una 30 nousets).
AH Mix: 25:75 Social rent:Intermediate			
HIT IIIA.			aiace
		dable Housing	
		LO6 allowance	
		er EUV sensitivity.	
	19% Gross	Profit sensitivity.  VIABILITY	
VEAR	DOWNSIDE	MIDDLE	UPSIDE
YEAR		MIDDLE	OPSIDE
	010 011		
	012		
	013		
	014		
	015		
	016		
	017		
2	018		
2	019		
2	020		
2	021		
2	022		
	023		
	024		
	025		
2	026		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EH52



	East He	erts CM23	
	20% Afford	able Housing	
AH Mix:		25:75	
		100% \$106 allowance	•
		l Grant Lower EUV sen	
	19	% Gross Profit sensitiv	rity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018 2019			
2019			
2020			
2022			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EH54

	East Her	ts CM23	
	10% Afforda	ble Housin	a
AH Mix:		Social Rent:Intern	_
		0.5 S106 allowanc	e
	Normal (	Grant Higher EUV s	ensitivity.
	19%	Gross Profit sensi	tivity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024 2025			
2025			
2020	=NOT VIABLE	<u> </u>	
	=MARGINALLY VIABLE		
	=VIABLE		

	East H	erts SG9	
	10% Afford	able Housing	1
AH Mix:		0 Social rent:Interm	
		0.5 S106 allowance	•
		Grant Higher EUV se	
	199	% Gross Profit sensit	ivity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015 2016			
2016			
2017			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EH56



Figure EH57

	East He	rts SG11	
50 units on a 0.714	hectare site (70 units pe	r hectare density) - 24 t	flat(s) and 26 house(s).
AH Mix:	75:2	5 Social Rent:Interme	diate
	35% Afford	able Housing	
		6 allowance	
	Normal Grant Lov	ver EUV sensitivity.	
	19% Gross Pi	rofit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
201			
201			
201			
201			
201			
201			
201			
201			
201			
201			
202			
202 202			
202			
202			
202			
202			
202	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EH58



	East He	erts SG11	
	10% Afford	able Housing	
AH Mix:		5 Social Rent:Interme	
		100% \$106 allowanc	
		Grant Higher EUV sei	
	199	% Gross Profit sensiti	vity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013 2014			
2014			
2015			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
202€			
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EH60

	East He	erts SG12	
50 units on a 0.71	14 hectare site (70 units pe	r hectare density) - 24 f	lat(s) and 26 house(s).
AH Mix:	75:2	5 Social Rent:Interme	diate
	35% Afford	able Housing	
		06 allowance	
	Normal Grant Los	ver EUV sensitivity.	
	19% Gross P	rofit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
20	010		
20	D11		
20	012		
20	013		
20	D14		
20	D15		
20	D16		
20	D17		
20	D18		
20	D19		
20	020		
20	021		
20	022		
	023		
	024		
	025		
20	026		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

	East H	erts SG12		
AH Mix:	25:75 Social Rent:Intermediate			
	35% Afford	lable Housing		
		06 allowance		
	Nil Grant Lowe	er EUV sensitivity.		
	19% Gross F	rofit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
20				
20				
20				
20				
20				
20				
20				
20				
20				
20				
20				
20				
20 20				
20				
20				
20				
20	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure EH62

	East He	erts SG12		
AH Mix:	H Mix: 25:75 Social Rent:Intermediate			
	35% Afford	lable Housing		
		06 allowance		
		wer EUV sensitivity.		
	19% Gross P	rofit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
20				
20				
20				
20				
20				
20				
20				
20	19			
20	20			
20	21			
20				
20				
20				
20				
20	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

50 units on a 0.714 h		r hectare density) - 24 erts SG12	flat(s) and 26 house(s).	
			I	
AH Mix:	10% Affordable Housing 25:75 Social Rent:Intermediate 100% S.106 Allowance			
	Normal Grant Higher EUV sensitivity. 19% Gross Profit sensitivity.			
		VIABILITY	-	
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
2013				
2014				
2015				
2016				
2017				
2018			_	
2019 2020				
2020				
2021				
2023				
2024				
2025				
2026				
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure EH64

	SCHEM	E TYPE 5		
50 units on a 0.714 h	ectare site (70 units pe	r hectare density) - 24 t	flat(s) and 26 house(s).	
	East Her	ts SG13.14		
AH Mix:	25:75 Social Rent:Intermediate			
	35% Afford	able Housing		
		6 allowance		
	Normal Grant Hig	her EUV sensitivity.		
	19% Gross Pi	rofit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
2013				
2014				
2015				
2016				
2017				
2018				
2019				
2020 2021				
2021				
2022				
2023	<u> </u>			
2025				
2026				
2020	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

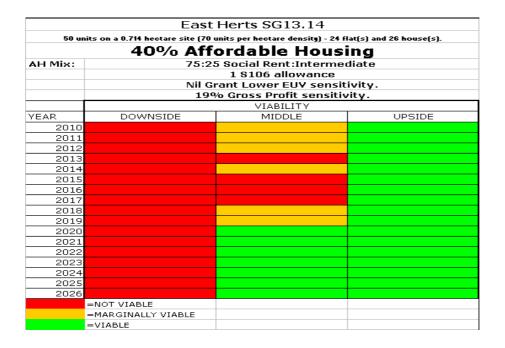


Figure EH66



Figure EH67

		East H	erts SG9	
AH Mix: 25:75 Social Rent:Intermediate				
		35% Afford	able Housing	
	•		06 allowance	
			wer EUV sensitivity.	
			rofit sensitivity.	
			VIABILITY	
YEAR		DOWNSIDE	MIDDLE	UPSIDE
2	2010			
2	2011			
2	2012			
	2013			
	2014			
	2015			
	2016			
	2017			
	2018			
	2019			
	2020			
	2021			
	2022			
	2023			
	2024			
	2025			
2	2026	OT LIVED F		
		OT VIABLE		
		ARGINALLY VIABLE		
	=V.	ADLE		

Figure EH68



Figure EH69



Figure EH70



Figure EH71

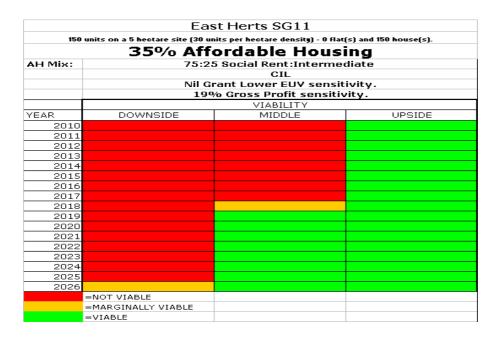


Figure EH72

	East He	rts SG11	
	35% Afforda	able Housing	3
AH Mix:		Social Rent:Interm	
		CIL	
		Grant Lower EUV se	
	19%	o Gross Profit sensi	tivity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
2011			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2022			
2023 2024			
2024			
2025			
2028	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

	East He	rts SG12		
150 units on a 5 hec	tare site (30 units per l	hectare density) - O flat	(s) and 150 house(s).	
AH Mix:	75:25 Social Rent:Intermediate			
	35% Afford	able Housing		
		6 allowance		
	Normal Grant Lov	ver EUV sensitivity.		
	19% Gross Pr	ofit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
2013				
2014				
2015				
2016 2017				
2017				
2019				
2020				
2021				
2022				
2023				
2024				
2025				
2026				
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure EH74

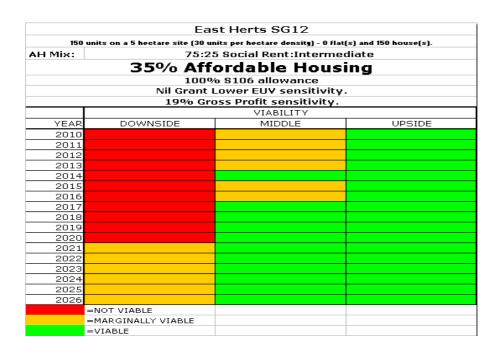


Figure EH75

	able Housin 5 Social Rent:Interr 0.5 \$106 allowance	
25:7	5 Social Rent:Interr	
	0 F 0106 - II	nearace
	Grant Higher EUV s	
199		itivity.
DOWNSIDE	MIDDLE	UPSIDE
<u> </u>		
<u> </u>		
	DOWNSIDE  =NOT VIABLE =MARGINALLY VIABLE =VIABLE	=NOT VIABLE =MARGINALLY VIABLE

Figure EH76



Figure EH77

		East Herts	SG13 SG14	
	509	% Afforda	able Housin	g
AH Mix:		25:75	Social Rent:Intern	- nediate
		1	100% S106 allowar	nce
			ant Lower EUV sen	
		19%	o Gross Profit sensi	itivity.
			VIABILITY	
YEAR	D	OWNSIDE	MIDDLE	UPSIDE
	2010			
	2011			
	2012			
	2013			
	2014			
	2015			
	2016			
	2017			
	2018			
	2019			
	2020			
	2021			
	2022			
	2023			
	2024			
	2025			
	2026	1515		
	=NOT VI			
		NALLY VIABLE		
	=VIABLE			

Figure EH78

		East Herts	SG13 SG14	
		10% Afford	able Housing	
AH Mix:		25:7	5 Social Rent:Interme	diate
			1 S106 allowance	
			l Grant Higher EUV sen	
		19	% Gross Profit sensitiv	/ity.
			VIABILITY	
YEAR		DOWNSIDE	MIDDLE	UPSIDE
	2010			
	2011			
	2012			
	2013			
	2014			
	2015			
	2016			
	2017			
	2018			
	2019			
	2020			
	2021			
	2022			
	2023			
	2024			
	2025			
	2026			
	-	OT VIABLE		
		ARGINALLY VIABLE		
	=\	IABLE		

Figure EH79

	East Her	ts CM23			
AH Mix:	Mix: 25:75 Social Rent:Intermediate				
	35% Afforda	able Housing			
		6 allowance			
	Normal Grant Low	er EUV sensitivity.			
	19% Gross Pr	ofit sensitivity.			
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
	010				
	011				
	012				
	013				
	014				
	015				
	017				
	018				
	019				
	120				
	021				
20	)22				
20	023				
	124				
	)25				
20	026				
	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Figure EH80

	East He	rts CM23	
	15% Afford	able Housing	1
AH Mix:		0 Social Rent:Interm	ediate
		100% \$106 allowand	
		rant Lower EUV sens	
	199	% Gross Profit sensit	ivity.
		VIABILITY	T
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		

	East H	erts SG9			
AH Mix:	H Mix: 25:75 Social Rent:Intermediate				
	35% Afford	lable Housing			
		06 allowance			
	Nil Grant Lowe	er EUV sensitivity.			
	19% Gross P	rofit sensitivity.			
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
	010				
	011				
	012				
	013				
	014				
	015				
	016				
	017				
	018				
	019				
	020				
	021				
	022				
	023 024				
	025				
	026				
	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Figure EH82

	East He	erts SG9	
AH Mix:	50:50	3 Social Rent:Interm	ediate
	35% Afford	able Housing	1
		6 allowance	
	Nil Grant Lowe	r EUV sensitivity.	
	19% Gross Pi	ofit sensitivity.	
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
20:			
20:			
20:			
20:			
20:			
20:			
20:			
20:			
20:			
20:			
20:			
20:			
20:			
20:			
20.			
20.			
20.	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

	East He	erts SG9		
30% Affordable Housing				
AH Mix:		) Social Rent:Interm		
		100% S106 allowan		
		rant Lower EUV sens		
	199	⁄o Gross Profit sensit	ivity.	
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
2013				
2014				
2015				
2016				
2017				
2018				
2019				
2020				
2021 2022				
2022				
2023 2024				
2024				
2025				
	=NOT VIABLE			
	=NOT VIABLE =MARGINALLY VIABLE			
	=VIABLE			

Figure EH84

	East H	lerts SG9	
	20% Afford	able Housing	
AH Mix:		5 Social Rent:Interme	ediate
		100% \$106 allowance	
		l Grant Higher EUV ser	
	19	% Gross Profit sensiti	vity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010			
201			
2013			
2013			
201			
201			
2010 2011			
201			
2010			
2020			
202			
202			
202:			
202			
202			
2020	5		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

	hectare site (50 units per East l	Herts SG9	
		dable Housing	
AH Mix:		75 Social Rent:Interme	diate
		100 %\$106 allowance	9
		al Grant Higher EUV sen	
	19	9% Gross Profit sensitiv	/ity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
	010		
	011		
	012		
	013		
	014 015		
	016		
	017		
	018		
	19		
20	020		
20	021		
20	022		
20	023		
	024		
	025		
20	026		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EH86



Figure EH87

East Herts SG11					
AH Mix:		25:75 Social Rent:Intermediate			
		35% Afford	able Housing		
			06 allowance		
		Normal Grant Hig	her EUV sensitivity.		
		19% Gross P	rofit sensitivity.		
			VIABILITY		
YEAR		DOWNSIDE	MIDDLE	UPSIDE	
	2010				
	2011				
	2012				
	2013				
	2014				
	2015				
	2016				
	2017				
	2018 2019				
	2019				
	2021				
	2022				
	2023				
	2024				
	2025				
	2026				
	-	NOT VIABLE			
	-	MARGINALLY VIABLE			
	-	-VIABLE			

Figure EH88



Figure EH89

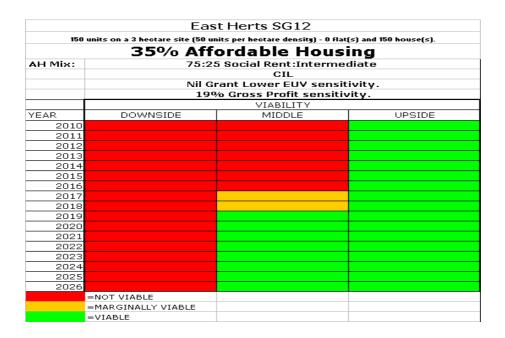
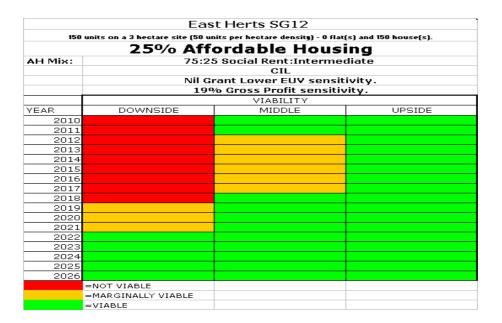


Figure EH90



	East H	lerts SG12			
AH Mix:	25:	25:75 Social Rent:Intermediate			
	35% Afford	dable Housing			
		LO6 allowance			
	Normal Grant Hi	qher EUV sensitivity.			
	19% Gross	Profit sensitivity.			
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
	10				
	111				
	112				
	13				
	114 115				
	116				
	117				
	118				
	119				
20	120				
20	21				
20	22				
	123				
	24				
	25				
20	26				
	=NOT VIABLE				
	=MARGINALLY VIABLE =VIABLE				
	= AIMOFC				

Figure EH92

	East He	erts SG12	
	15% Afford	able Housing	
AH Mix:		iO Social Rent:Interme	diate
		100% S106 allowance	
		rant Higher EUV sensi	
	19	% Gross Profit sensiti	vity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
201			
201			
201			
201			
201			
201 201			
201			
201			
201			
202			
202			
202			
202			
202	4		
202	5		
202	6		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

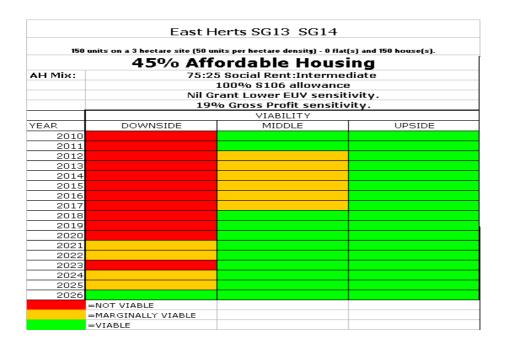
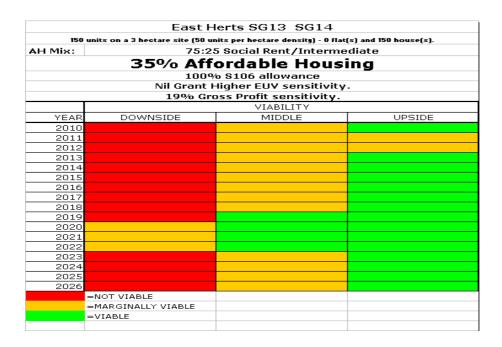


Figure EH94



			per hectare density) - 72 flat(s erts CM23	
AH Mix:	H Mix: 25:75 Social Rent:Intermediate			
		35% Afford	able Housing	
			06 allowance	
			wer EUV sensitivity.	
		19% Gross P	rofit sensitivity.	
			VIABILITY	_
YEAR		DOWNSIDE	MIDDLE	UPSIDE
	2010			
	2011			
	2012			
	2013			
	2014			
	2015			
	2016			
	2017			
	2018			
	2019			
	2020	<u> </u>		
	2021	<u> </u>		
	2022			
	2023			
	2024			
	2025			
	2026			
		=NOT VIABLE		
		=MARGINALLY VIABLE		
		=VIABLE		

Figure EH96



East Herts SG9				
AH Mix:	25:75	25:75 Social Rent:Intermediate		
	35% Afforda	able Housing		
		6 allowance		
	Normal Grant Low	er EUV sensitivity.		
	19% Gross Pr	ofit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
20				
20				
20				
20				
20				
20				
20				
20				
20				
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20				
20				
20				
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20				
	=NOT VIABLE			
	=MARGINALLY VIABLE =VIABLE			

Figure EH98



	Fast F	lerts SG9	
		lable Housing	
AH Mix:		75 Social Rent:Interme	diate
	201	100% S106 allowance	
	Norma	l Grant Higher EUV ser	sitivity.
	19	% Gross Profit sensiti	vity.
		VIABILITY	
YEAR	DOWNSIDE	MIDDLE	UPSIDE
	010		
	011		
	012		
	013		
	014		
	015 016		
	017		
	018		
	019		
	020		
	021		
	022		
	023		
	024		
20	025		
20	026		
	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

Figure EH100

	East Her	ts SG11		
AH Mix:				
	35% Afforda	ble Housing		
	100% S106			
	Nil Grant Lower			
	19% Gross Pro			
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
2010				
2011				
2012				
2013				
2014				
2015				
2016				
2017				
2018				
2019				
2020				
2021 2022		<u></u>		
2022				
2023				
2024				
2025				
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

130 dines o	n a 2.142857 hectare site (70 units Fast Ho	erts SG11	ana io nouse(s).	
AH Mix:	25:75 Social Rent:Intermediate			
	35% Afford	lable Housing		
		06 allowance		
		wer EUV sensitivity.		
		rofit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
	10			
	11			
	12			
	13			
	14			
	15			
	16			
	17			
	18			
	19			
	20			
	21			
	22			
	23			
	24 25			
	26			
21	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			
	-414055			

Figure EH102

	East He	rts SG12	
	10% Afford	able Housing	
AH Mix:	25:7	5 Social Rent:Interm	ediate
		100% S106 allowand	
		Grant Higher EUV se	
	199	6 Gross Profit sensit	ivity.
WE LE	500,000	VIABILITY	LIBOTE
YEAR	DOWNSIDE	MIDDLE	UPSIDE
2010 2011			
2011			
2012			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024 2025		<u> </u>	
2025			
2020	=NOT VIABLE		
	=MARGINALLY VIABLE		
	=VIABLE		

		its per hectare density) - 72 flat(s Herts SG12	,		
AH Mix:	25	25:75 Social Rent:Intermediate			
	35% Affor	dable Housing			
		106 allowance			
	Normal Grant L	ower EUV sensitivity.			
	19% Gross	Profit sensitivity.			
		VIABILITY			
YEAR	DOWNSIDE	MIDDLE	UPSIDE		
	2010				
	2011				
	2012				
	2013				
	2014				
	2015				
	2016				
	2017 2018				
	2018				
	2020	_			
	2021				
	2022				
	2023				
	2024				
	2025				
2	2026				
	=NOT VIABLE				
	=MARGINALLY VIABLE				
	=VIABLE				

Figure EH104

150 units o	n a 2.142857 hectare site (70 units	•	and 18 nouse(s).	
		erts SG12		
	25% Afford	lable Housing		
AH Mix:	25:75 Social Rent:Intermediate			
		100% S106 allowance Nil Grant Lower EUV sensitivity. 19% Gross Profit sensitivity.		
	19			
YEAR	DOWNSIDE	VIABILITY UF		
YEAK 20		IMIDDLE	UPSIDE	
20				
20				
20				
20	14			
20	15			
	16			
20				
	18			
20				
20				
20				
20				
20				
20				
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

150 unit	s on a 2		per hectare density) - 72 flat(s CC 10 CC 14	and 78 house(s).	
AH Mix:	East Herts SG 13 SG 14				
			able Housing		
			16 allowance		
			r EUV sensitivity.		
		19% Gross Pi	rofit sensitivity.		
V= 15	VIABILITY				
YEAR	0046	DOWNSIDE	MIDDLE	UPSIDE	
	2010 2011				
	2011				
	2012				
	2013				
	2015				
	2016				
	2017				
	2018				
	2019				
	2020				
	2021				
	2022				
	2023				
	2024	<u> </u>			
	2025				
	2026				
	_	=NOT VIABLE			
		=MARGINALLY VIABLE			
		=VIABLE			

Figure EH106

	East Hert	s SG 13 SG14		
AH Mix:	25:75 Social Rent:Intermediate			
	35% Affor	dable Housing		
		106 allowance		
	Normal Grant H	igher EUV sensitivity.		
	19% Gross	Profit sensitivity.		
		VIABILITY		
YEAR	DOWNSIDE	MIDDLE	UPSIDE	
	010			
	011			
	012			
	013			
	014			
	015			
	016 017			
	017			
	018			
	020			
	021			
	022			
	023			
	024			
2	025			
2	026			
	=NOT VIABLE			
	=MARGINALLY VIABLE			
	=VIABLE			

Figure EH107

East Herts SG11							
10 units on a 0.333333 hectare site (30 units per hectare density) - 0 flat(s) and 10 house(s).  20% Affordable Housing							
	Nil Grant Lower EUV sensitivity. 19% Gross Profit sensitivity.						
		VIABILITY					
YEAR	DOWNSIDE	MIDDLE	UPSIDE				
2010							
2011							
2012							
2013							
2014							
2015 2016							
2016							
2017							
2019							
2020							
2021							
2022							
2023							
2024							
2025							
2026							
	=NOT VIABLE						
	=MARGINALLY VIABLE						
	=VIABLE						

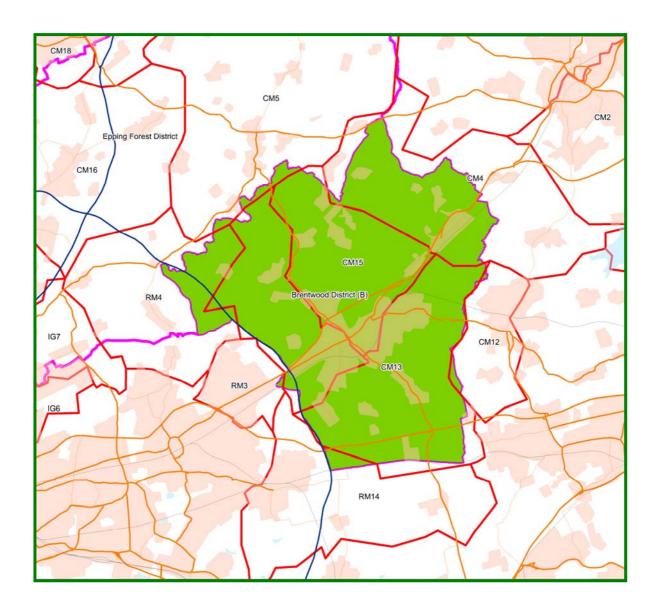
Figure EH108

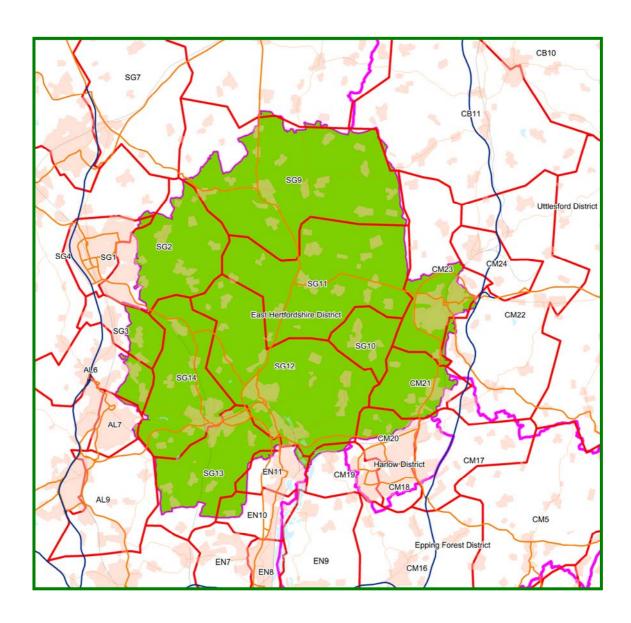


Appendix Fifteen – Local Authority Postcode Area Maps

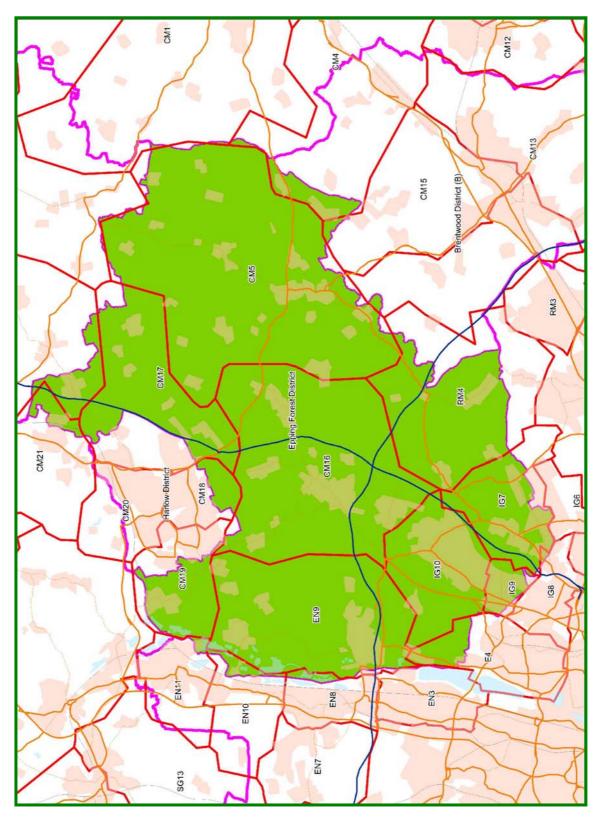
The Postcode Areas for each Local Authority are illustrated by the following maps.

Postcode Area Map 1 – Brentwood Borough Council

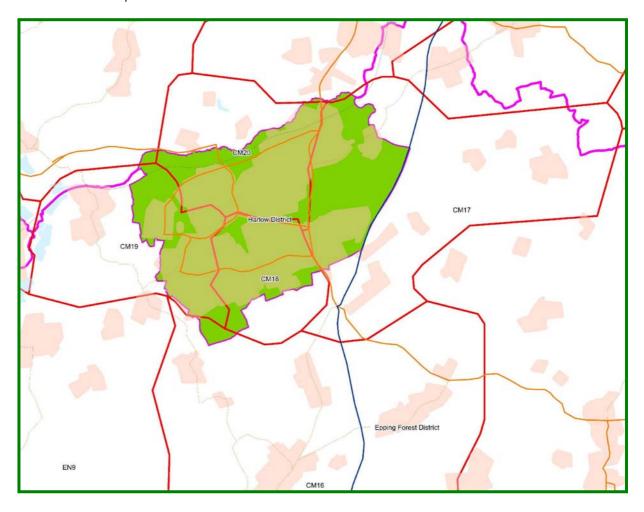




Postcode Area Map 3 – Epping Forest District Council



## Postcode Area Map 4 – Harlow District Council



## Postcode Area Map 5 – Uttlesford District Council

