Central Bedfordshire Council
www.centralbedfordshire.gov.uk

Residential Development Viability Report

July 2017

Central Bedfordshire Council: Residential Development Viability Report

1. Introduction

1.1 This is a Central Bedfordshire Council Residential Viability Study which has been produced to support the Site Assessment Technical Document. National Planning Policy requires the Local Planning Authority to consider the viability of sites in the preparation of a Local Plan in accordance with Paragraph 47 of the NPPF and the guidance within the National Planning Practice Guidance.

1.2 This Residential Development Viability Study does not assess the viability of strategic sites with high infrastructure requirements but relies upon a typology based approach to identify broadly the viability of development at different scales and different locations across the Central Bedfordshire authority area. Where sites are indicated within the report to be unviable, marginal or are strategic sites with high infrastructure requirements, further information will be required to demonstrate that the sites would be viable and sustainable.

1.3 The study divides Central Bedfordshire into three value areas based on house price data:

- Zone A, which is the highest value Zone. This covers locations south east of Milton Keynes, south west of Bedford and a small area to the south west of Whipsnade.
- Zone B, which covers much of the mid and western parts of Central Bedfordshire.
- Zone C, which is lowest value Zone. This covers the area around Luton, Leighton Buzzard, Flitwick, Arlesey, Biggleswade, Sandy, Tempsford and the east of the Authority's area.

1.4 Drawing from the 852 of sites received during the Council's Call for Sites in 2016 and available case studies, the Viability Study considers a broad range of development typologies. These range from:

- 10 dwellings on 0.33ha; to
- 3,510 dwellings on 260ha.

This is in accordance with the Site Assessment Technical Document capacity assumptions. The case studies are applied in all three market value areas. A standard scenario (30% affordable housing, which is modelled at 72% affordable rent and 28% shared ownership) and a Starter home scenario (20% starter homes and 10% affordable rent) are used.

1.5 The Viability Report uses a standard residual value method for the testing, where the residual value (net of development costs) is compared to the benchmark land value – where the residual value is above the benchmark the development can be considered viable and able to proceed. Benchmarks vary between:

- £0.65m- £0.95m/ha for the smaller urban/edge of settlement sites; and
- £0.2m-£0.33m/ha for larger sites, with an intermediate benchmark of £0.5m/ha.
- As a sensitivity test, larger sites are also tested against £0.5m/ha.

2. Key Findings

2.1 Where large scale developments are proposed within lower value areas there will need to be careful planning for the infrastructure and funding strategy, in order to ensure that sustainable development can proceed. Therefore, where the Council identifies strategic locations that score highly in terms of spatial criteria, limited impact and overall sustainability in planning terms, then a range of options could be employed to bring developments forward. These options may include additional funding (potentially from central government), s106 negotiations and flexible planning policy.

2.2 By Value Zone:

- In Value Zone A all of the case studies comfortably achieve the both the upper and lower benchmark land values. Where additional infrastructure and s106 obligations may be required then these costs can also be supported by all the Value Zone A case studies, although there is limited headroom for the largest case study (3,510 dwellings) against the highest higher benchmark if £38,000 per dwellings is required.
- In Value Zone B all of the case studies comfortably achieve both the upper and lower benchmark land values. While this remains the case when s106/infrastructure costs of £19,000/dwelling are required, most of the case studies are either marginal with £38,000/dwelling s106/infrastructure costs, or unviable with the given assumptions (150 dwellings and 3,510 dwellings).
- In Value Zone C the case studies achieve the both the upper and lower benchmark land values without additional s106/infrastructure obligations. While this remains the case when s106/infrastructure costs of £19,000/dwelling are required, most of the case studies are not viable with £38,000/dwelling s106/infrastructure costs and the given assumptions.

2.3 Where no affordable housing is provided (under 11 dwellings), viability is considerably stronger. The inclusion of Starter Homes instead of 'traditional' affordable housing also improves viability, although the underlying patterns between case studies and value areas remain.

2.4 Sensitivity testing of the larger sites with a higher benchmark land value shows development remains viable (with 30% affordable housing) but with no 'headroom' for additional development or planning obligations costs. It is likely that only sites with no infrastructure requirements or other planning obligations are able to afford to pay these higher land values and that where there are constraints or planning obligations required, land values will be lower.

3. Implications for the Local Plan

3.1 The implication of the findings of the report for the Local Plan is that where large scale development is proposed for lower value areas there will need to be further information provided in relation to the viability of theses sites and there will need to be careful planning for infrastructure and funding strategy, in order to ensure that sustainable development can proceed. Therefore, where the Council identifies strategic locations that score highly in terms of spatial criteria, limited impact and overall sustainability in planning terms, then a range of options could be considered to be employed to bring such developments forward.

These options may include additional funding (potentially from Central Government), s106 negotiations and flexible planning policy.

3.2 Notwithstanding the above findings of the report, this report should be read in conjunction with the Development Gain Study, which considers land value uplift and property price increases as a result of major transport infrastructure improvements which include:

- East-West Rail;
- Oxford-Cambridge Expressway;
- A1 Corridor Improvements; and
- A421 improvements.

3.3 Such land and property value increases could make strategic scale sites more viable in areas within close proximity to these infrastructure improvements than outlined within this study, although less affordable for lower income families and first time buyers.

3.4 The Residential Development Viability Report is of appropriate detail to this stage of plan making, forming a foundation for future detailed viability work. The Report should not be considered or viewed as a stand alone document.

Appendix A

Central Bedfordshire Council

Residential Development Viability Report

Three Dragons

February 2017

CENTRAL BEDFORDSHIRE COUNCIL

Residential Development Viability Report

Three Dragons

February 2017

epd
environment planning and design
A PARKWOOD BUSINESS

Three Dragons
1996-2016

This report is not a formal land valuation or scheme appraisal. It has been prepared using the Three Dragons toolkit and is based on district level data supplied by Central Bedfordshire Council, consultation and quoted published data sources. The toolkit provides a review of the development economics of illustrative schemes and the results depend on the data inputs provided. This analysis should not be used for individual scheme appraisal.

No responsibility whatsoever is accepted to any third party who may seek to rely on the content of the report unless previously agreed.

February 2017
Three Dragons with Parkwood epd

CONTENTS

February 2017
Three Dragons with Parkwood epd

EXECUTIVE SUMMARY

1. This Viability Study supports the call for sites undertaken in 2016 by Central Bedfordshire Council as part of the work on the new draft Local Plan, with sites being collated through a Site Assessment Technical Document. The evidence has followed the relevant regulations and guidance, including the National Planning Policy Framework. It also takes into account the proposed affordable housing policies based on the 2015 SHMA. The purpose of the study is to provide information about the *achievability* of different types of housing development across Central Bedfordshire, to form one part of a wider technical assessment of site suitability and availability.

2. The draft Local Plan proposes a delivery of between 20,000-30,000 new homes in Central Bedfordshire. The 2016 call for sites resulted in 830 sites put forward for consideration to accommodate this growth. Sites range from under 1 ha to over 700ha. Most of the sites put forward are smaller (over two thirds are less than 5 ha) although 3% are over 100ha and there are six sites over 300 ha.

3. The research that has been drawn on for this analysis includes a review of the submitted sites in the Site Assessment Technical Document, the policies likely to be included in the emerging Local Plan and government viability guidance; current s106 and infrastructure requirements for existing sites; desk review of published information on costs and values; consultation with the development industry and Registered Providers; and use of the Three Dragons Toolkit.

4. Central Bedfordshire is divided into three value areas based on house price data:

   - Zone A, which is the highest value Zone. This covers locations south east of Milton Keynes, south west of Bedford and a small area to the south west of Whipsnade.
   - Zone B, which covers much of the mid and western parts of Central Bedfordshire.
   - Zone C, which is lowest value Zone. This covers the area around Luton, Leighton Buzzard, Flitwick, Arlesey, Sandy and the east of the Authority's area.

5. The base testing includes 30% affordable housing, which is modelled at 72% affordable rent and 28% shared ownership. A Starter Home scenario is also included, with 20% starter homes and 10% affordable rent. The testing follows the Site Assessment Technical Document capacity assumptions, with development at 30 dwellings per ha and varying site coverage according to site size.

6. Build costs are derived from September 2016 Building Cost Information Service (BCIS) data and include an allowance of 15% for external works, with additional allowances to cover costs of development on larger sites.

7. A standard residual value method is used for the testing, where the residual value (net of the development costs) is compared to a benchmark land value – where the residual value is above the benchmark the development can be considered viable and able to proceed. Benchmarks vary between £0.65m-£0.95m/ha for the smaller urban/edge of settlement sites and £0.2m-£0.33m/ha for larger sites, with an intermediate benchmark of £0.5m/ha. As a sensitivity test, larger sites are also tested against £0.5m/ha.

8. The testing uses nine case studies developed from a review of the sites in the Site Assessment Technical Document. These sites vary between 10 dwellings on 0.33ha to 3,510 dwellings on 260ha. The case studies are applied in all three market value areas, using both the standard scenario and the Starter Home scenario.

9. The modelling is also used to explore the extent that development can support higher infrastructure or s106 costs. As there has been no known planning or cost information for the Site Assessment Technical Document sites, for illustrative purposes the testing uses £38,000/dwelling (based on requirements for other strategic sites elsewhere in Central Bedfordshire), £19,000/dwelling (i.e. half the strategic site requirement) and £10,000/dwelling (based on current s106 requirements).

10. In broad terms the case studies modelled here indicate that development is viable across Central Bedfordshire with 30% affordable housing, although if potential infrastructure/s106 costs are included, potential development is shown as less viable, particularly in lower value areas. The viability is strongest in the highest value area (area A) and then decreases as values fall. The largest case study site (3,510 dwellings) is the least viable, but still able to proceed in all areas depending on the infrastructure/s106 costs that the development needs to support. On this basis, the sites are *achievable*.

11. Where additional costs of development are included, then some development in some locations may be marginal or unviable. Generally, development can support additional infrastructure/s106 costs of at least £19,000 per dwelling, but where costs rise to £38,000 per dwelling some of the development in the lowest value area (area C) may not be viable. If such cost is necessary to bring forward a site then we would anticipate a combination of lower land values, external funding options explored and some negotiation with the council about the scale of contributions in order to allow development to proceed. Development in all areas with 30% affordable housing can support the current average £10,000/dwelling s106.

12. The implication for the development strategy is that where large scale development is proposed for lower value areas there will need to be careful planning for the infrastructure and funding strategy, in order to ensure that sustainable development can proceed. Therefore, where the Council identifies strategic locations that score highly in terms of spatial criteria, limited impact and overall sustainability in planning terms, then a range of options could be employed to bring developments forward. These options may include additional funding, s106 negotiations and flexible planning policy.

13. By Value Zone:

- In Value Zone A all of the case studies comfortably achieve the both the upper and lower benchmark land values. Where additional infrastructure and s106 obligations may be required then these costs can also be supported by all the Value Zone A case studies, although there is limited headroom for the largest case study (3,510 dwellings) against the highest higher benchmark if £38,000 per dwellings is required.
- In Value Zone B all of the case studies comfortably achieve the both the upper and lower benchmark land values. While this remains the case when s106/infrastructure costs of £19,000/dwelling are required, most of the case studies are either marginal with £38,000/dwelling s106/infrastructure costs, or unviable with the given assumptions (150 dwellings and 3,510 dwellings).

- In Value Zone C the case studies achieve the both the upper and lower benchmark land values without additional s106/infrastructure obligations. While this remains the case when s106/infrastructure costs of £19,000/dwelling are required, most of the case studies are not viable with £38,000/dwelling s106/infrastructure costs and the given assumptions.

14. Where no affordable housing is provided (under 11 dwellings), viability is considerably stronger. The inclusion of Starter Homes instead of 'traditional' affordable housing also improves viability, although the underlying patterns between case studies and value areas remain.

15. Sensitivity testing of the larger sites with a higher benchmark land value shows development remains viable (with 30% affordable housing) but with no 'headroom' for additional development or planning obligations costs. It is likely that only sites with no infrastructure requirements or other planning obligations are able to afford to pay these higher land values, and that where there are constraints or planning obligations required, land values will be lower.

1 INTRODUCTION

1.1 The National Planning Policy Framework (NPPF)[1] sets out the government's planning policies for England. Paragraph 159 requires authorities, in the production of a local plan, to "prepare a Strategic Housing Land Availability Assessment to establish realistic assumptions about the availability, suitability and the likely economic viability of land to meet the identified need for housing over the plan period" [2]. Central Bedfordshire Council's Site Assessment Technical Document is part of the work towards a SHLAA.

1.2 Central Bedfordshire Council is preparing a new Local Plan to manage the delivery of growth up to 2035. As part of this Central Bedfordshire Council has undertaken a 'Call for Sites' where developers were asked to submit land for housing. Approximately 830 sites were received for technical assessment by the Council.

1.3 This viability assessment forms one part of a much wider technical assessment of suitability, availability and achievability, and responds to the requirements in the brief issued by Central Bedfordshire Council in July 2016. The economic viability evidence in this report has been prepared to assist Central Bedfordshire Council in the task of assessing *achievability* of land for residential development (and thus the likelihood of sites being able to support housing development during the plan period).

1.4 This viability study follows on from previous viability work undertaken by Three Dragons:

- Viability Study assessing affordable housing, the Community Infrastructure Levy and the Development Strategy, 2013
- Viability Study – Refresh, 2015
- Arlesey Cross Viability Report, 2015

1.5 The research which has been drawn on for this analysis includes:

- A review of the policies likely to be included in the emerging Local Plan
- A review of the central government guidance that may have implications for development viability
- A review of the Site Assessment Technical Document sites and the assessment process with Council officers
- A review of the s106 and infrastructure costs for the strategic sites proposed by the draft Development Strategy in 2015
- Desk research to form initial views on the values and costs of residential development in Central Bedfordshire and how these vary across the area
- Consultation with the development industry active in the area through
    - A workshop in September 2016 (a note of the workshop discussions is shown at Annex 2).
    - Subsequent feedback from some workshop attendees.

[1] National Planning Policy Framework DCLG 2012
[2] Para 159 National Planning Policy Framework DCLG 2012

- Three Dragons also undertook interviews with Registered Providers active in Central Bedfordshire in September 2016 to refine estimates of costs and values of affordable housing.
- With agreement of the Council to the assumptions used, operation of the Three Dragons residential viability models to undertake the viability testing set out in this report.

2 CONTEXT FOR THE ANALYSIS

National Policy Context

2.1 The National Planning Policy Framework (NPPF) requires local planning authorities to assess the availability, suitability and economic viability of sites identified when preparing a SHLAA[3].

2.2 Although this is a sites viability assessment rather than a plan viability assessment, the NPPF principles provide a useful approach. NPPF paragraph 173 sets out how Government expects viability to be considered in planning:

'Pursuing sustainable development requires careful attention to viability and costs in plan-making and decision-taking. Plans should be deliverable. Therefore, the sites and the scale of development identified in the plan should not be subject to such a scale of obligations and policy burdens that their ability to be developed viably is threatened. To ensure viability, the costs of any requirements likely to be applied to development, such as requirements for affordable housing, standards, infrastructure contributions or other requirements should, when taking account of the normal cost of development and mitigation, provide competitive returns to a willing land owner and willing developer to enable the development to be deliverable.'[4]

2.3 Planning Practice Guidance[5] (PPG) provides further detail about how the NPPF should be applied. PPG contains general principles for understanding viability. It also notes that there is a range of sector-led guidance available[6]. In order to understand viability, a realistic understanding of the costs and the value of development is required and direct engagement with development sector may be helpful[7]. Evidence should be proportionate to ensure plans are underpinned by a broad understanding of viability, with further detail where viability may be marginal or for strategic sites with high infrastructure requirements[8]. However not every site requires testing and site typologies may be used to determine policy[9].

2.4 PPG requires that a buffer should be allowed and that current costs and values should be used (except where known regulation/policy changes are to take place)[10]. Generally, values should be based on comparable, market information, using average figures and informed by specific local evidence[11]. For an area wide viability assessment, a broad assessment of costs is required, based on robust evidence which is reflective of local market conditions. All

[3] Para 159 NPPF
[4] DCLG, 2012, NPPF Para 173
[5] DCLG, Planning Practice Guidance
[6] PPG Paragraph: 002 Reference ID: 10-002-20140306
[7] PPG Paragraph: 004 Reference ID: 10-004-20140306
[8] PPG Paragraph: 005 Reference ID: 10-005-20140306
[9] PPG Paragraph: 006 Reference ID: 10-006-20140306
[10] PPG Paragraph: 008 Reference ID: 10-008-20140306
[11] PPG Paragraph: 012 Reference ID: 10-012-20140306

development costs should be taken into account, including infrastructure and policy costs as well as the standard development costs[12].

2.5 Land values should reflect emerging policy requirements and planning obligations, and provide a competitive return to willing developers and land owners. Where possible land values should be informed by comparable, market-based evidence but excluding transactions above the market norm[13]. Assumptions about brownfield land values should clearly reflect the levels of mitigation and investment required to bring sites back into use[14].

2.6 PPG identifies circumstances where contributions for affordable housing and s106 obligations should not be sought[15]. These circumstances include developments of 10-units or less with GIA of no more than 1000sq m (more than 5 units in rural areas) and self-build.

Other Guidance on Viability Testing for Residential Development

2.7 Guidance has been published to assist practitioners in undertaking viability studies for policy making purposes – "*Viability Testing Local Plans - Advice for planning practitioners*"[16]. The Foreword to the Advice for planning practitioners includes support from DCLG, the LGA, the HBF, PINS and POS. PINS and the POS[17] state that:

"*The Planning Inspectorate and Planning Officers Society welcome this advice on viability testing of Local Plans. The use of this approach will help enable local authorities to meet their obligations under NPPF when their plan is examined*."

2.8 The approach to viability testing adopted for this study follows the principles set out in the Advice. The Advice re-iterates that:

"The approach to assessing plan viability should recognise that it can only provide high level assurance."

2.9 The Advice also comments on how viability testing should deal with potential future changes in market conditions and other costs and values and, in line with PPG, states that:

"*The most straightforward way to assess plan policies for the first five years is to work on the basis of current costs and values*". (page 26)

But that:

"*The one exception to the use of current costs and current values should be recognition of significant national regulatory changes to be implemented……" (page 26)*

[12] PPG Paragraph: 013 Reference ID: 10-013-20140306
[13] PPG Paragraph: 014 Reference ID: 10-014-20140306
[14] PPG Paragraph: 025 Reference ID: 10-025-20140306
[15] Paragraph: 031 Reference ID: 23b-031-20161116
[16] The guide was published in June 2012 and is the work of the Local Housing Delivery Group, chaired by Sir John Harman, which is a cross-industry group, supported by the Local Government Association and the Home Builders Federation.
[17] Acronyms for the following organisations - Department of Communities and Local Government, LGA Environment and Housing Board, Home Builders Federation, Planning Inspectorate, Planning Officers Society

Local Plan Policies

2.10 NPPF requires sites identified to be assessed for their potential to deliver over a 20-year plan period. In order to be deliverable sites must be available, suitable and achievable[18] and this study tests the economic viability of the sites which will help to determine achievability. The Site Assessment Technical Document itself contains an assessment of availability and suitability.

2.11 The NPPF is clear that viability testing should take into account, '*…the costs of any requirements likely to be applied to development…'* (Para 173).

2.12 Central Bedfordshire Council is developing a new Local Plan, with the Regulation 18 initial draft due for consultation in mid-2017. This will include options for growth and the completed Site Assessment Technical Document will be published during the Regulation 18 consultation as part of the technical evidence base. The detail of all the policies that may affect development are not yet known. However, the likely affordable housing requirements are set out in the 2015 SHMA[19] and in the light of this report Central Bedfordshire Council have advised that this viability study should assume a requirement for 30% affordable housing with 72% affordable rent and 28% shared ownership, to apply to sites of 11 or more dwellings in line with national guidance. The Council are aware of the Government's plans for Starter Homes and has instructed that the viability testing includes scenarios with 20% Starter Homes (as suggested in the March 2016 Technical Consultation) with 10% affordable rent.

Call for Sites

2.13 The draft Local Plan proposes a delivery of between 20,000-30,000 new homes in Central Bedfordshire. The 2016 call for sites resulted in 830 sites put forward for consideration to accommodate this growth. Sites range from under 1 ha to over 700ha. Unsurprisingly most of the sites put forward are smaller (over two thirds are less than 5 ha) although 3% are over 100ha and there are six sites over 300 ha.

Figure 2.1 SHLAA Sites Summary

Site area	Proportion of sites
Up to 1 ha	22%
1-5 ha	46%
5-10 ha	16%
10-20 ha	6%
20-50 ha	7%
50-100 ha	2%
Over 100 ha	3%

2.14 The Site Assessment Technical Document assessment being undertaken by CBC includes the following broad assumptions as set out within their published methodology:

[18] NPPF para 159

[19] ORS, 2015, Luton & Central Bedfordshire Strategic Housing Market Assessment Update

- Sites are assumed to be developed at 30 dwellings per net ha (dph)
- Within the Site Assessment Technical Document, site coverage is assumed to vary with size as follows:
    - Up to 0.4 ha 100% developable
    - 0.4-2ha 80% net developable
    - 2ha or above 60% net developable

Development Industry Feedback

2.15 Development industry views on the viability testing have been provided through the September 2016 workshop, subsequent feedback and the September 2016 RPs survey. The main issues raised were:

Benchmark Land Values

- Feedback on benchmark land values varied with no clear consensus view. Some members of the development industry were concerned that benchmarks may be too low (although others thought them too high) and post-workshop feedback made some suggestions about alternative values (c.£300,000, £370,00 and £500,000 per ha for greenfield sites).

Case studies

- In addition to the original case studies suggested, a larger case study should also be included to take account of the largest SHLAA sites put forward.

Site coverage and built Floorspace

- Site coverage on the largest sites will be less than the 60% used in the call for sites and a range of large sites with between 33% and 56% was cited.
- Built floorspace would typically be 3,300sq m per net ha.

Return on affordable houses

- Workshop feedback suggested that there should be a higher return on affordable housing because of a higher risk of RP's reluctance to take on more stock.

Role of s106 payments in the viability testing

- Concern was expressed about the level of s106 costs being built into the viability testing.

Other development costs

- It was suggested that 10% professional fees should be used instead of 8%
- It was suggested that 5% contingency be built into the testing
- It was suggested that some additional infrastructure costs should be built into the viability testing
- It was suggested that finance should be included at 7% instead of 5%

Basis of testing

- Although the workshop made no objection to the residual value approach to viability testing, subsequent feedback suggested that a return on capital employed basis may be preferable.

Study Response

2.16 The study responds to the national and local policy context by:

- Recognising that although this is a Site Assessment Technical Document assessment rather than a plan viability assessment, the viability testing used in the study is in accordance with the NPPG and the Local Housing Delivery Group Guidance.
- Including the affordable housing policies planned for inclusion in the draft Local Plan.
- Using the analysis of the residual values to understand the potential for other policy obligation costs (given that the other development policies are not yet know).
- Selecting generic case studies for viability testing based on the sites included in the call for sites.

2.17 The study responds to the developer feedback by:

- Reviewing the evidence previously collected for benchmark land values in Central Bedfordshire. As a result of this review (see Section 3 and Annex 3) it has been decided to maintain the benchmark land values originally proposed but include some higher benchmarks as sensitivity test. It is clear that there is no real consensus on land value benchmarks and it seems prudent to consider a range of benchmarks. Ultimately, however, land will only be worth what policy compliant development can afford to pay for it, subject to a premium over existing use value.
- Including a larger case study to take into account the largest of the Site Assessment Technical Document sites put forward with an additional case study of 260ha (previously the largest case study was 83ha).
- Reducing the net developable area to 45% for the largest case study.
- Adjusting the dwelling mix to increase the built floor area assumed in the case studies.
- Undertaking a survey of RPs active in Central Bedfordshire to test the view that s106 affordable housing was no longer attractive to RPs, and to check the affordable housing costs and values. Five RPs responded and provided information; and three of the five confirmed that they saw no impediment to taking s106 affordable housing in Central Bedfordshire. None saw any impediment to developing their own affordable housing. On this basis, we have concluded that there is no systematic increase in risk of developing affordable housing as part of mixed tenure schemes and so the return has been left at 6%.
- The analysis has been used to explore the opportunities for s106 contributions as a findings output, rather than including s106 costs as an input. This aspect has been discussed with Central Bedfordshire Council, and it has been agreed that this was the best for a high-level approach like this SHLAA viability study, particularly as the policy requirements that might give rise to s106 had not yet been finalised.

- In terms of professional fees, we have continued to use 8%. This is based on experience of the levels of fee now being used by developers in their viability appraisals (often at 6%).
- We have not built a contingency into the appraisal but instead have been clear about the viability buffer produced in different scenarios (as indicated by NPPG[20]). This is part of the analysis at the end of the testing.
- In response to comments about additional s106 and infrastructure requirements we have reviewed recent s106 requirements in Central Bedfordshire and 2015 work on infrastructure requirements on the strategic urban extensions planned under the draft Development Strategy. In advance of any infrastructure planning for the Site Assessment Technical Document sites this has provided a basis for some illustrative additional cost scenarios that we have then included in the viability testing.
- Interest rates remain at a historic low and there are no firm suggestions that they are rising. We have maintained the finance rate at 5%, noting that this is an allowance net of any inflation component in headline rates.
- We have considered the use of alternative viability testing methods such as return on capital employed (and internal rates of return). NPPG does not name the specific approach to viability testing, although it does state that "A site is viable if the value generated by its development exceeds the costs of developing it and also provides sufficient incentive for the land to come forward and the development to be undertaken." This clearly includes a residual land value (RLV) approach. Viability Testing Local Plans produced by the Local Housing Delivery Group in 2012 and endorsed by the LGA, the HBF, the Planning Inspectorate and the Planning Officers Society states "We recommend that the residual land value approach is taken when assessing the viability of plan-level policies and further advice is provided below on the considerations that should be given to the assumptions and inputs to a model of this type." Guidance is also provided by RICS in Financial Viability in Planning, 2012. Box 6 on page 12 states "The residual appraisal methodology for financial viability testing is normally used, where either the level of return or Site Value can be an input and the consequential output (either a residual land value or return respectively) can be compared to a benchmark having regard to the market in order to assess the impact of planning obligations or policy implications on viability". We recognise that a return on capital employed can be a useful decision tool when a developer is choosing which of its potential site to develop first, but it does not seem to be a useful tool here because land value is generally an input to this calculation along with other costs; finance cost is excluded and because there are no generally accepted benchmarks.

[20] Paragraph: 008 Reference ID: 10-008-20140306

3. VIABILITY APPROACH AND KEY ASSUMPTIONS

Principles and approach

3.1 The Advice for planning practitioners summarises viability as follows:

'*An individual development can be said to be viable if, after taking account of all costs, including central and local government policy and regulatory costs and the cost and availability of development finance, the scheme provides a competitive return to the developer to ensure that development takes place and generates a land value sufficient to persuade the land owner to sell the land for the development proposed. If these conditions are not met, a scheme will not be delivered*.' (page 14)

3.2 Reflecting this definition of viability, and as specifically recommended by the Advice for planning practitioners[21], we have adopted a residual value approach to our analysis. Residual value is the value of the completed development (known as the Gross Development Value or GDV) less the costs of undertaking the development. The residual value is then available to pay for the land. The value of the scheme includes both the value of the market housing and affordable housing. Scheme costs include the costs of building the development, plus professional fees, scheme finance and a return to the developer. Scheme costs also include planning obligations (including affordable housing, direct s106 costs and if appropriate, CIL) and the greater the planning obligations, the less will be the residual value.

3.3 The residual value of a scheme is then compared with a benchmark land value. If the residual value is less than the benchmark value, then the scheme is unlikely to be brought forward for development and is considered unviable for testing purposes. If the residual value exceeds the benchmark, then it can be considered viable in terms of policy testing.

Assumptions used in the testing

3.4 A full set of assumptions used in the testing is set out in Annex 1. They are based on current costs and assumptions as per national guidance[22]. Build costs were accessed from BCIS in September 2016 and house prices are based on an analysis of land registry data from 2013-16 and compared to data on new build dwellings for sale in Central Bedfordshire (as accessed in July/August 2016).

3.5 The market values for the sale housing are based on an analysis of Land Registry data for new house prices, cross checked against new housing currently for sale, and then tested through discussions at the Development Industry Workshop[23]. We note that house prices in Central Bedfordshire have continued to increase (2.5% increase between July-December

[21] See page 25 – "We recommend that the residual land value approach is taken when assessing the viability of plan-level policies and further advice is provided below on the considerations that should be given to the assumptions and inputs to a model of this type."

[22] Paragraph: 008 Reference ID: 10-008-20140306 PPG

[23] September 2016 – see Annex 2 for the workshop notes including list of organisations attending.

2016)[24] although build costs also have changed[25] but to a lesser extent. Therefore, the current indications are that the viability is strengthening.

3.6 Central Bedfordshire is divided into three value areas[26]:

- Zone A, which is the highest value Zone. This covers locations south east of Milton Keynes, south west of Bedford and a small area to the south west of Whipsnade.
- Zone B, which covers much of the mid and western parts of Central Bedfordshire.
- Zone C, which is lowest value Zone. This covers the area around Luton, Leighton Buzzard, Flitwick, Arlesey, Sandy and the east of the Authority's area.

3.7 The value areas are illustrated in Figure 3.1 below. Note that this map also shows how the value areas extend beyond the Central Bedfordshire boundaries, albeit in a lighter shade to aid clarity. Figure 3.2 then sets out the indicative market values for new build properties we have used. Within all the value areas, there will be local variations in selling prices in relation to specific immediate circumstances[27]. For illustrative purposes the figure also shows the location of the sites submitted to the call for sites process in 2016 and it is clear that the majority fall within the medium and lower value areas.

3.8 It may be that early provision of infrastructure and a sense of place and community may have positive effects of house prices. As plans for larger scale development and associated infrastructure become clearer this may increase prices on some of the lower value area sites[28]. As well as site specific infrastructure such as schools, workspace and open space there are strategic proposals such as the Oxford to Cambridge Expressway, a new east-west rail link and investment in the A1 (including Black Cat roundabout) that may have a positive impact on values in some locations in Central Bedfordshire.

[24] Land Registry House Price Index

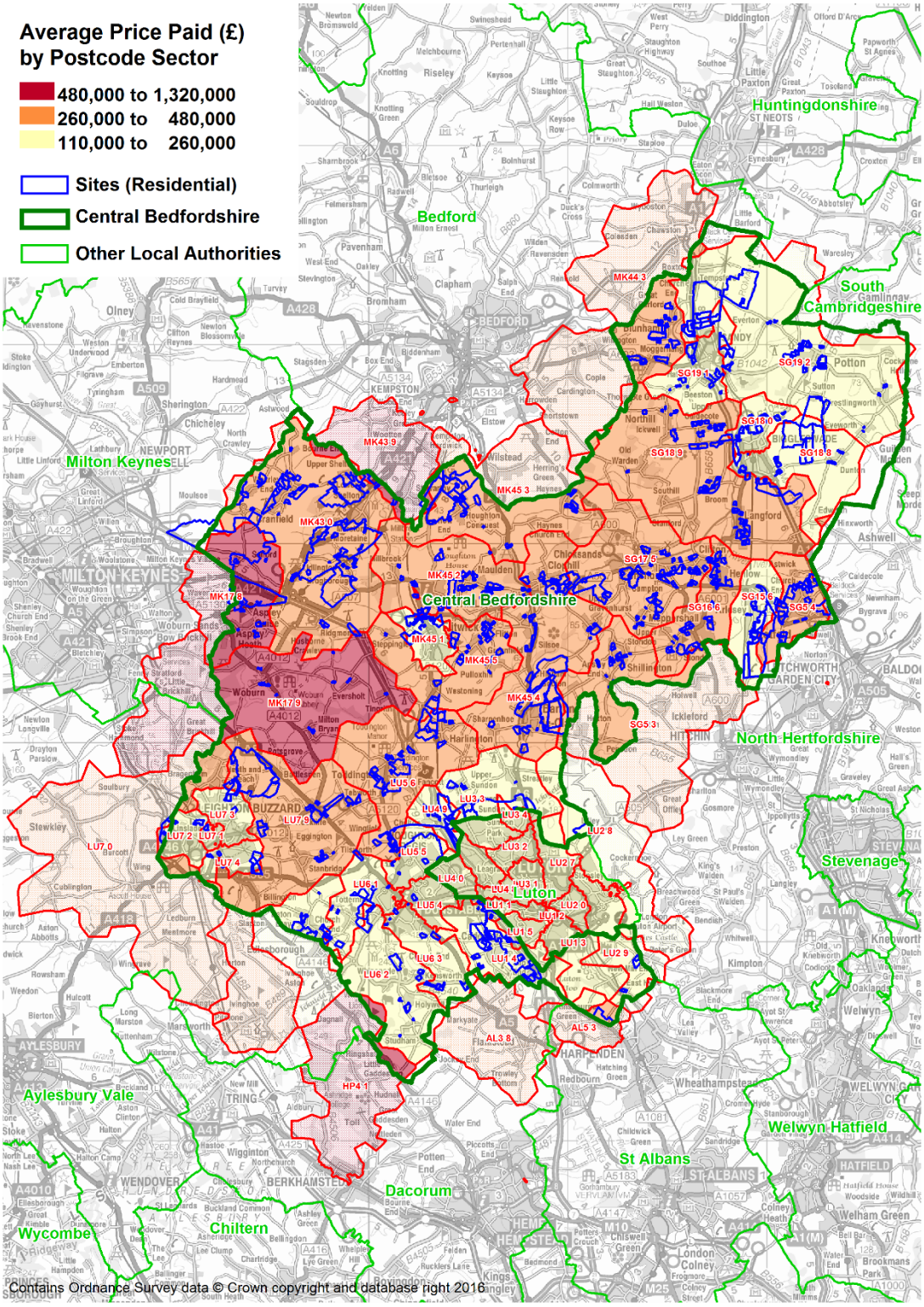
[25] BCIS All In Tender Price Index has a 1% increase between Q3 2016 and Q1 2017

[26] House price data was analysed using Jenks Natural Breaks to form the value areas.

[27] Note that the original analysis of the house price data showed that there are currently some higher value areas in the lower value zone surrounding Luton, which are more typical of the of the adjoining rural housing markets. However, for the analysis we have assumed that new build development may not command these values and will be similar to surrounding locations in the Luton area.

[28] E.g. recent research from Savills (The value of placemaking 2016) highlighted the positive impacts on values and saleability from early provision of infrastructure http://www.savills.co.uk/research_articles/205506/208527-0

Figure 3-1: Central Bedfordshire residential market value areas



Note that value areas extend outside CBC boundaries (marked by the green boundary line)

Figure 3-2: Market values used in testing

Type	4 bed detached	3 bed semi-detached	2 bed terrace	2 bed flat
Size sq m	124	93	70	67*
Dwelling prices				
Area A	£440,200	£297,600	£231,000	£207,400
Area B	£384,400	£260,400	£199,500	£176,900
Area C	£372,000	£246,450	£196,000	£161,650
£/sq m				
Area A	£3,550	£3,200	£3,300	£3,400
Area B	£3,100	£2,800	£2,850	£2,900
Area C	£3,000	£2,650	£2,800	£2,650

*includes 10% circulation (£/sq m for flats based on 61sq m net GIA)

3.9 Other key assumptions used in the testing are:

- The base testing includes 30% affordable housing, which is modelled at 72% affordable rent and 28% shared ownership. Rental values and capitalisation have been checked with Registered Providers active in Central Bedfordshire.
- A Starter Home scenario is included to explore the viability impact of this government initiative. This scenario has 20% starter homes and 10% affordable rent instead of the mix of 'traditional' affordable housing used in the base scenario. Starter Homes are modelled with the same 20% return as market housing (rather than the 6% used for affordable housing)[29].
- The testing follows the Site Assessment Technical Document capacity assumptions, with development at 30 dwellings per ha and site coverage:
    - Up to 0.4 ha 100% developable
    - 0.4-2ha 80% net developable
    - 2ha or above 60% net developable
    - 100 ha or above 45% net developable[30]
- Basic build costs are derived from Building Cost Information Service (BCIS) data, are adjusted to take into account the location[31] and include an allowance of 15% for external works. This external works allowance equates to £467,000 per net ha at 30 dph and is equivalent to £15,600/dwelling. For the purpose of this testing externals are considered as non-strategic works associated with residential properties i.e. gardens, enclosure, domestic servicing, pavements, lighting and estate roads.

[29] Note that the February 2017 Housing White Paper suggests that the NPPF will be amended to introduce a policy expectation that housing sites deliver a minimum of 10% affordable home ownership units

[30] The 45% net developable is introduced in response to discussion at the workshop and subsequent feedback

[31] The closest location factor available from BCIS is Mid Bedfordshire, which is therefore used here

- Additional allowances are made to cover costs of development on larger sites. These costs could include site preparation such as earthworks, provision of access to the site etc. These are in addition to the allowances above for external works and are:
    - £55,000/net ha for developments of 50 or more dwellings
    - £110,000/net ha for developments of 100 or more dwellings
    - £165,000/net ha for developments of 150 or more dwellings
    - £220,000/net ha for developments of 200 or more dwellings

Land Value Benchmarks

3.10 Guidance in the Local Housing Delivery Group report[32] clearly states that premium over existing use is the most appropriate method of setting a benchmark land value, and Planning Practice Guidance also refers to use of current and alternative use values, with market values of use as comparable but subservient to the requirement to 'reflect' (i.e. mirror) policy requirements. It is important to note that the benchmarks represent the lowest price that land owners will release land for development, not the highest price (which is typically represented by unfiltered market values). Recent RICS research highlights the issues with using market values to set land benchmarks – "*If market value is based on comparable evidence without proper adjustment to reflect policy compliant planning obligations, this introduces a circularity, which encourages developers to overpay for sites and try to recover some or all of this overpayment via reductions in planning obligations*"[33].

3.11 The land value benchmark is an estimate of the lowest cost that a willing landowner would sell land for development. Note that where development is able to pay more for land, then it is likely that transactions will be above the benchmark land value, particularly when different developers are competing for the same piece of land.

Figure 3-3: Benchmark Land Values

Land value per gross ha	Benchmark
Urban/edge of settlement	£950,000
	£650,000
Intermediate sites	£500,000
Large scale greenfield	£330,000
	£200,000

3.12 As well as taking account of the current agricultural use for most large scale greenfield sites. the benchmarks also reflect the higher development costs and the poorer net to gross developable site areas for larger sites, which mean that lower prices can be supported for larger sites. Furthermore, where there are site specific constraints (e.g. flood, highways, archaeology) then the costs of dealing with these may reduce the value of a particular site. The benchmarks are discussed in more detail in Annex 3.

[32] Local Housing Delivery Group, 2012, Viability Testing Local Plans
[33] RICS, 2015, Financial Viability Appraisal in Planning Decisions: Theory and Practice

Additional s106/infrastructure costs

3.13 We have reviewed recent s106 requirements in Central Bedfordshire and note that the average across the 22 agreements considered was £10,000/dwelling (the median was £8,300/dwelling). These 22 agreements included sites from 7 to 1,850 dwellings and we are told by Central Bedfordshire Council that these amounts are less than in the pre-pooling restriction past.

3.14 We are also aware from our 2015 work in Central Bedfordshire that some large sites are required to provide significant infrastructure both as strategic requirements and also to cover the site-specific s106 requirements (e.g. transport links, education etc.)[34]. The circumstances for each site varied considerably and some costs were specific requirements that would be unlikely to replicated elsewhere (such as the A5-M1 link road) but nonetheless they could be considered as a broad guide to costs that may be required from sites in the Site Assessment Technical Document. Clearly this sort of assumption comes with the profound caveat that no known infrastructure planning has been undertaken for the Site Assessment Technical Document sites (partly because they have not yet been allocated) and it may be that these sites may have to pay more or less than the strategic sites in the 2015 viability work.

3.15 As part of the analysis we have explored whether sites will remain viable if they are asked to provide £38,000 per dwelling (the median from the 2015 strategic sites) or £19,000/dwelling (nominally set at half the median from the strategic sites[35]), purely as a hypothetical exercise. We have also explored the impact of £10,000/dwelling s106.

Funding for Infrastructure

3.16 Central Bedfordshire Council has reported that the Government has made commitments to both East-West rail links and the Oxford to Cambridge expressway with strategic routes through Central Bedfordshire. This will support major housing growth in the area however further funds will be needed to support the delivery of key infrastructure in order to unlock and accelerate housing delivery. The Council has already bid to DCLG for:

- Large Sites Capacity Fund – Bid for capacity and staff resources in order to unlock stalled sites & speed up build rates on key allocated developments
- Estate Regeneration Fund – Bid for staff resource, feasibility, technical studies and community engagement on 5 deprived social housing estates (two of which in Houghton Regis, two in Dunstable and one in Sandy)
- Accelerated Construction Fund - To increase build rates by bringing forward Council-owned sites in partnership with SMEs and non-major builders

3.17 The outcomes of these bids are expected imminently and will help to support both existing residential allocations and also the regeneration of existing estates.

3.18 The Council is mindful of the future given the significant amount housing growth planned and the level of infrastructure that will be needed to support such growth. As such

[34] EC Harris (now known as Arcadis) provided information about the likely infrastructure and s106 costs for six strategic urban extensions in 2015. See Annex 6 for the 2015 EC Harris report

[35] In addition, CBC has stated that pre-pooling s106 would typically be approximately £18,000-£19,000 per dwelling

preparatory work is underway on the Housing Infrastructure Fund (HIF) which will focus on funding key infrastructure which unlocks delivery of housing sites and removing barriers to delivery.

3.19 Central Bedfordshire Council will tailor their funding bids to Government to support the delivery of large scale development within the lower value areas where the delivery of infrastructure may be less viable than other locations. The Council considers that it is strategically important for to support the delivery of infrastructure in areas of current lower residential value and will be seeking Government intervention to support significant housing growth, particularly in these locations.

Testing undertaken

3.20 The viability testing undertaken considers a series of case studies that represent the types of development identified through the SHLAA call for sites. They range in size from 10 dwelling to 3,510 dwellings (0.33ha to 260ha). Note that sites of 10 or fewer dwellings are not required to provide affordable housing, and this is accounted for in the viability testing.

3.21 Whilst it is noted that there is potential for a much larger site than the largest tested site at 3,510 dwellings (through identified single or conjoined sites), it is considered that it is not helpful or necessary at this stage to undertake further testing. This is because the strategic broad testing at this stage, where site details are unknown, uses a range of generic assumptions that would be the same for a site of say 5-7,000 dwellings as it would be for the largest tested site – therefore the result would be similar on a per hectare or dwelling basis. If a very large site is taken forward then more detailed testing, particularly of the infrastructure requirements will be required as the site moves foward through the plan making and planning application process. It should also be noted that very large sites will take a number of years to develop and are unlikely to all come forward within the plan period and therefore broad testing at this early stage will not serve any useful purpose.

3.22 The case studies used in the testing are set out below. All case studies are tested in all 3 market value zones.

3.23 The case studies use the proportions of net developable area used in the SHLAA (plus the reduced area for the largest case study); as well as the different benchmark land values as discussed above and in Annex 3; and the larger sites include an allowance for additional site costs. The delivery rates are as discussed at the developer workshop and as the site size increases it is assumed that the number of outlets on site increases.

3.24 A discounted cash flow that takes account of the development period is used for all case studies estimated to take longer than a year to build out (case studies 4-9).

Figure 3-4: Case study sites

Case study	Dwellings	Net ha	Gross to net	Gross ha	Opening-up costs	Benchmark Land Value	Developers	Delivery
1	10	0.33	100%	0.33	£0	£650,000-£950,000	1	Year 1
2	15	0.50	80%	0.63	£0	£650,000-£950,000	1	Year 1
3	25	0.83	80%	1.04	£0	£650,000-£950,000	1	Year 1
4	50	1.67	60%	2.78	£55,000	£500,000	1	Year to first completion then 40 pa
5	80	2.67	60%	4.44	£50,000	£500,000	1	Year to first completion then 50 pa
6	150	5.00	60%	8.33	£110,000	£500,000	1	Year to first completion then 50 pa
7	500	16.67	60%	27.78	£220,000	£200,000-£330,000	2	Year to first completion then 100 pa
8	1,500	50.00	60%	83.33	£220,000	£200,000-£330,000	4	Year to first completion then 200 pa
9	3,510	117.00	45%	260.00	£220,000	£200,000-£330,000	6	Year to first completion then 300 pa

4 VIABILITY ANALYSIS

Introduction

4.1 This chapter discusses the viability of the case studies, which are tested in all three of the value areas. The testing commences with a standard scenario (30% affordable housing) and then the Starter Home scenario (20% Starter Homes and 10% affordable rent). Sensitivity testing is undertaken to explore the impact of a higher land value benchmark for strategic sites, and also to explore the impact of additional infrastructure and s106 costs on viability.

4.2 The viability findings are presented as a residual value per hectare, which is then compared to the benchmark land value. Where it is above the benchmark, the case study can be considered viable. The viability findings are also presented in terms of the 'viability headroom' – the net residual value above the benchmark land value.

4.3 The net viability headroom findings are presented on a per dwelling basis, and these are compared to the potential additional s106/infrastructure costs of £10,000, £19,000 and £38,000 per dwelling. Whilst the testing applies these s106/infrastructure costs to all the case studies, general experience suggests that it is often the larger sites that have higher cost requirements. However, as discussed no specific cost information is available for the tested sites so these costs can only be considered illustrative. Note that the additional s106/infrastructure costs are in addition to the additional opening up cost allowances for larger sites (see table 3.4) and allowances for external works.

Viability findings - Standard Scenario

4.4 Figure 4.1 shows the residual value per ha for each of the generic case studies in each value area. The table illustrates how the viability per ha is affected by the different case study characteristics and which value area it falls within.

4.5 The main finding is that without additional s106/infrastructure costs, all of the case studies in all of the market areas have a residual value above the benchmark, and therefore can be considered viable.

4.6 Sites which do not provide affordable housing are considerably more viable than those that do – for example in Value Area B, case study 1 with no affordable housing has a residual value per ha of £3.1m/ha compared to case study 2 with 30% affordable housing which has a residual value of £1.6m/ha.

4.7 The residual values are consistently stronger in the higher value areas, although the difference between value area B and value area C (the mid and lower value areas) is less than the difference between the value area B and value area A (the mid and high value areas).

4.8 Part of the impact of the smaller proportion of net developable land is offset by the lower benchmark land value in the larger sites (the three smaller sites have the highest benchmark, followed by the three middle sites and then the three largest sites with the lowest benchmarks – see section 3) and this is apparent across all value areas. Despite this, the largest site (with 45% net developable area), has the lowest residual value per ha of all the case studies tested.

4.9 Against the *upper* benchmark land values (case studies 1-3 and 7-9 have higher and lower benchmarks):

- Case studies in value area A have viability headroom net of the benchmark of between £0.55m/ha (for the largest case study) to £1.3m/ha (for the case study with 25 dwellings) and £3.2m/ha for the 10-dwelling scheme with no affordable housing.
- Case studies in value area B have viability headroom net of the benchmark of between £0.3m/ha (for the largest case study) to £0.8m/ha (for the case study with 50 dwellings) and £2.1m/ha for the 10-dwelling scheme with no affordable housing.
- Case studies in value area C have viability headroom net of the benchmark of between £0.23m/ha (for the largest case study) to £0.6m/ha (for the case study with 50 dwellings) and £1.9m/ha for the 10-dwelling scheme with no affordable housing.

4.10 Although the comparison above uses the upper benchmark for consistency, the lower benchmark is more appropriate in some circumstances – particularly for the largest case study with the lower proportion of net developable land; and for most of the case studies in the lower market value area.

Figure 4-1 Case Study Viability Findings – 30% Affordable Housing

Value Area	Case Study	Dwellings	%AH	net to gross %	OUC/ net ha	RV	RV/gross ha	Upper Benchmark /ha	Headroom /ha	Lower Benchmark /ha	Headroom /ha
A	1	10	0%	100%	-	1,376,000	4,169,697	950,000	3,219,697	650,000	3,519,697
A	2	15	30%	79%	-	1,410,000	2,238,095	950,000	1,288,095	650,000	1,588,095
A	3	25	30%	80%	-	2,346,000	2,255,769	950,000	1,305,769	650,000	1,605,769
A	4	50	30%	60%	55,000	4,655,176	1,674,524	500,000	1,174,524	500,000	1,174,524
A	5	80	30%	60%	55,000	7,202,264	1,622,132	500,000	1,122,132	500,000	1,122,132
A	6	150	30%	60%	110,000	12,917,586	1,550,731	500,000	1,050,731	500,000	1,050,731
A	7	500	30%	60%	220,000	39,420,778	1,419,034	330,000	1,089,034	200,000	1,219,034
A	8	1,500	30%	60%	220,000	109,573,830	1,314,939	330,000	984,939	200,000	1,114,939
A	9	3,510	30%	45%	220,000	229,335,993	882,062	330,000	552,062	200,000	682,062
B	1	10	0%	100%	-	1,021,000	3,093,939	950,000	2,143,939	650,000	2,443,939
B	2	15	30%	79%	-	1,014,000	1,609,524	950,000	659,524	650,000	959,524
B	3	25	30%	80%	-	1,683,000	1,618,269	950,000	668,269	650,000	968,269
B	4	50	30%	60%	55,000	3,391,580	1,219,993	500,000	719,993	500,000	719,993
B	5	80	30%	60%	55,000	5,247,024	1,181,762	500,000	681,762	500,000	681,762
B	6	150	30%	60%	110,000	9,355,170	1,123,070	500,000	623,070	500,000	623,070
B	7	500	30%	60%	220,000	28,166,597	1,013,916	330,000	683,916	200,000	813,916
B	8	1,500	30%	60%	220,000	78,316,243	939,833	330,000	609,833	200,000	739,833
B	9	3,510	30%	45%	220,000	163,710,817	629,657	330,000	299,657	200,000	429,657
C	1	10	0%	100%	-	933,000	2,827,273	950,000	1,877,273	650,000	2,177,273
C	2	15	30%	79%	-	913,000	1,449,206	950,000	499,206	650,000	799,206
C	3	25	30%	80%	-	1,516,000	1,457,692	950,000	507,692	650,000	807,692
C	4	50	30%	60%	55,000	3,071,782	1,104,958	500,000	604,958	500,000	604,958
C	5	80	30%	60%	55,000	4,752,165	1,070,307	500,000	570,307	500,000	570,307
C	6	150	30%	60%	110,000	8,453,547	1,014,832	500,000	514,832	500,000	514,832
C	7	500	30%	60%	220,000	25,318,249	911,384	330,000	581,384	200,000	711,384
C	8	1,500	30%	60%	220,000	70,405,187	844,896	330,000	514,896	200,000	644,896
C	9	3,510	30%	45%	220,000	147,101,590	565,775	330,000	235,775	200,000	365,775

Viability findings – Starter Homes Scenario

4.11 Figure 4.2 shows the residual value per ha for each of the generic case studies in each value area for the case studies with starter homes. Again, the main finding is that all of the case studies in all of the market areas have a residual value above the benchmark, and therefore can be considered viable. The viability is stronger for the Starter Homes scenario as these dwellings have a higher value than affordable rent (except for the 10-dwelling case study, as it does not provide either affordable housing or Starter Homes and therefore the residual value is unchanged between the two scenarios). The other characteristics are the broadly same across the two scenarios:

- Sites which do not provide affordable housing are considerably more viable than those that do.
- The residual values are consistently stronger in the higher value areas, and the difference between value area B and value area C is less than the difference between the value area B and value area A.
- Across all value areas the impact of the smaller proportion of net developable land is offset by the lower benchmark land value in the larger sites. Again, the largest site, with 45% net developable, still has the lowest residual value per ha of all the case studies tested.

Figure 4-2 Case Study Viability Findings – Starter Home Scenario

Value Area	Case Study	Dwellings	%AH	net to gross %	OUC/ net ha	RV	RV/gross ha	Upper Benchmark /ha	Headroom /ha	Lower Benchmark /ha	Headroom /ha
A	1	10	0%	100%	-	1,376,000	4,169,697	950,000	3,219,697	650,000	3,519,697
A	2	15	30%	79%	-	1,571,000	2,493,651	950,000	1,543,651	650,000	1,843,651
A	3	25	30%	80%	-	2,611,000	2,510,577	950,000	1,560,577	650,000	1,860,577
A	4	50	30%	60%	55,000	5,170,097	1,859,747	500,000	1,359,747	500,000	1,359,747
A	5	80	30%	60%	55,000	7,989,811	1,799,507	500,000	1,299,507	500,000	1,299,507
A	6	150	30%	60%	110,000	14,327,104	1,719,940	500,000	1,219,940	500,000	1,219,940
A	7	500	30%	60%	220,000	43,876,590	1,579,431	330,000	1,249,431	200,000	1,379,431
A	8	1,500	30%	60%	220,000	121,950,041	1,463,459	330,000	1,133,459	200,000	1,263,459
A	9	3,510	30%	45%	220,000	255,394,342	982,286	330,000	652,286	200,000	782,286
B	1	10	0%	100%	-	1,021,000	3,093,939	950,000	2,143,939	650,000	2,443,939
B	2	15	30%	79%	-	1,143,000	1,814,286	950,000	864,286	650,000	1,164,286
B	3	25	30%	80%	-	1,900,000	1,826,923	950,000	876,923	650,000	1,176,923
B	4	50	30%	60%	55,000	3,816,805	1,372,951	500,000	872,951	500,000	872,951
B	5	80	30%	60%	55,000	5,887,200	1,325,946	500,000	825,946	500,000	825,946
B	6	150	30%	60%	110,000	10,496,281	1,260,058	500,000	760,058	500,000	760,058
B	7	500	30%	60%	220,000	31,774,290	1,143,783	330,000	813,783	200,000	943,783
B	8	1,500	30%	60%	220,000	88,337,007	1,060,086	330,000	730,086	200,000	860,086
B	9	3,510	30%	45%	220,000	184,823,296	710,859	330,000	380,859	200,000	510,859
C	1	10	0%	100%	-	933,000	2,827,273	950,000	1,877,273	650,000	2,177,273
C	2	15	30%	79%	-	1,032,000	1,638,095	950,000	688,095	650,000	988,095
C	3	25	30%	80%	-	1,714,000	1,648,077	950,000	698,077	650,000	998,077
C	4	50	30%	60%	55,000	3,460,388	1,244,744	500,000	744,744	500,000	744,744
C	5	80	30%	60%	55,000	5,336,914	1,202,008	500,000	702,008	500,000	702,008
C	6	150	30%	60%	110,000	9,493,696	1,139,699	500,000	639,699	500,000	639,699
C	7	500	30%	60%	220,000	28,606,933	1,029,767	330,000	699,767	200,000	829,767
C	8	1,500	30%	60%	220,000	79,539,962	954,518	330,000	624,518	200,000	754,518
C	9	3,510	30%	45%	220,000	166,353,774	639,822	330,000	309,822	200,000	439,822

Viability findings per dwelling

4.12 Figures 4-3 and 4-4 illustrate the viability headroom (net of the benchmark land value) on a per dwelling basis for the standard and Starter Home scenarios. The figures then show the viability headroom on a per dwelling basis net of the nominal £10,000, £19,000 and £38,000 infrastructure/s106 cost per dwelling (see section 2), noting that these are purely illustrative sums based on unconnected site costs elsewhere in Central Bedfordshire. NPPG states that plan making should not be to the margins of viability and it is important to consider the implications of additional policy costs that may be required for sites. In the tables:

- The results with £38,000/dwelling infrastructure/s106 for case studies 1-6 in the three value zones are greyed out as Central Bedfordshire Council considers it unlikely these size sites will be obliged to provide this amount
- The results with £19,000/dwelling infrastructure/s106 for case studies 7-9 in the three value zones are greyed out as Central Bedfordshire Council considers it unlikely these size sites will be obliged to provide this amount of infrastructure/s106

4.13 To assist the analysis of sites the results of the testing against the variable S106 contributions are set out as deliverable (green), marginal (amber) and delivery issues (red). The amber results are within a plus minus range of £5,000 per dwelling as this is considered to represent only a small change in costs and/or values to become viable. Above this, i.e. over £5,000 it is considered that there is sufficient headroom for schemes to come forward on the basis of the set assumptions without any public or private intervention. Below -£5,000 i.e. red it is considered that there would be a delivery issue that will require addressing and potentially intervention.

4.14 Figures 4-5 and 4-6 after the tables illustrate the viability in graph form.

4.15 Annex 5 contains the detailed figures.

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Figure 4-3 Viability headroom per dwelling with £0, £10,000, £19,000 and £38,000 s106/infrastructure per dwelling – 30% Affordable Housing

Case Study			Viability Headroom £/Dwelling		Viability Headroom /Dwelling against £10,000/dwelling s106/infrastructure		Viability Headroom /Dwelling against £19,000/dwelling s106/infrastructure		Viability Headroom /Dwelling against £38,000/dwelling s106/infrastructure	
Value Area	Case Study No	Dwgs	Net headroom £/dwelling against upper benchmark	Net headroom £/dwelling against lower benchmark	Net headroom £/dwelling against upper benchmark	Net headroom £/dwelling against lower benchmark	Net headroom £/dwelling against upper benchmark	Net headroom £/dwelling against lower benchmark	Net headroom £/dwelling against upper benchmark	Net headroom £/dwelling against lower benchmark
A	1	10	106,250	116,150	96,250	106,150	87,250	97,150	68,250	78,150
A	2	15	54,100	66,700	44,100	56,700	35,100	47,700	16,100	28,700
A	3	25	54,320	66,800	44,320	56,800	35,320	47,800	16,320	28,800
A	4	50	65,304	65,304	55,304	55,304	46,304	46,304	27,304	27,304
A	5	80	62,278	62,278	52,278	52,278	43,278	43,278	24,278	24,278
A	6	150	58,351	58,351	48,351	48,351	39,351	39,351	20,351	20,351
A	7	500	60,507	67,730	50,507	57,730	41,507	48,730	22,507	29,730
A	8	1,500	54,717	61,939	44,717	51,939	35,717	42,939	16,717	23,939
A	9	3,510	40,893	50,523	30,893	40,523	21,893	31,523	2,893	12,523
B	1	10	70,750	80,650	60,750	70,650	51,750	61,650	32,750	42,650
B	2	15	27,700	40,300	17,700	30,300	8,700	21,300	- 10,300	2,300
B	3	25	27,800	40,280	17,800	30,280	8,800	21,280	- 10,200	2,280
B	4	50	40,032	40,032	30,032	30,032	21,032	21,032	2,032	2,032
B	5	80	37,838	37,838	27,838	27,838	18,838	18,838	- 162	- 162
B	6	150	34,601	34,601	24,601	24,601	15,601	15,601	-3,399	- 3,399
B	7	500	37,998	45,221	27,998	35,221	18,998	26,221	- 2	7,221
B	8	1,500	33,878	41,100	23,878	31,100	14,878	22,100	- 4,122	3,100
B	9	3,510	22,197	31,826	12,197	21,826	3,197	12,826	- 15,803	- 6,174
C	1	10	61,950	71,850	51,950	61,850	42,950	52,850	23,950	33,850
C	2	15	20,967	33,567	10,967	23,567	1,967	14,567	- 17,033	- 4,433
C	3	25	21,120	33,600	11,120	23,600	2,120	14,600	- 16,880	- 4,400
C	4	50	33,636	33,636	23,636	23,636	14,636	14,636	- 4,364	- 4,364
C	5	80	31,652	31,652	21,652	21,652	12,652	12,652	- 6,348	- 6,348

Case Study			Viability Headroom £/Dwelling		Viability Headroom /Dwelling against £10,000/dwelling s106/infrastructure		Viability Headroom /Dwelling against £19,000/dwelling s106/infrastructure		Viability Headroom /Dwelling against £38,000/dwelling s106/infrastructure	
Value Area	Case Study No	Dwgs	Net headroom £/dwelling against upper benchmark	Net headroom £/dwelling against lower benchmark	Net headroom £/dwelling against upper benchmark	Net headroom £/dwelling against lower benchmark	Net headroom £/dwelling against upper benchmark	Net headroom £/dwelling against lower benchmark	Net headroom £/dwelling against upper benchmark	Net headroom £/dwelling against lower benchmark
C	6	150	28,590	28,590	18,590	18,590	9,590	9,590	- 9,410	- 9,410
C	7	500	32,302	39,524	22,302	29,524	13,302	20,524	- 5,698	1,524
C	8	1,500	28,604	35,826	18,604	25,826	9,604	16,826	- 9,396	- 2,174
C	9	3,510	17,465	27,094	7,465	17,094	- 1,535	8,094	- 20,535	- 10,906

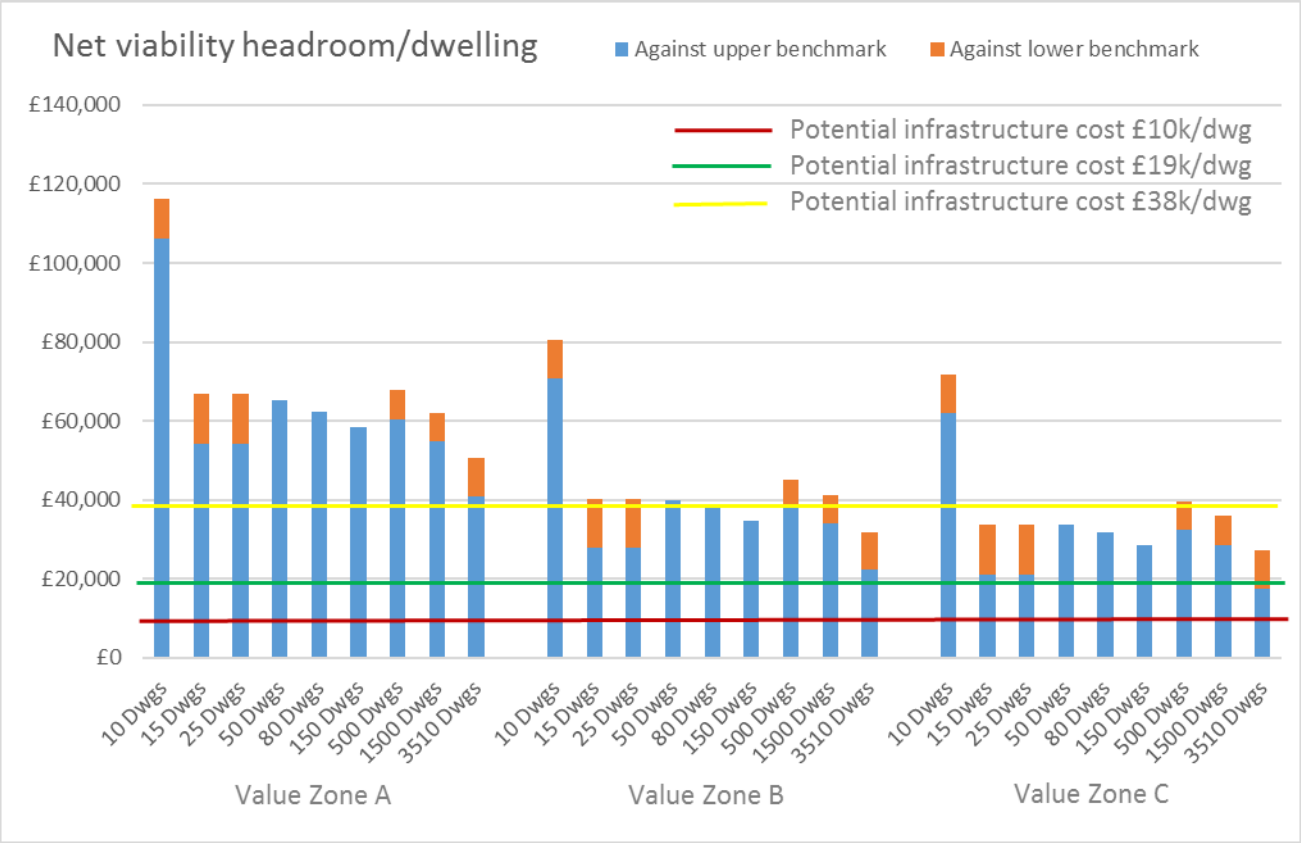
Figure 4-4 Viability headroom per dwelling with £0, £10,000, £19,000 and £38,000 s106/infrastructure per dwelling – Starter Home Scenario[36]

Case Study			Viability Headroom/Dwelling		Viability Headroom/Dwelling against £10,000/dwelling s106/infrastructure		Viability Headroom/Dwelling against £19,000/dwelling s106/infrastructure		Viability Headroom/Dwelling against £38,000/dwelling s106/infrastructure	
Value Area	Case Study No	Dwgs	Net headroom £/dwelling against upper benchmark	Net headroom £/dwelling against lower benchmark	Net headroom £/dwelling against upper benchmark	Net headroom £/dwelling against lower benchmark	Net headroom £/dwelling against upper benchmark	Net headroom £/dwelling against lower benchmark	Net headroom £/dwelling against upper benchmark	Net headroom £/dwelling against lower benchmark
A	1	10	106,250	116,150	96,250	106,150	87,250	97,150	68,250	78,150
A	2	15	64,833	77,433	54,833	67,433	45,833	58,433	26,833	39,433

[36] The February 2017 Housing White Paper subsequently stated that low cost home ownership (includes starter homes) will form part of the wider homeownership options on a suggested minimum of 10% of dwellings. CBC will consider this in more detail during further site-specific viability testing.

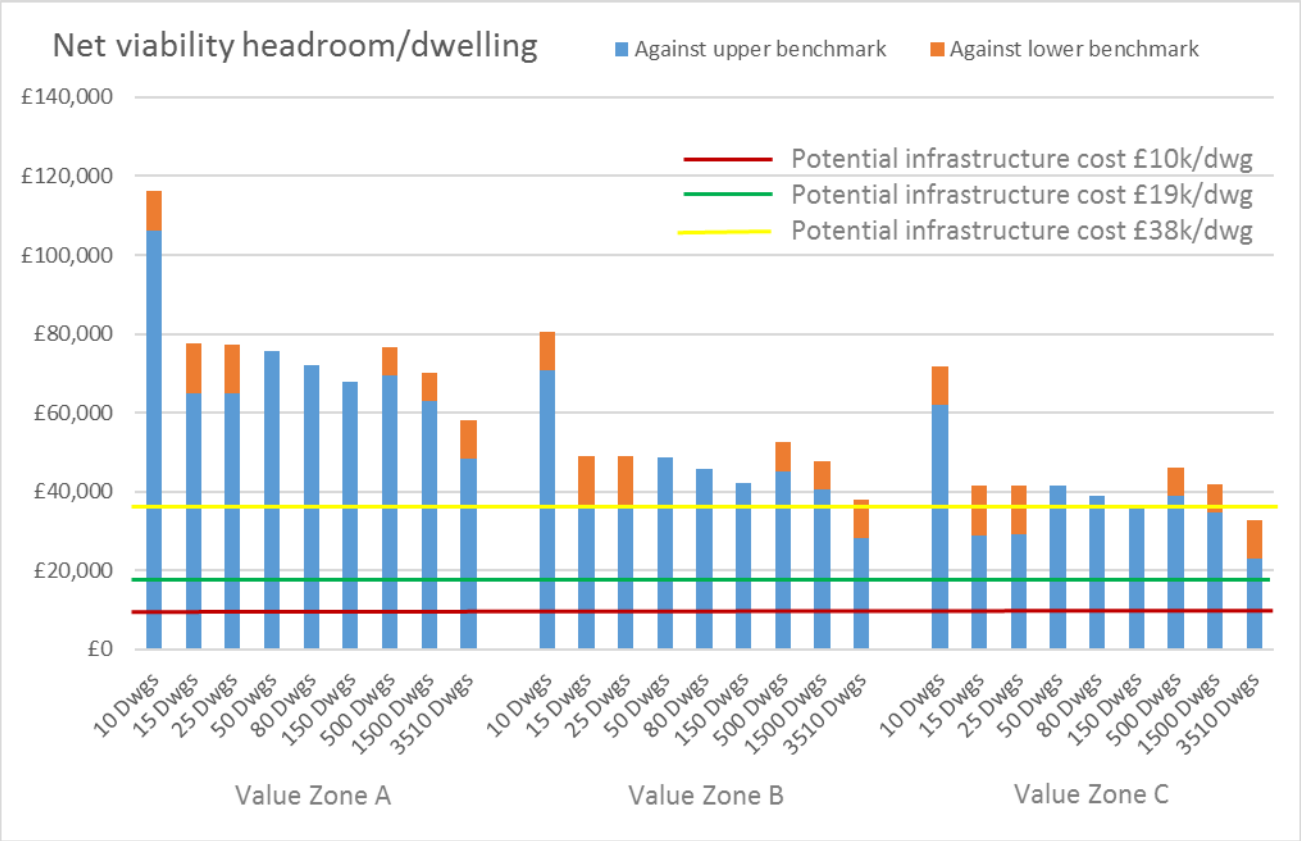
Case Study			Viability Headroom/Dwelling		Viability Headroom/Dwelling against £10,000/dwelling s106/infrastructure		Viability Headroom/Dwelling against £19,000/dwelling s106/infrastructure		Viability Headroom/Dwelling against £38,000/dwelling s106/infrastructure	
Value Area	Case Study No	Dwgs	Net headroom £/dwelling against upper benchmark	Net headroom £/dwelling against lower benchmark	Net headroom £/dwelling against upper benchmark	Net headroom £/dwelling against lower benchmark	Net headroom £/dwelling against upper benchmark	Net headroom £/dwelling against lower benchmark	Net headroom £/dwelling against upper benchmark	Net headroom £/dwelling against lower benchmark
A	3	25	64,920	77,400	54,920	67,400	45,920	58,400	26,920	39,400
A	4	50	75,602	75,602	65,602	65,602	56,602	56,602	37,602	37,602
A	5	80	72,123	72,123	62,123	62,123	53,123	53,123	34,123	34,123
A	6	150	67,747	67,747	57,747	57,747	48,747	48,747	29,747	29,747
A	7	500	69,418	76,641	59,418	66,641	50,418	57,641	31,418	38,641
A	8	1,500	62,967	70,189	52,967	60,189	43,967	51,189	24,967	32,189
A	9	3,510	48,317	57,947	38,317	47,947	29,317	38,947	10,317	19,947
B	1	10	70,750	80,650	60,750	70,650	51,750	61,650	32,750	42,650
B	2	15	36,300	48,900	26,300	38,900	17,300	29,900	-1,700	10,900
B	3	25	36,480	48,960	26,480	38,960	17,480	29,960	-1,520	10,960
B	4	50	48,536	48,536	38,536	38,536	29,536	29,536	10,536	10,536
B	5	80	45,840	45,840	35,840	35,840	26,840	26,840	7,840	7,840
B	6	150	42,209	42,209	32,209	32,209	23,209	23,209	4,209	4,209
B	7	500	45,214	52,437	35,214	42,437	26,214	33,437	7,214	14,437
B	8	1,500	40,559	47,781	30,559	37,781	21,559	28,781	2,559	9,781
B	9	3,510	28,212	37,841	18,212	27,841	9,212	18,841	-9,788	-159
C	1	10	61,950	71,850	51,950	61,850	42,950	52,850	23,950	33,850
C	2	15	28,900	41,500	18,900	31,500	9,900	22,500	-9,100	3,500
C	3	25	29,040	41,520	19,040	31,520	10,040	22,520	-8,960	3,520
C	4	50	41,408	41,408	31,408	31,408	22,408	22,408	3,408	3,408
C	5	80	38,961	38,961	28,961	28,961	19,961	19,961	961	961
C	6	150	35,525	35,525	25,525	25,525	16,525	16,525	-2,475	-2,475
C	7	500	38,879	46,102	28,879	36,102	19,879	27,102	879	8,102
C	8	1,500	34,694	41,916	24,694	31,916	15,694	22,916	-3,306	3,916
C	9	3,510	22,950	32,579	12,950	22,579	3,950	13,579	-15,050	-5,421

Figure 4-5 Standard scenario net viability headroom per dwelling



Note that the 50, 80 and 150 dwelling case studies are only tested against the £0.5m/ha benchmark.

Figure 4-6 Starter Homes scenario net viability headroom per dwelling



Note that the 50, 80 and 150 dwelling case studies are only tested against the £0.5m/ha benchmark.

4.16 These graphs show:

- Clear differences between value areas and between case studies with and without affordable housing, and stronger viability in the Starter Homes scenario than with standard affordable housing.
- In the standard scenario, development in value area A is able to proceed with higher infrastructure/s106 costs with a considerable buffer against both benchmark land values, except for the largest case study where development is marginal against the higher benchmark and with a buffer of under £13,000 per dwellings against the lower benchmark.
- In value area B, all development is able to provide a nominal £19,000 additional costs per dwelling (although marginal against the higher benchmark for the largest case study), while providing the higher nominal £38,000 per dwelling leaves development marginal or unviable (150 and 3,510 dwellings) as modelled, except where there is no affordable housing.
- In value area C, all development is able to provide a nominal £19,000 additional costs per dwelling against the lower benchmark although the buffer is £8,000/dwelling for the largest case study. As modelled, the higher £38,000 infrastructure/s106 per dwelling will leave all

of the case studies in Value Zone C unviable/marginal, except where no affordable housing is provided.

4.17 The viability findings confirm the view discussed earlier that where there is an upper and a lower benchmark, the lower benchmarks are most appropriate for value area C and for the largest case study in all areas, as it seems unlikely that development could afford to pay more. It seems unlikely that policy compliant large scale development or policy compliant lower value area development in the would be able to afford to pay more for land. The reduced viability for the largest case study will be related to the higher proportion of non-developable land, even before any additional s106/infrastructure costs are considered, and we would expect these factors to form part of any site land negotiation.

4.18 The review of current s106 requirements discussed in section 2 of this report noted that the average payment was £10,000/dwelling. We note that all the case studies in all of the value areas as modelled here are able to meet payments of this magnitude.

4.19 Where affordable housing is not required the viability is much stronger and it is likely that these sites will pay more for land as a result (unless they are required to provide other planning obligations instead).

4.20 As previously discussed early provision of strategic and site specific infrastructure may increase house prices and this will strengthen viability, as well as de-risking some development. In order to enable this there will need to be early investment from the public sector and other service providers and this will require a coordinated approach through an infrastructure funding strategy. Section 3 of this report discusses some of the current infrastructure funding initiatives and we would expect further funding in the future as new opportunities arise.

Sensitivity Test

4.21 As part of the testing we have included testing higher land value benchmarks for the larger sites, using £500,000/ha. This is applied to:

- Case study 7, with 500 dwellings
- Case study 8, with 1,500 dwellings
- Case study 9, with 3,510 dwellings

4.22 The viability testing shows that development remains viable against this higher benchmark, although the largest site (3,510 dwellings) is marginal in value areas B and C. Against this higher benchmark there is not enough 'headroom' to support the higher infrastructure costs of £38,000/dwelling in any of the value areas, but there is just enough to support £19,000 per dwelling in case studies 7 and 8 in all three value areas, albeit with little margin. The largest case study 9 (3,510 dwellings) is not able to support *any* meaningful additional costs against this higher benchmark.

4.23 Testing results can be found in Annex 5.

Summary

4.24 In broad terms the case studies modelled here *without* any additional infrastructure or s106 costs indicate that development is viable across Central Bedfordshire with 30% affordable

housing. The largest case study site is the least viable, but still able to proceed in all areas. On this basis, the Site Assessment Technical Document sites may be considered achievable. However, when additional cost are included some development becomes marginal or not viable:

- In Value Zone A all of the case studies comfortably achieve the both the upper and lower benchmark land values. Where additional infrastructure and s106 obligations may be required the modelling indicates that these costs can also be supported by all the Value Zone A case studies, although there is limited headroom for the largest case study (3,510 dwellings) against the highest higher land benchmark if £38,000 per dwellings is required.
- In Value Zone B all of the case studies comfortably achieve the both the upper and lower benchmark land values. While this remains the case when s106/infrastructure costs of £19,000/dwelling are required, most of the case studies are either marginal with £38,000/dwelling s106/infrastructure costs, or unviable (150 dwellings and 3,510 dwellings).
- In Value Zone C the case studies achieve the both the upper and lower benchmark land values. While this remains the case when s106/infrastructure costs of £19,000/dwelling are required, most of the case studies are not viable with £38,000/dwelling costs.

4.25 Where large scale development is proposed in lower value areas there is potentially a case for infrastructure investment by the public sector in order to address any viability issues. This will require more detailed infrastructure planning once specific sites are identified as well as a funding strategy. A range of infrastructure funding initiatives are already in place and we would expect more to arise in the future.

4.26 Development in all areas with 30% affordable housing is able to support the current average £10,000/dwelling s106. It is likely that this scale of costs is likely to apply to most of the smaller case study sites.

4.27 Where there is viability headroom not taken up by additional development costs or planning obligations it is expected that more will be available to pay for land, meaning that in many cases site transactions will be at values in excess of the benchmarks used in this study. This also means that where development is unencumbered by additional infrastructure or s106 costs then the higher benchmark land values suggested by some of the development industry can be achieved.

4.28 The inclusion of Starter Homes instead of 'traditional' affordable housing improves viability, although the underlying patterns between case studies and value areas remain.

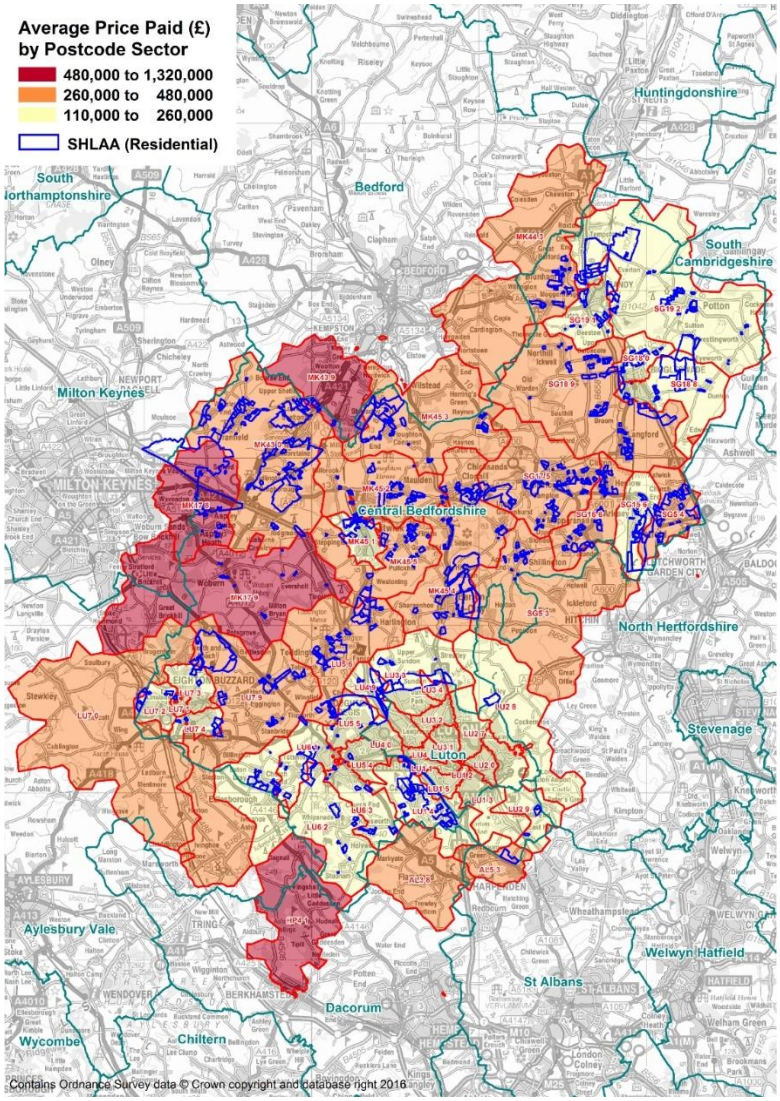
ANNEX 1 – VIABILITY TESTING ASSUMPTIONS

CENTRAL BEDFORDSHIRE VIABILITY TESTING ASSUMPTIONS

Benchmark Land Values

Land value per gross ha	Benchmark
Urban/edge of settlement	£950,000
	£650,000
Intermediate sites	£500,000
Large scale greenfield	£330,000
	£200,000

Value areas



Type	**4 bed detached**	**3 bed semi**	**2 bed terrace**	**2 bed flat**
Size sq m	124	93	70	67*
Dwelling prices				
Area A	£440,200	£297,600	£231,000	£207,400
Area B	£384,400	£260,400	£199,500	£176,900
Area C	£372,000	£246,450	£196,000	£161,650
£/sq m				
Area A	£3,550	£3,200	£3,300	£3,400
Area B	£3,100	£2,800	£2,850	£2,900
Area C	£3,000	£2,650	£2,800	£2,650

*includes 10% circulation

Development Density and Coverage

Development at 30 dph
Gross to net:

- Up to 0.4 ha 100%
- 0.4-2ha 80%
- 2ha or above 60%
- 100 ha or above 45%

Dwelling Mix				
Type	4 bed detached	3 bed semi	2 bed terrace	2 bed flat*
Size sq m	124	93	70	67
Market	65%	30%	5%	0%
Affordable	0%	20%	35%	45%

**includes 10% circulation*
Dwelling mix refined to take account of workshop comments about coverage.

Development Costs

Type	**Cost**	
Flats (1-2 storeys)	£1,428	sq m includes 15% for external works
Houses	£1,188	sq m includes 15% for external works
Professional fees	8%	of build costs
Finance	6%	of development costs (net of inflation)

Type	**Cost**	
Marketing fees	3%	of GDV
Developer return	20%	of GDV
Contractor return	6%	of affordable housing build costs
Agents and legal	1.75%	of land cost
S106	£0 (opportunities for s106 to be determined through RLV)	per dwelling - local open space, children's play etc.
SDLT	0%-5%	of land cost
Opening up costs	£55,000	>50 dwgs
	£110,000	>100 dwgs
	£165,000	>200 dwgs
	£220,000	> 400 dwgs

Build costs from BCIS 5-year median accessed September 2016

Affordable Housing

30% affordable housing, split 72% affordable rent 28% shared ownership

Item	**Allowance**
Management & maintenance	£900
Voids/bad debts	3%
Repairs reserve	£500
Capitalisation	6.0%
Shared Ownership Share size	40%
Shared Ownership Rental share	2.50%
Affordable Rent	100% of applicable LHA rate
Service charges - flats	£10
Service charges - houses	£3

Rents		
100% of LHA	**2 bed**	**3 bed**
Bedford	£133	£156
Luton	£142	£170
Milton Keynes	£152	£175
Stevenage	£155	£186

Confirmed via RPs survey September 2016
Use lowest BRMA for the testing - Bedford

Starter Homes Scenario

20% starter homes and 10% affordable rent – using same dwelling mix as base affordable homes scenario. Starter Homes at 80% of market value and modelled with 20% developer return.

Delivery

Smaller sites (up to 40 units) developed within a year
Larger – year to first completion and then 50 units per annum per housebuilder

ANNEX 2 - DEVELOPMENT INDUSTRY WORKSHOP

Central Bedfordshire - SHLAA Viability workshop

13th September 2016

Attending Organisations
Pegasus Group
Forest of Marston Vale
Geoffrey Leaver Solicitors
Progress Homes
Landscope
Gregg Morris Consultants
Foston Estates
Kirkby Diamond
Aragon Land and Planning Ltd
DLP
HearneHolmes Developments
Jeremy Peter Associates
HGS
Sherwill Drake Forbes
Denison Investments Limited
Nathaniel Lichfield & Partners
Ashley Contracts (Bidwell Trust)
Taylor Wimpey
David Wilson Homes
Orchestra Land
David Lock Associates
Woods Hardwick Planning
Bloor Homes
Herridge Property Consulting Ltd on behalf of Arnold White Estates
Beechwood Homes Ltd
Robinson & Hall LLP
North Hertfordshire Homes
Gladman Developments
ORS PLC
Turley
Stonewater
Savills on behalf of Crown Estates
Willis Dawson Holdings Ltd
JB Planning Associates
DLA Town Planning

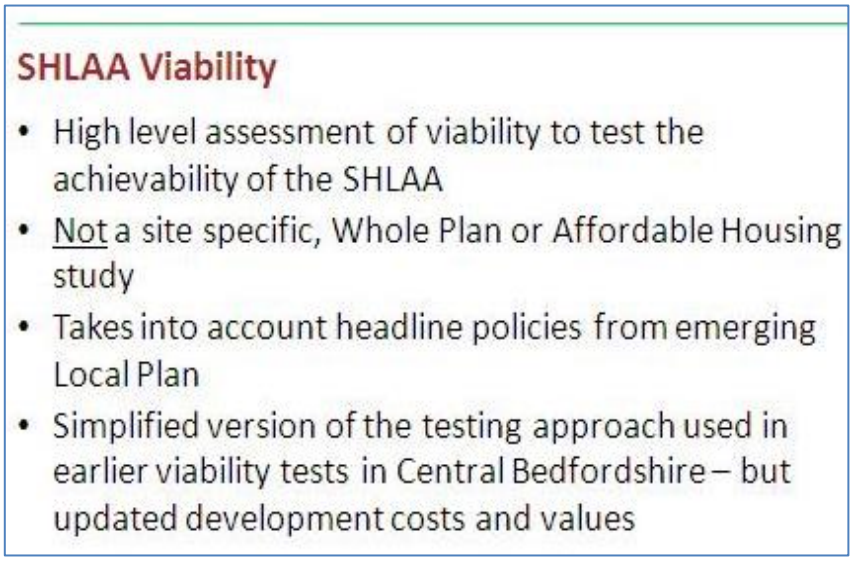
The workshop was facilitated by Connie Fox Bryant from Central Bedfordshire Council (CFB), Dominic Houston (DH) from Three Dragons and Mark Felgate (MF) from Parkwood epd.

Introduction

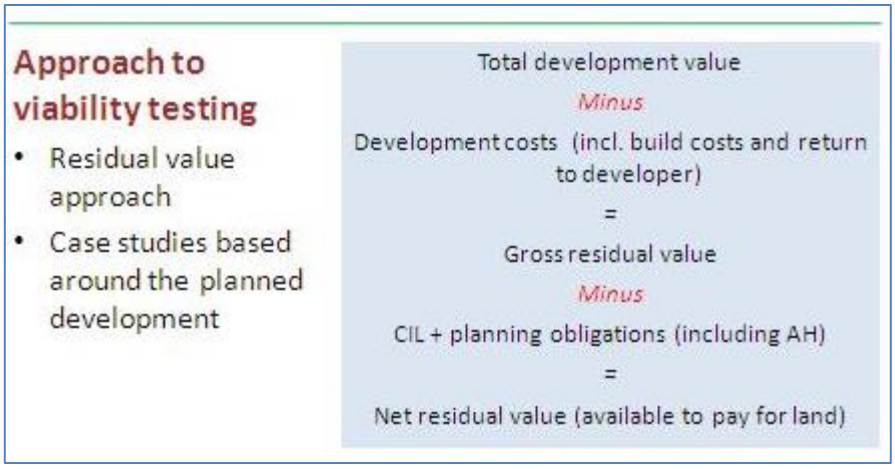
1. CFB introduced the workshop and set out the process and timetable for production of the Central Beds Local Plan. She explained the SHLAA process and emphasised that the achievability element was being undertaken through a high level review of viability, which is a more detailed approach than many SHLAA studies.

   Post meeting note – it is worth reviewing what the aim of a SHLAA is and its role in plan making. To help Appendix C sets out the government guidance for SHLAAs contained within the NPPG
2. DH welcomed participants and set out that the workshop aims were to explain the methodology and set out proposed assumptions to help inform the achievability assessment. DH explained that comments were welcomed throughout the workshop session and that whilst these would be noted that none would be specifically attributed to individuals. DH informed the workshop attendees that notes and a copy of the slides would be sent to all those attending as well as contact details and any further comments on those or individual discussions welcomed.

Approach

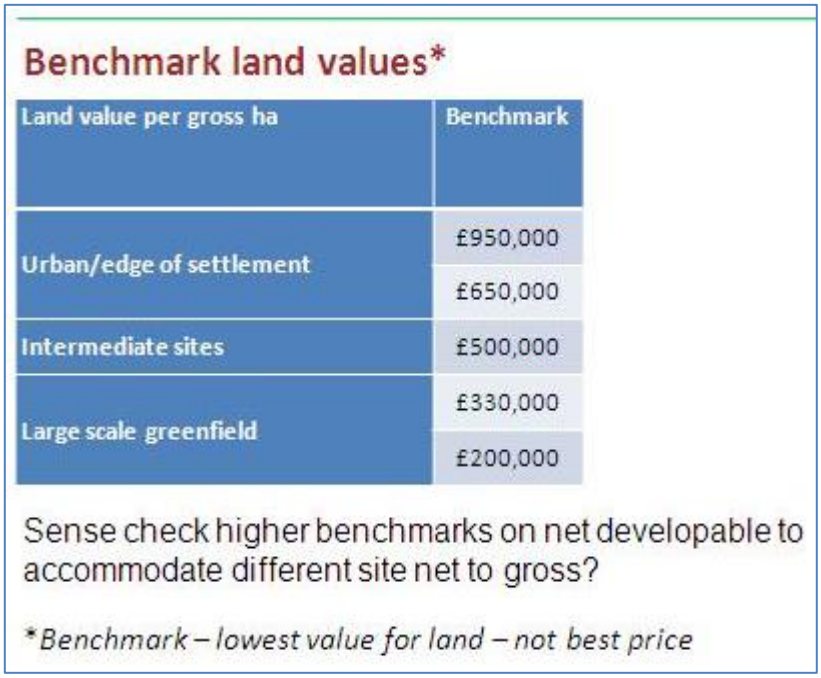


3. DH explained that the assessment was very high level and should be considered within the context of the SHLAA guidelines. It is not intended to be a plan assessment, site specific assessment or CIL study.
4. Whilst not a detailed assessment DH set out that many of the assumptions proposed have their genus from the previous work undertaken for Central Beds, including the CIL assessment.



5. The assessment will be a standard RLV with the RV compared to benchmark land values to test as to whether a site is viable and the scope for contributions towards any potential policy costs. No comments on approach.

Benchmark land values



6. DH explained that benchmark land values would be varied according to site type. The benchmark land values were derived from previous work undertaken on viability within Central Beds including the CIL work.
7. Initially there were no comments on benchmark land values, however during the session the following comments were provided:
    a. Benchmarks are too high
    b. Benchmarks are too low

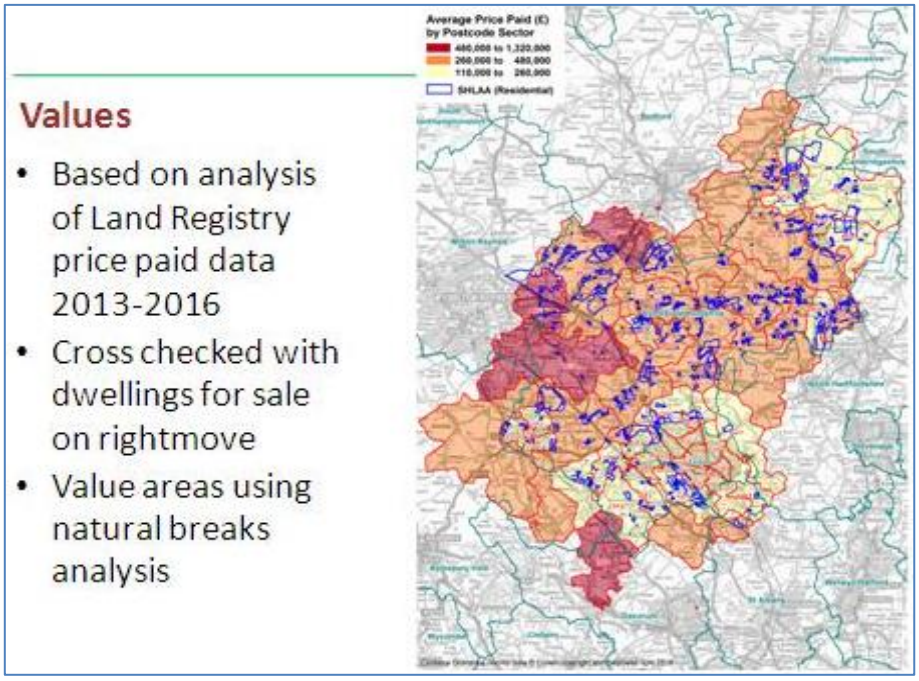
c. Benchmarks are too difficult to set as every site is different with different land owner expectations and development costs
d. Benchmarks for large strategic sites should be higher
e. Benchmarks should be inflated in line with house price rises to reflect owner aspiration
f. Benchmarks should not rely on published land registry transaction data as the background to those deals are unknown e.g. are their uplift clauses

DH responded to these comments in broad terms explaining the difficulties in determining benchmarks for a high level generic study where site specific details are unknown at this stage of the process. The lack of agreement within the room was testament to this point. He also explained that the benchmarks were set at a level considered to be the minimum for a willing land owner and that in reality actual deals would be much more mixed with some higher or lower than those used in the testing, but in general terms the proposed figures represented a significant uplift on existing use values. In terms of whether land values should be increased to reflect house price rises DH stated that costs will have also gone up and that one would have to consider whether the net benefit is sufficient, once policy costs had been accounted for, to pay more for land. Do the corresponding increase in build costs cancel out any increase in values? – no real view to the contrary at the workshop.

The base working assumption for the benchmark is that it is applied to reasonably easy to develop sites, and that where there are site specific constraints these will be reflected by an adjustment to the land price. DH explained that there had been cross checks with land titles, which showed that there had been land transacted either side of the benchmarks. It was noted that farmers will often receive compensation payments which will not show as a land value anywhere, and DH confirmed that the land titles were not used as a mathematical basis for estimating benchmarks.

Post meeting note – if any attendees have evidence to support a suggested alternative for land values please provide/discuss with the consultant team.

<u>Values and value areas</u>



Please see Appendix B at the end of this note for larger maps of the value areas*

Values

Type	4 bed detached	3 bed semi	2 bed terrace	2 bed flat
Size sq m	124	93	70	67*
Dwelling prices				
Area A	£440,200	£297,600	£231,000	£207,400
Area B	£384,400	£260,400	£199,500	£176,900
Area C	£372,000	£246,450	£196,000	£161,650
£/sq m				
Area A	£3,550	£3,200	£3,300	£3,400
Area B	£3,100	£2,800	£2,850	£2,900
Area C	£3,000	£2,650	£2,800	£2,650

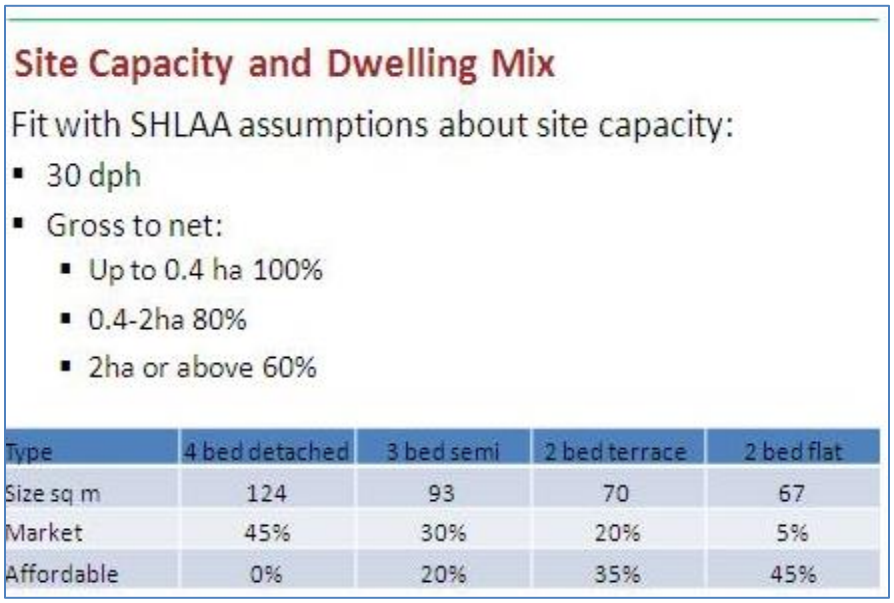
*includes 10% circulation

8. DH explained that value areas had been derived by analysing price paid data from land registry for new homes over the past 3 years. An established statistical approach (naturalbreak) was used to breakdown the values into broad areas. As shown on the map the highest value area (A) is generally on the edge of Milton Keynes, the lower value area (C) around Luton fringe, Leighton Buzzard and around Biggleswade, remaining areas are mid range (B).
9. DH also set out the per square metres values proposed to be used within the study. These are based on the Land Registry new build data and EPC records (to work out size of property) and cross checked with new build dwellings currently for sale (e.g. listed on Rightmove) to provide a sense check of current asking prices. The suggested values are a conservative approach, much reduced from current asking prices. DH noted that Rightmove was short hand for current advertised prices and that in analysing the local market other sources were used including housebuilders own websites and marketing details. There were limited comments as to whether the per square values were appropriate. A question was asked as to the difference in percentage terms between the Land Registry and the Rightmove data.

   Post meeting note – Rightmove advertised price data was generally around 20-30% higher than the Land Registry three-year average.

   Post meeting note – if any attendees have evidence to support a suggested alternative for property values please provide/discuss with the consultant team.

House sizes and mix



Site Capacity and Dwelling Mix

Fit with SHLAA assumptions about site capacity:

- 30 dph
- Gross to net:
  - Up to 0.4 ha 100%
  - 0.4-2ha 80%
  - 2ha or above 60%

Type	4 bed detached	3 bed semi	2 bed terrace	2 bed flat
Size sq m	124	93	70	67
Market	45%	30%	20%	5%
Affordable	0%	20%	35%	45%

10. DH explained that the proposed house sizes for testing were based on national house standards. There was comment that developers all have preferred sizes that may be different to those proposed. DH responded that this is the reason the space standards are going to be used because of the variance in the market. DH also assured attendees that space standards were not used to generate the per sqm values, these were either EPCs for Land Registry or developers own details on Rightmove.
11. In terms of the mix and density one participant suggested that generally Central Beds have required more non-residential elements in their schemes e.g. open space, than in other areas. Normally it was anticipated that 16,000 sqf to the acre would be normal but in Central Beds it is more likely to be 10% lower. This is equivalent to 3,300 sq m/ha including the 10% discount. DH responded that the floorspace per hectare in the proposed testing assumptions are less than this benchmark.

12. DH set out the density and the gross to net assumptions to be used, explaining that these were part of the SHLAA method already agreed. He noted that the net to gross in particular for smaller sites just over 2 hectares was a particularly conservative figure. There were no further comments on the use of these assumptions.

Typologies

Case Studies

- Case studies based on the SHLAA sites (0.1ha - 700ha)
- Applied in each of the three value areas

CS no	Dwellings	Net ha	Gross to net	Gross ha	Land Benchmark
1	10	0.33	100%	0.33	
2	15	0.50	80%	0.63	£650,000-£950,000
3	25	0.83	80%	1.04	
4	50	1.67	60%	2.78	
5	80	2.67	60%	4.44	£500,000
6	150	5.00	60%	8.33	
7	500	16.67	60%	27.78	£200,000-£330,000
8	1500	50.00	60%	83.33	

- Takes into account 11 dwelling affordable housing threshold

13. DH explained that 8 case studies would be undertaken for each value area and that the sizes shown were considered to be representative of those sites submitted through the SHLAA process. DH also stated that currently there was no very large site being considered, e.g. around 5,000 dwellings as it was considered that such high level testing may distort the capability or not of delivery of such a large scale proposal and that it was unlikely to be 'deliverable' within the context of the NPPF/NPPG, though it may be developable.
14. There was concern from attendees that by not testing larger sites that the assessments would appear to dismiss them as options for future growth. Both DH and CFB provided assurance that this was not the case and that further testing may be required in the future when more detail was known as to the spatial strategy and potential policy position. However, it was agreed that further consideration would be given to including a larger site at this high level stage to provide comparators to the rest of the testing. It was noted that without knowledge of the specific policy requirements likely to be required for larger sites (more so than for most smaller sites), the testing could only provide an initial view on large site viability.

Other testing assumptions

Other Development Costs

Type	Cost	
Flats (1-2 storeys)	£1,428	sq m includes 15% for external works
Houses	£1,188	sq m includes 15% for external works
Professional fees	8%	of build costs
Finance	5%	of development costs (net of inflation)
Marketing fees	3%	of GDV
Developer return	20%	of GDV
Contractor return	6%	of affordable housing build costs
Agents and legal	1.75%	of land cost
S106	£2,000	per dwelling - local open space, children's play etc.
SDLT	0%-5%	of land cost
Opening up costs	£50,000 - £200,000	per net ha

15. DH set out the other testing assumptions to be used within the viability assessments. He explained that build costs were based on BCIS 5 year medians for estate housing and were generally above those of the major housebuilders. The S106 costs were based on discussions with Central Beds around what on site mitigation requirements are likely to continue, even if CIL was introduced. Finance costs were based on previous work but lowered to reflect the current all time low in base rates. Other assumptions were drawn from the previous CIL work.
16. There were a number of comments from attendees:
    - Recent HBF suggestions that 20% GDV for market and 10% on cost for AH should be used for appraisals. The basis of this is that affordable housing is riskier for RPs to take on because of the 1% reduction in rents, along with starter homes, Brexit, universal credit and other welfare reforms. DH responded that whilst there is uncertainty at present in respect of affordable housing that this is short term and as clarity emerges and AH providers sort themselves out, stability will return and risks reduced. It was agreed to undertake some specific work with RPs to test the attitude towards taking on further affordable housing in Central Bedfordshire.
    - It was questioned why was there no provision for education s106 costs? DH explained that wider S106 costs are unknown at present but that the assessment results will show the scope for such payments i.e. the difference between the RLV and the benchmark. This could be compared to comparator schemes to provide assurance that the sites are capable of delivering the likely infrastructure requirements.
    - Opening-up costs are defined as the costs attributable to the site itself (minus the external works) – for example land forming, drainage etc. In terms of opening up costs DH reminded the audience that external costs at 15% of build cost are also included and that these can sometimes be mixed up with 'opening up' costs and that S106 mitigation is considered separately. DH explained a sliding scale of opening up cost were applied as sites increased in size. However, he invited participants to discuss this in more detail and provide any examples if they still considered the figures to be too low.

- Debate over stamp duty assumptions with a suggestion that these should be 12%, however many disagreed with this stating that the assumption of up to 5% was correct.
- Some smaller developers will build at a higher cost per sq m, but may get higher values for the dwellings.

Affordable housing and other assumptions

Affordable housing

- Emerging new Local Plan Policy
- 30% affordable housing, split 72% affordable rent 28% shared ownership

80% of LHA	2 bed	3 bed
Bedford	£83	£125
Luton	£89	£136
Milton Keynes	£97	£140
Stevenage	£98	£149

Affordable rent	
Management and maintenance	£900 pa
Voids/bad debts	3%
Repairs reserve	£500 pa
Capitalisation	6%
Shared ownership	
Rental factor	2.5% of share
Share size	40%
Capitalisation	6%

Ground Rents

- Flats ground rent at £250/dwelling capitalised at 5%

Delivery rates

- Smaller sites (up to 40 units) developed within a year
- Larger – year to first completion and then 50 units per annum per housebuilder

Starter Homes

- Scenarios with 20% starter homes and 10% affordable housing.

17. DH set out the affordable housing assumptions to be used, explaining that two scenarios were to be tested – AH at 30% composed of 72% AR and 28% SO and Starter homes at 20% with other AH at 10% with the same split as the first scenario. Profit level on started homes would be the same as market housing to reflect the risk of a new untested product. There was some discussion about the uncertainties with starter homes, especially in relation to the effect on other products such as shared ownership and smaller market homes, but whilst the details are currently lacking in terms of regulations this was considered an appropriate approach for the current work. It was suggested that it could be March 2017 before the regulations are published.

18. Feedback from sources such as the GLA indicated that there would be more messages on this after the summer recess. Regulations may not be published until the new year, approximately March 2017
19. In terms of delivery rates it was commented that these had slowed from 1 a week average to nearer 1 a fortnight, in the last couple of months, but it was not certain as to whether this trend would continue. It was agreed that 1 a week per developer was suitable for testing, with slightly fewer as the number of developers on site increased.

Other matters discussed

20. Method adopted – there was some concern expressed that as the viability process is necessarily high level it may rule out sites that with more detailed work could be considered as viable and vice-a-versa. CFB advised that the viability assessment was just one part of the process and would not be necessarily be the determining factor as to whether a site was considered within the Plan, she also reiterated that more detailed testing would take place once the strategy had been drafted and that testing is an iterative process across plan making. DH added that in terms of the high level testing there would also be an element of sense checking to ensure that should a site be classified as either viable or non viable that it would also be looked at in terms of in a market is it likely that a site with those broad characteristics would normally come forward or not.
21. DH ended the session explaining that a copy of the slides and the notes would be sent to all those present at the workshop and comments invited. Contact details for the consultant team would also be provided.

Post meeting note: Please read through the note and let us know anything you disagree with or if you have any further evidence to support assumptions showed or alternative assumptions we will welcome your response. Please contact:

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ANNEX 3 – BENCHMARK LAND VALUES

Benchmark Land Values for Residential Development

The benchmark values reflect the level of value at which a landowner could be reasonably expected to bring forward their land for development. Benchmark values are not intended to mirror the highest prices for land; instead they are an estimate of the lowest prices that a willing buyer and seller might agree on. Estimates of benchmark values will take into account the impact of policy and will consider current rather than likely future values. This is important as from time to time, land transactions take place on the basis of rising values in the future and purchasers may also take a view on the possibility of negotiating down policy obligations.

If the residual land value found is higher than the benchmark, development can be reasonably considered as financially viable at the input values used for the assessment (subject to there being enough margin to provide an incentive for development). However, if a resulting residual land value is significantly lower than the established benchmark, then development at the respective input values can be considered to be 'unviable' and that type of development to be less likely to be brought forward. Benchmark values discussed here are for the gross site area, not the net developable area.

Establishing suitable land value benchmarks is an important part of any viability testing and the Advice for planning practitioners[37] sets out a preferred approach in the following extract from page 29:

> *"We recommend that the Threshold Land Value is based on a premium over current use values and credible alternative use values (noting the exceptions below…….)."*

The exceptions referred to in the Advice for planning practitioners reflect the significant differences in the types of current use found within settlements and on greenfield land adjoining settlements. The exceptions are summarised as:

- Larger scale sites for urban extensions on greenfield land where the uplift on current use value (agricultural land) sought by the landowner will be significantly higher than in an urban context.
- Edge-of-settlement greenfield sites, where landowners' required returns will be more like those for sites within the settlement.

Advice for planning practitioners states that reference to market values can still provide a useful 'sense check' on the benchmark values that are being used for testing, but it is not recommended that these are used as the basis for the input to a model. This is an important concept and explains why the land value benchmark used to test plan policies (and CIL rates) can be **less** than the value at which land is being traded in the market. This point was highlighted in the London Mayoral CIL examiner's report[38]:

> Finally the price paid for development land may be reduced. As with profit levels there may be cries that this is unrealistic, but a reduction in development land value is an inherent part of the CIL concept. It may be argued that such a reduction may be all very well in the medium to long term but it is impossible in the short term because of the price already paid/agreed for development land. The difficulty with that argument is that if accepted the prospect of raising funds for infrastructure would be forever receding into the future. In any event in some instances it may be possible for contracts and options to be re-negotiated in the light of the changed circumstances arising from the imposition of CIL charges.

[37] Local Housing Delivery Group, 2012, Viability Testing Local Plans
[38] Report to The Mayor of London, by Keith Holland January 2012

In addition to the guidance advocating the use of premium over existing use value (particularly the Local Housing Delivery Group, 2012), recent RICS research[39] highlights the issues with using market values to set land benchmarks – "*If market value is based on comparable evidence without proper adjustment to reflect policy compliant planning obligations, this introduces a circularity, which encourages developers to overpay for sites and try to recover some or all of this overpayment via reductions in planning obligations"*. Furthermore, there are tangible differences between the types of appraisals supporting market values and those used for area wide viability appraisals such as this CIL study. These differences further highlight the issues with using market value comparables to set benchmarks:

Appraisal Input	**Area-wide viability study**	**Developer appraisal to inform land purchase**
Sales values	Current day	Potentially inflated to take into account of market rises
Build costs	Current day full BCIS cost	Value engineered
Profit	Full target applied	Competitive and not necessarily at target level
Planning requirements	Applied in full	Potentially squeezed
Site costs	Extensive	None/limited
Development Programme	Lengthy	Short

This study splits land values between sites for development within and on the edge of urban areas in Central Bedfordshire (including villages and larger settlements such as Dunstable, Sandy and Flitwick), and land for the larger scale developments that may form strategic urban extensions.

2013 and 2014 Viability Study Residential Land Benchmarks

The 2013 and 2015 viability studies[40] used various research and consultation to establish benchmark land values for Central Bedfordshire.

Residential development land in towns and villages

The benchmark land values used in the 2013 and 2015 viability study ranged between £650,000-£950,000 per ha. £650,000 was the same value that was used in the previous viability appraisals carried out by Fordhams and Savills in 2009 and 2010 respectively. The figure of £650,000 per ha was accepted by the Inspector who appraised the 2009 Mid Bedfordshire Core Strategy (now part of Central Bedfordshire)[41].

The 2013 and 2015 studies also considered that in some instances there may be higher benchmark land values and drew upon guidance in the Local Housing Delivery Group [42]report, which recommends an uplift on current or alternative use values to estimate threshold land values. A 30% uplift, (allowing for taxation, transaction

[39] RICS, 2015, Financial Viability Appraisal in Planning Decisions: Theory and Practice
[40] Three Dragons, January 2013, Viability Study assessing affordable housing, the Community Infrastructure Levy and the Development Strategy; and Three Dragons, March 2015, Viability Study Refresh
[41] PINS/J0215/429/5 (LDF000980)
[42] Local Housing Delivery Group chaired by Sir John Harman, 2012, Viability Testing Local Plans

costs and a modest increase in land value) on the VOA Property Market[43] data for the East of England provided a benchmark of £950,000 per ha.

Residential development on strategic greenfield sites

The 2013 study used a land value of £330,000 per ha, based on a multiplier of 15 times agricultural value[44]. This figure is based on guidance issued by the HCA in Transparent Assumptions: Guidance for the Area Wide Viability Model[45] which states that "*For greenfield land, benchmarks tend to be in a range of 10 to 20 times agricultural value".* The 2015 study was able to make use of more detailed planning for the proposed urban extensions and also used a lower strategic greenfield benchmark of £200,000 per gross ha to cover the largest sites with high proportions of non-developable land and substantial constraints.

Development Industry Feedback on Land Values

As part of the Viability Study published in 2015, Three Dragons contacted local estate agents to check land values in autumn 2014[46]. The agents reported that there had been few recent transactions and therefore it was difficult to come to a definitive view. There had been some transactions involving redevelopments between 1 and 3 dwellings in the built-up areas as large houses/ plots are redeveloped at a higher density, but these tend to support higher values because of existing use. The interviews included an example of unconstrained residential development land valued at £1.2m/ha (12ha site), but the eventual value would only be arrived at once the costs of consent, servicing the land and policy obligations (such as the affordable housing and s106) were deducted.

Land Registry

Data from Land Registry shows that land for development on current urban extensions (SUEs) in Central Bedfordshire transacts at a variety of prices per hectare. This includes some substantial land holdings being transferred at prices considerably below the benchmarks used in the 2013 study, with examples dating from 2009 including 23ha being bought for £60,000/ha, another 23ha being bought for £100,000/ha and 7ha being bought for £200,000/ha. There are also examples of SUE development land being purchased for agricultural values (i.e. under £10,000 per ha – although these are historic sales) as well as what appears to be a small ransom strip at £3 million per ha. The terms of these sales are unknown and the spread of values is substantial, and so it is prudent not to attempt to base a benchmark around an arithmetic mean. However it is clear that where there are locations where substantial costs are associated with development or large proportions of undevelopable land within a site, the payment for land will reflect this with lower prices to the land owner.

Other Information

Central Bedfordshire Council has commissioned viability work to inform affordable housing and s106 negotiations. Work undertaken by BPS Chartered Surveyors[47] suggested that the benchmark value for strategic

[43] http://www.voa.gov.uk/dvs/_downloads/pmr_2011.pdf

[44] Based on recent research by Smiths Gore showing that agricultural land values in the Eastern Region average £9,000 per acre or £22,000 per ha.

[45] Annex 1 (Transparent Viability Assumptions) to the Homes and Communities Agency guidance for its Area Wide Viability Model published in August 2010

[46] Contact was made with Vantage Land, Satchells, Michael Graham, Taylor Land, Barford & Co, Robinson & Hall, Kirkby & Diamond, Lane & Browns. 50% of these were able to provide useful responses.

[47] Extract from BPS Chartered Surveyors, 2014, Independent Review of Assessment of Economic Viability

greenfield sites in Central Bedfordshire may well be lower than the £330,000 used in the 2013 viability study to reflect the exceptionally high infrastructure costs associated with developments on the large urban extensions.

BPS has quoted agricultural land transactions from Central Bedfordshire and nearby locations. The average value of agricultural land indicated by these transactions was £18,787/ha and this value was also within the range quoted during the estate agent interviews noted above. This value is slightly lower than the Smiths Gore research underpinning the £330,000/ha used in the 2013 study and BPS suggest that if the same uplift is used on these lower agricultural values then this would suggest £282,000/ha for strategic greenfield sites in Central Bedfordshire.

BPS has also quoted recent residential land transactions. These transactions have been predominantly small consented sites (all less than three hectares and most less than one hectare). The average price per ha is £2.8 m. This high value reflects the estate agent comments on land values discussed above and is not a useful figure for the viability work being undertaken here.

Comments on residential land values were received as part of the representations on the 2013 Preliminary Draft Charging Schedule. Optimis Consulting on behalf of various developers and landowners suggested that landowners expect £1.9m to £2.4m per ha for sites with consent, although there was no discussion about size or location of site, whether this took account of the required affordable housing and other planning obligations, nor did it provide any specific examples. Furthermore, sites with consent are likely to be above benchmark values as the level of risk is reduced.

2016 Development Industry Feedback

The urban/edge of settlement and strategic benchmark land values used in the 2013 and 2015 viability studies were discussed at the September 2016 development industry workshop, along with an intermediate site value of £500,000/ha. The discussion produced a variety of views, with attendees suggesting that benchmarks should be both higher and lower than the values suggested. Subsequent feedback suggested that the benchmarks for larger sites should also be £500,000 per ha while other feedback suggested that £308,000 to £370,000 per ha may be more appropriate for larger sites.

Residential Benchmark Land Value Conclusion

For the purposes of the current SHLAA Viability Study the following is proposed:

- The 'standard' £650,000/ha and £950,000/ha benchmarks will be used for urban sites (including market towns and villages). This is at the same level as the 2013 and 2015 studies as although house prices have increased, build costs have increased more which will limit the ability to pay more for land. The 12ha example discussed above would fit within this range once the likely policy and infrastructure costs are deducted.
    - The £330,000/ha benchmark will be used for strategic greenfield sites. Again, this is at the same level as the 2013 study as the increase in house prices will have been mitigated by the increase in build costs.
    - An additional strategic greenfield £200,000/ha benchmark will be used as a lower land value for SUEs. This is a generous interpretation of the Land Registry evidence and reflects exceptional costs required to facilitate development on strategic greenfield sites as well as the unfavourable net to gross developable areas.
    - An intermediate benchmark of £500,000 per ha will be used for intermediate sites (50-200 dwellings).

The benchmark land values are generally applied per gross ha.

The feedback from the development industry that suggests benchmarks should be higher will be considered in the analysis, particularly where viability is more marginal.

The benchmarks proposed do not preclude the possibility that land may transact at higher values and where this does happen, it is likely that purchasers either have particularly high value schemes, or are counting on rising future values or, possibly, assuming that affordable housing or other policies obligations can be negotiated down. Furthermore, land may be worth less than these benchmarks if it is subject to specific constraints or policy obligations.

ANNEX 4 - CASE STUDY CHARACTERISTICS

Case studies

Case studies –run for each value area with standard and starter homes scenarios.

Case study	Dwellings	Net ha	Gross to net	Gross ha	Opening-up costs	Benchmark Land Value	Developers	Delivery
1	10	0.33	100%	0.33	£0	£650,000-£950,000	1	Year 1
2	15	0.50	80%	0.63	£0	£650,000-£950,000	1	Year 1
3	25	0.83	80%	1.04	£0	£650,000-£950,000	1	Year 1
4	50	1.67	60%	2.78	£55,000	£500,000	1	Year to first completion then 40 pa
5	80	2.67	60%	4.44	£50,000	£500,000	1	Year to first completion then 50 pa
6	150	5.00	60%	8.33	£110,000	£500,000	1	Year to first completion then 50 pa
7	500	16.67	60%	27.78	£220,000	£200,000-£330,000	2	Year to first completion then 100 pa
8	1,500	50.00	60%	83.33	£220,000	£200,000-£330,000	4	Year to first completion then 200 pa
9	3,510	117.00	45%	260.00	£220,000	£200,000-£330,000	6	Year to first completion then 300 pa

Case studies 7,8 and 9 are also tested against the higher land value benchmark of £500,000 per ha as a sensitivity test.

ANNEX 5 - CASE STUDY RESIDUAL VALUES

Standard Scenario - Residual value, residual value per ha, and residual value per dwelling with £19,000 and £38,000 additional infrastructure/s106

Case Study				Site Area	Result and Benchmarks						Upper benchmark		Lower benchmark		£19k Infrastructure cost?		£38k Infrastructure cost?	
Value Area	Case Study No	Dwgs	%AH	net to gross %	RV	RV/gross ha	Upper Benchmark	Headroom/ ha	Lower Benchmark	Headroom/ ha	Net headroom/ dwelling	Net headroom/ sqm development	Net headroom/dwelling	Net headroom/sqm development	Upper benchmark	Lower benchmark	Upper benchmark	Lower benchmark
A	1	10	0%	100%	1,376,000	4,169,697	950,000	3,219,697	650,000	3,519,697	106,250	949	116,150	1,037	87,250	97,150	68,250	78,150
A	2	15	30%	79%	1,410,000	2,238,095	950,000	1,288,095	650,000	1,588,095	54,100	539	66,700	665	35,100	47,700	16,100	28,700
A	3	25	30%	80%	2,346,000	2,255,769	950,000	1,305,769	650,000	1,605,769	54,320	541	66,800	665	35,320	47,800	16,320	28,800
A	4	50	30%	60%	4,655,176	1,674,524	500,000	1,174,524	500,000	1,174,524	65,304	651	65,304	651	46,304	46,304	27,304	27,304
A	5	80	30%	60%	7,202,264	1,622,132	500,000	1,122,132	500,000	1,122,132	62,278	620	62,278	620	43,278	43,278	24,278	24,278
A	6	150	30%	60%	12,917,586	1,550,731	500,000	1,050,731	500,000	1,050,731	58,351	581	58,351	581	39,351	39,351	20,351	20,351
A	7	500	30%	60%	39,420,778	1,419,034	330,000	1,089,034	200,000	1,219,034	60,507	603	67,730	675	41,507	48,730	22,507	29,730
A	8	1,500	30%	60%	109,573,830	1,314,939	330,000	984,939	200,000	1,114,939	54,717	545	61,939	617	35,717	42,939	16,717	23,939
A	9	3,510	30%	45%	229,335,993	882,062	330,000	552,062	200,000	682,062	40,893	407	50,523	503	21,893	31,523	2,893	12,523
B	1	10	0%	100%	1,021,000	3,093,939	950,000	2,143,939	650,000	2,443,939	70,750	632	80,650	720	51,750	61,650	32,750	42,650
B	2	15	30%	79%	1,014,000	1,609,524	950,000	659,524	650,000	959,524	27,700	276	40,300	402	8,700	21,300	-10,300	2,300
B	3	25	30%	80%	1,683,000	1,618,269	950,000	668,269	650,000	968,269	27,800	277	40,280	401	8,800	21,280	-10,200	2,280
B	4	50	30%	60%	3,391,580	1,219,993	500,000	719,993	500,000	719,993	40,032	399	40,032	399	21,032	21,032	2,032	2,032
B	5	80	30%	60%	5,247,024	1,181,762	500,000	681,762	500,000	681,762	37,838	377	37,838	377	18,838	18,838	-162	-162
B	6	150	30%	60%	9,355,170	1,123,070	500,000	623,070	500,000	623,070	34,601	345	34,601	345	15,601	15,601	-3,399	-3,399
B	7	500	30%	60%	28,166,597	1,013,916	330,000	683,916	200,000	813,916	37,998	379	45,221	451	18,998	26,221	-2	7,221
B	8	1,500	30%	60%	78,316,243	939,833	330,000	609,833	200,000	739,833	33,878	338	41,100	409	14,878	22,100	-4,122	3,100
B	9	3,510	30%	45%	163,710,817	629,657	330,000	299,657	200,000	429,657	22,197	221	31,826	317	3,197	12,826	-15,803	-6,174
C	1	10	0%	100%	933,000	2,827,273	950,000	1,877,273	650,000	2,177,273	61,950	553	71,850	642	42,950	52,850	23,950	33,850
C	2	15	30%	79%	913,000	1,449,206	950,000	499,206	650,000	799,206	20,967	209	33,567	334	1,967	14,567	-17,033	-4,433
C	3	25	30%	80%	1,516,000	1,457,692	950,000	507,692	650,000	807,692	21,120	210	33,600	335	2,120	14,600	-16,880	-4,400
C	4	50	30%	60%	3,071,782	1,104,958	500,000	604,958	500,000	604,958	33,636	335	33,636	335	14,636	14,636	-4,364	-4,364
C	5	80	30%	60%	4,752,165	1,070,307	500,000	570,307	500,000	570,307	31,652	315	31,652	315	12,652	12,652	-6,348	-6,348
C	6	150	30%	60%	8,453,547	1,014,832	500,000	514,832	500,000	514,832	28,590	285	28,590	285	9,590	9,590	-9,410	-9,410
C	7	500	30%	60%	25,318,249	911,384	330,000	581,384	200,000	711,384	32,302	322	39,524	394	13,302	20,524	-5,698	1,524
C	8	1,500	30%	60%	70,405,187	844,896	330,000	514,896	200,000	644,896	28,604	285	35,826	357	9,604	16,826	-9,396	-2,174
C	9	3,510	30%	45%	147,101,590	565,775	330,000	235,775	200,000	365,775	17,465	174	27,094	270	-1,535	8,094	-20,535	-10,906

Standard Scenario - sensitivity test with higher benchmark land value for larger sites

Case Study				Site Area	Result and Benchmarks						Sensitivity test higher benchmark £0.5m/ha		
Value Area	Case Study No	Dwgs	%AH	net to gross %	RV	RV/gross ha	Upper Benchmark	Headroom/ ha	Lower Benchmark	Headroom/ ha	Benchmark	Headroom/ha	Net headroom/ dwelling
A	7	500	30%	60%	39,420,778	1,419,034	330,000	1,089,034	200,000	1,219,034	500,000	919,034	51,062
A	8	1,500	30%	60%	109,573,830	1,314,939	330,000	984,939	200,000	1,114,939	500,000	814,939	45,273
A	9	3,510	30%	45%	229,335,993	882,062	330,000	552,062	200,000	682,062	500,000	382,062	28,301
B	7	500	30%	60%	28,166,597	1,013,916	330,000	683,916	200,000	813,916	500,000	513,916	28,553
B	8	1,500	30%	60%	78,316,243	939,833	330,000	609,833	200,000	739,833	500,000	439,833	24,434
B	9	3,510	30%	45%	163,710,817	629,657	330,000	299,657	200,000	429,657	500,000	129,657	9,604
C	7	500	30%	60%	25,318,249	911,384	330,000	581,384	200,000	711,384	500,000	411,384	22,856
C	8	1,500	30%	60%	70,405,187	844,896	330,000	514,896	200,000	644,896	500,000	344,896	19,160
C	9	3,510	30%	45%	147,101,590	565,775	330,000	235,775	200,000	365,775	500,000	65,775	4,872

Starter Home scenario - Residual value, residual value per ha, and residual value per dwelling with £19,000 and £38,000 additional infrastructure/s106

Case Study				Site Area	Result and Benchmarks						Upper benchmark		Lower benchmark		£19k Infrastructure cost?		£38k Infrastructure cost?	
Value Area	Case Study No	Dwgs	%AH	net to gross %	RV	RV/gross ha	Upper Benchmark	Headroom	Lower Benchmark	Headroom	Net headroom /dwelling	Net headroom /sqm development	Net headroom/ dwelling	Net headroom/sqm development	Upper benchmark	Lower benchmark	Upper benchmark	Lower benchmark
A	1	10	0%	100%	1,376,000	4,169,697	950,000	3,219,697	650,000	3,519,697	106,250	949	116,150	1,037	87,250	97,150	68,250	78,150
A	2	15	30%	79%	1,571,000	2,493,651	950,000	1,543,651	650,000	1,843,651	64,833	664	77,433	793	45,833	58,433	26,833	39,433
A	3	25	30%	80%	2,611,000	2,510,577	950,000	1,560,577	650,000	1,860,577	64,920	665	77,400	792	45,920	58,400	26,920	39,400
A	4	50	30%	60%	5,170,097	1,859,747	500,000	1,359,747	500,000	1,359,747	75,602	774	75,602	774	56,602	56,602	37,602	37,602
A	5	80	30%	60%	7,989,811	1,799,507	500,000	1,299,507	500,000	1,299,507	72,123	738	72,123	738	53,123	53,123	34,123	34,123
A	6	150	30%	60%	14,327,104	1,719,940	500,000	1,219,940	500,000	1,219,940	67,747	694	67,747	694	48,747	48,747	29,747	29,747
A	7	500	30%	60%	43,876,590	1,579,431	330,000	1,249,431	200,000	1,379,431	69,418	711	76,641	785	50,418	57,641	31,418	38,641
A	8	1,500	30%	60%	121,950,041	1,463,459	330,000	1,133,459	200,000	1,263,459	62,967	645	70,189	719	43,967	51,189	24,967	32,189
A	9	3,510	30%	45%	255,394,342	982,286	330,000	652,286	200,000	782,286	48,317	495	57,947	593	29,317	38,947	10,317	19,947
B	1	10	0%	100%	1,021,000	3,093,939	950,000	2,143,939	650,000	2,443,939	70,750	632	80,650	720	51,750	61,650	32,750	42,650
B	2	15	30%	79%	1,143,000	1,814,286	950,000	864,286	650,000	1,164,286	36,300	372	48,900	501	17,300	29,900	- 1,700	10,900
B	3	25	30%	80%	1,900,000	1,826,923	950,000	876,923	650,000	1,176,923	36,480	373	48,960	501	17,480	29,960	- 1,520	10,960
B	4	50	30%	60%	3,816,805	1,372,951	500,000	872,951	500,000	872,951	48,536	497	48,536	497	29,536	29,536	10,536	10,536
B	5	80	30%	60%	5,887,200	1,325,946	500,000	825,946	500,000	825,946	45,840	469	45,840	469	26,840	26,840	7,840	7,840
B	6	150	30%	60%	10,496,281	1,260,058	500,000	760,058	500,000	760,058	42,209	432	42,209	432	23,209	23,209	4,209	4,209
B	7	500	30%	60%	31,774,290	1,143,783	330,000	813,783	200,000	943,783	45,214	463	52,437	537	26,214	33,437	7,214	14,437
B	8	1,500	30%	60%	88,337,007	1,060,086	330,000	730,086	200,000	860,086	40,559	415	47,781	489	21,559	28,781	2,559	9,781
B	9	3,510	30%	45%	184,823,296	710,859	330,000	380,859	200,000	510,859	28,212	289	37,841	387	9,212	18,841	- 9,788	- 159
C	1	10	0%	100%	933,000	2,827,273	950,000	1,877,273	650,000	2,177,273	61,950	553	71,850	642	42,950	52,850	23,950	33,850
C	2	15	30%	79%	1,032,000	1,638,095	950,000	688,095	650,000	988,095	28,900	296	41,500	425	9,900	22,500	- 9,100	3,500
C	3	25	30%	80%	1,714,000	1,648,077	950,000	698,077	650,000	998,077	29,040	297	41,520	425	10,040	22,520	- 8,960	3,520
C	4	50	30%	60%	3,460,388	1,244,744	500,000	744,744	500,000	744,744	41,408	424	41,408	424	22,408	22,408	3,408	3,408
C	5	80	30%	60%	5,336,914	1,202,008	500,000	702,008	500,000	702,008	38,961	399	38,961	399	19,961	19,961	961	961
C	6	150	30%	60%	9,493,696	1,139,699	500,000	639,699	500,000	639,699	35,525	364	35,525	364	16,525	16,525	- 2,475	- 2,475
C	7	500	30%	60%	28,606,933	1,029,767	330,000	699,767	200,000	829,767	38,879	398	46,102	472	19,879	27,102	879	8,102
C	8	1,500	30%	60%	79,539,962	954,518	330,000	624,518	200,000	754,518	34,694	355	41,916	429	15,694	22,916	- 3,306	3,916
C	9	3,510	30%	45%	166,353,774	639,822	330,000	309,822	200,000	439,822	22,950	235	32,579	334	3,950	13,579	- 15,050	- 5,421

Starter Home Scenario - sensitivity test with higher benchmark land value for larger sites

Case Study				Site Area	Result and Benchmarks						Upper benchmark		Lower benchmark		Sensitivity test higher benchmark £0.5m/ha		
Value Area	Case Study No	Dwgs	%AH	net to gross %	RV	RV/gross ha	Upper Benchmark	Headroom /ha	Lower Benchmark	Headroom /ha	Net headroom /dwelling	Net headroom /sqm development	Net headroom/ dwelling	Net headroom/sqm development	Benchmark	Headroom/ha	Net headroom/ dwelling
A	7	500	30%	60%	43,876,590	1,579,431	330,000	1,249,431	200,000	1,379,431	69,418	711	76,641	785	500,000	1,079,431	59,973
A	8	1,500	30%	60%	121,950,041	1,463,459	330,000	1,133,459	200,000	1,263,459	62,967	645	70,189	719	500,000	963,459	53,523
A	9	3,510	30%	45%	255,394,342	982,286	330,000	652,286	200,000	782,286	48,317	495	57,947	593	500,000	482,286	35,725
B	7	500	30%	60%	31,774,290	1,143,783	330,000	813,783	200,000	943,783	45,214	463	52,437	537	500,000	643,783	35,769
B	8	1,500	30%	60%	88,337,007	1,060,086	330,000	730,086	200,000	860,086	40,559	415	47,781	489	500,000	560,086	31,115
B	9	3,510	30%	45%	184,823,296	710,859	330,000	380,859	200,000	510,859	28,212	289	37,841	387	500,000	210,859	15,619
C	7	500	30%	60%	28,606,933	1,029,767	330,000	699,767	200,000	829,767	38,879	398	46,102	472	500,000	529,767	29,434
C	8	1,500	30%	60%	79,539,962	954,518	330,000	624,518	200,000	754,518	34,694	355	41,916	429	500,000	454,518	25,250
C	9	3,510	30%	45%	166,353,774	639,822	330,000	309,822	200,000	439,822	22,950	235	32,579	334	500,000	139,822	10,357

ANNEX 6 – SUMMARY OF 2015 STRATEGIC URBAN EXTENSION COSTS (EC HARRIS)

STRATEGIC INFRASTRUCTURE AND S106 COSTINGS

SUMMARY OF APPRAISED SITES

Site	Infrastructure Total	Infrastructure Per Unit	S106 Total	S106 Per Unit	TOTAL	TOTAL PER UNIT
HOUGHTON REGIS NORTH - SITE 1	97,650,000	20,777	106,074,585	22,569	**203,724,585**	**43,346**
HOUGHTON REGIS NORTH - SITE 2	31,200,000	20,800	33,853,591	22,569	**65,053,591**	**43,369**
NORTH OF LUTON	39,230,000	12,259	84,276,589	26,336	**123,506,589**	**38,596**
EAST OF LEIGHTON - LINSDALE	43,050,000	17,220	50,585,893	20,234	**93,635,893**	**37,454**
WIXAMS	24,150,000	16,100	30,000,000	20,000	**54,150,000**	**36,100**

HOUGHTON REGIS NORTH – SITE 1 UNITS 4700

Heading	Inclusions	Total Cost	Per Dwelling cost	Cost from / calc	20 Years Cashflow / Expenditure
Enabling Works	Haul routes, Archaeology, demolition, site clearance, tree protection, special boundary fencing and sitewide earthworks	8,000,000	£ 1,702.13	EC Harris report June 2013	Year 1 - over 12 months
S278 Highways / Off Site Highways	Off site access roads, Woodside Link, Sundon Link Road	12,500,000	£ 2,659.57	EC Harris report June 2013	Year 3 & 4 - over 24 months
On Site Highways (Primary and Secondary Routes)	On site strategic roads	31,000,000	£ 6,595.74	EC Harris report June 2013	Split into 3 - Year 1 and 2 over 24 months, Year 6 and 7 over 24 months, Year 12 and 13 over 24 months
Green Infrastructure	Included in S106		£ -	EC Harris report June 2013	
Surface Water Drainage	Strategic SW sewers, SUDs, balancing ponds and outfalls	4,500,000	£ 957.45	EC Harris report June 2013	Split into 3 - Year 1 and 2 over 24 months, Year 6 and 7 over 24 months, Year 12 and 13 over 24 months
Foul Water Drainage	Strategic FW sewers, pumping stations and outfalls	4,650,000	£ 989.36	EC Harris report June 2013	Split into 3 - Year 1 and 2 over 24 months, Year 6 and 7 over 24 months, Year 12 and 13 over 24 months
Utilities	On site distributions, diversions, duct crossings and reinforcement costs	23,500,000	£ 5,000.00	EC Harris report June 2013	50% - Year 1, 2 and 3 over 36 months, 25% Year 6 and 7 over 24 months, 25% Year 12 and 13 over 24 months
Professional / LA Fees including surveys and site investigations	At 15% of construction costs	13,500,000	£ 2,872.34	EC Harris report June 2013	Over Years 1 to 13 inclusive
Contingency	Included elsewhere in viability				
S106	A5 - M1 Link Road Contribution	45,000,000	£ 9,574.47	HRN1 Heads of Terms Draft	
	Primary Education	23,694,825	£ 5,041.45	HRN1 Heads of Terms Draft	
	Secondary Education	20,901,175	£ 4,447.06	HRN1 Heads of Terms Draft	
	Public Transport Subsidy	2,500,000	£ 531.91	HRN1 Heads of Terms Draft	
	On Site Bus Stops	377,000	£ 80.21	HRN1 Heads of Terms Draft	
	Off Site Bus Stops	261,000	£ 55.53	HRN1 Heads of Terms Draft	
	Guided Bus Provision Off Site	192,000	£ 40.85	HRN1 Heads of Terms Draft	
	Travel Plan 1	1,489,913	£ 317.00	HRN1 Heads of Terms Draft	
	Green Infrastructure	3,690,000	£ 785.11	HRN1 Heads of Terms Draft	
	Green Infrastructure Maintenance	4,000,000	£ 851.06	HRN1 Heads of Terms Draft	
	SSSI's, Off Site Recreation and Allotments	858,672	£ 182.70	HRN1 Heads of Terms Draft	
	Noise and Air Quality	110,000	£ 23.40	HRN1 Heads of Terms Draft	
	Notional value of the land for WSL	3,000,000	£ 638.30	HRN1 Heads of Terms Draft	
	Uplift mechanism obligations package	-	£ -	Not included	
	TOTAL	**£ 203,724,585**			
	TOTAL PER DWELLING		**£ 43,346**		
	TOTAL PER DWELLING INFRASTRUCTURE		**£ 20,777**		
	TOTAL PER DWELLING S106		**22,569**		

Information used: Policy 60 – HRN1 / HRN1 Heads of Terms (Draft) / Policy 60 Framework Plan Diagram / EC Harris Report June 2013

HOUGHTON REGIS NORTH – SITE 2 UNITS 1500

Heading	Inclusions	Total Cost	Per Dwelling cost	Cost from / calc	15 Years Cashflow / Expenditure
Enabling Works	Haul routes, Archaeology, demolition, site clearance, tree protection, special boundary fencing and sitewide earthworks	2,550,000	£ 1,700.00	As HRN Site 1	Year 1 - over 12 months
S278 Highways / Off Site Highways	Off site access roads	3,900,000	£ 2,600.00	As HRN Site 1	Year 3 & 4 - over 24 months
On Site Highways (Primary and Secondary Routes)	On site strategic roads	9,900,000	£ 6,600.00	As HRN Site 1	Split into 3 - Year 1 and 2 over 24 months, Year 6 and 7 over 24 months, Year 12 and 13 over 24 months
Green Infrastructure	Included in S106	-	£ -	As HRN Site 1	
Surface Water Drainage	Strategic SW sewers, SUDs, balancing ponds and outfalls	1,500,000	£ 1,000.00	As HRN Site 1	Split into 3 - Year 1 and 2 over 24 months, Year 6 and 7 over 24 months, Year 12 and 13 over 24 months
Foul Water Drainage	Strategic FW sewers, pumping stations and outfalls	1,500,000	£ 1,000.00	As HRN Site 1	Split into 3 - Year 1 and 2 over 24 months, Year 6 and 7 over 24 months, Year 12 and 13 over 24 months
Utilities	On site distributions, diversions, duct crossings and reinforcement costs	7,500,000	£ 5,000.00	As HRN Site 1	50% - Year 1, 2 and 3 over 36 months, 25% Year 6 and 7 over 24 months, 25% Year 12 and 13 over 24 months
Professional / LA Fees including surveys and site investigations	At 15% of construction costs	4,350,000	£ 2,900.00	As HRN Site 1	Over Years 1 to 13 inclusive
Contingency	Included elsewhere in viability				
S106		33,853,591	£ 22,569.06	As HRN Site 1	
	TOTAL	**£ 65,053,591**			
	TOTAL PER DWELLING		**£ 43,369**		
	TOTAL PER DWELLING INFRASTRUCTURE		**£ 20,800**		
	TOTAL PER DWELLING S106		**£ 22,569**		

Information used:
Policy 60 – HRN2

NORTH OF LUTON UNITS 3200

Heading	Inclusions	Total Cost	Per Dwelling cost	Cost from / calc	16 Years Cashflow / Expenditure
Enabling Works	Haul routes, Archaeology, demolition, site clearance, tree protection, special boundary fencing and sitewide earthworks	2,150,000	£ 671.88	EC Harris Infrastructure Cost Schedule Sept 2013	Year 1 - over 12 months
S278 Highways / Off Site Highways	Included in S106	-	£ -	EC Harris Infrastructure Cost Schedule Sept 2013	
On Site Highways (Primary and Secondary Routes)	On site strategic roads	7,950,000	£ 2,484.38	EC Harris Infrastructure Cost Schedule Sept 2013	Split into 2 - Years 1 and 2 over 24 months, Years 4 and 5 over 24 months
Green Infrastructure	Included in S106	-	£ -	EC Harris Infrastructure Cost Schedule Sept 2013	
Surface Water Drainage	Strategic SW sewers, SUDs, balancing ponds and outfalls	1,350,000	£ 421.88	EC Harris Infrastructure Cost Schedule Sept 2013	Split into 2 - Years 1 and 2 over 24 months, Years 4 and 5 over 24 months
Foul Water Drainage	Strategic FW sewers, pumping stations and outfalls	780,000	£ 243.75	EC Harris Infrastructure Cost Schedule Sept 2013	Split into 2 - Years 1 and 2 over 24 months, Years 4 and 5 over 24 months
Utilities	On site distributions, diversions, duct crossings and reinforcement costs	18,250,000	£ 5,703.13	EC Harris Infrastructure Cost Schedule Sept 2013	Split into 2 - Years 1 and 2 over 24 months, Years 4 and 5 over 24 months
Professional / LA Fees including surveys and site investigations	As breakdown within cost schedule	8,750,000	£ 2,734.38	EC Harris Infrastructure Cost Schedule Sept 2013	Over Years 1 to 8 inclusive
Contingency	Included elsewhere in viability				
S106	Highways Work	38,040,000	£ 11,887.50	As Woodhardwicks assessment v3 Sept 2013	
	Walking / Safe Routes to Schools	266,000	£ 83.13	As Woodhardwicks assessment v3 Sept 2013	
	Public Transport / Sustainable Transport	2,614,365	£ 816.99	As Woodhardwicks assessment v3 Sept 2013	
	Early Years / Daycare	2,604,416	£ 813.88	As Woodhardwicks assessment v3 Sept 2013	
	Primary Education	12,153,984	£ 3,798.12	As Woodhardwicks assessment v3 Sept 2013	
	Secondary Education	16,006,560	£ 5,002.05	As Woodhardwicks assessment v3 Sept 2013	
	Childrens Social Services	649,600	£ 203.00	As Woodhardwicks assessment v3 Sept 2013	
	Health Care	1,920,000	£ 600.00	As Woodhardwicks assessment v3 Sept 2013	
	Leisure, Open Space and Green Infrastructure	7,247,104	£ 2,264.72	As Woodhardwicks assessment v3 Sept 2013	
	Community Facilities and Services	1,788,960	£ 559.05	As Woodhardwicks assessment v3 Sept 2013	
	Waste Management	278,400	£ 87.00	As Woodhardwicks assessment v3 Sept 2013	
	Public Art	707,200	£ 221.00	As Woodhardwicks assessment v3 Sept 2013	
	TOTAL	**£ 123,506,589**			
	TOTAL PER DWELLING		**£ 38,596**		
	TOTAL PER DWELLING INFRASTRUCTURE		**£ 12,259**		
	TOTAL PER DWELLING S106		**£ 26,336**		

Information used:

Policy 61 – North of Luton / Luton North – Land Use Plan (LPA Option 4 draft) / EC Harris Report September 2013 / Woodshardwick S106 assessment v3 September 2013

EAST OF LEIGHTON – LINSDALE UNITS 2500

Heading	Inclusions	Total Cost	Per Dwelling cost	Cost from / calc	11 Years Cashflow / Expenditure
Enabling Works	Haul routes, Archaeology, demolition, site clearance, tree protection, special boundary fencing and sitewide earthworks	6,000,000	£ 2,400.00	EC Harris Cost Estimate Sept 2013	Year 1 and 2 - over 24 months
S278 Highways / Off Site Highways	Included in S106	-	£ -	EC Harris Cost Estimate Sept 2013	
On Site Highways (Primary and Secondary Routes)	On site strategic roads	14,800,000	£ 5,920.00	EC Harris Cost Estimate Sept 2013	Split into 2 - Years 1 and 2 over 24 months, Years 4 and 5 over 24 months
Green Infrastructure	Included in S106	-	£ -	EC Harris Cost Estimate Sept 2013	
Surface Water Drainage	Strategic SW sewers, SUDs, balancing ponds and outfalls	1,600,000	£ 640.00	EC Harris Cost Estimate Sept 2013	Split into 2 - Years 1 and 2 over 24 months, Years 4 and 5 over 24 months
Foul Water Drainage	Strategic FW sewers, pumping stations and outfalls	2,400,000	£ 960.00	EC Harris Cost Estimate Sept 2013	Split into 2 - Years 1 and 2 over 24 months, Years 4 and 5 over 24 months
Utilities	On site distributions, diversions, duct crossings and reinforcement costs	11,500,000	£ 4,600.00	EC Harris Cost Estimate Sept 2013	Split into 2 - Years 1 and 2 over 24 months, Years 4 and 5 over 24 months
Professional / LA Fees including surveys and site investigations	At 13.5% of construction costs	6,750,000	£ 2,700.00	EC Harris Cost Estimate Sept 2013	Over Years 1 to 8 inclusive
Contingency	Included elsewhere in viability				
S106	Education	21,470,811	£ 8,588.32	Pro rata 1280 units to 2500	
	Community Facilities	3,433,973	£ 1,373.59	Pro rata 1280 units to 2500	
	Highways (Eastern Link Road, A505 Roundabout)	14,224,672	£ 5,689.87		
	Sustainable Transport	1,737,912	£ 695.16		
	Green Infrastructure	8,707,041	£ 3,482.82		
	Public Art	522,285	£ 208.91	Pro rata 1280 units to 2500	
	Emergency Services	489,199	£ 195.68	Pro rata 1280 units to 2500	
	TOTAL	**£ 93,635,893**			
	TOTAL PER DWELLING		**£ 37,454**		
	TOTAL PER DWELLING INFRASTRUCTURE		**£ 17,220**		
	TOTAL PER DWELLING S106		**£ 20,234**		

Information used:

Policy 62 – Clipstone Park

East of Leighton Framework Plan June 2013

EC Harris Cost Estimate September 2013

WIXAMS **UNITS 1500**

Heading	Inclusions	Total Cost	Per Dwelling cost	Cost from / calc	11 Years Cashflow / Expenditure
Enabling Works	Haul routes, Archaeology, demolition, site clearance, tree protection, special boundary fencing and sitewide earthworks	3,000,000	£ 2,000.00	Benchmark per unit for scheme	Year 1 and 2 - over 24 months
S278 Highways / Off Site Highways		3,000,000	£ 2,000.00	Benchmark per unit for scheme	
On Site Highways (Primary and Secondary Routes)	On site strategic roads	4,500,000	£ 3,000.00	Benchmark per unit for scheme	Split into 2 - Years 1 and 2 over 24 months, Years 4 and 5 over 24 months
Green Infrastructure	Included in S106	-	£ 2,500.00		
Surface Water Drainage	Strategic SW sewers, SUDs, balancing ponds and outfalls	1,500,000	£ 1,000.00	Benchmark per unit for scheme	Split into 2 - Years 1 and 2 over 24 months, Years 4 and 5 over 24 months
Foul Water Drainage	Strategic FW sewers, pumping stations and outfalls	1,500,000	£ 1,000.00	Benchmark per unit for scheme	Split into 2 - Years 1 and 2 over 24 months, Years 4 and 5 over 24 months
Utilities	On site distributions, diversions, duct crossings and reinforcement costs	7,500,000	£ 5,000.00	Benchmark per unit for scheme	Split into 2 - Years 1 and 2 over 24 months, Years 4 and 5 over 24 months
Professional / LA Fees including surveys and site investigations	At 15% of construction costs	3,150,000	£ 2,100.00	Benchmark per unit for scheme	Over Years 1 to 8 inclusive
Contingency	Included elsewhere in viability				
S106		30,000,000	£ 20,000.00	Benchmark per unit for scheme	
	TOTAL	**£ 54,150,000**			
	TOTAL PER DWELLING		**£ 36,100**		
	TOTAL PER DWELLING INFRASTRUCTURE		**£ 16,100**		
	TOTAL PER DWELLING S106		**£ 20,000**		

Information used:

Policy 63 – Wixams

Document – Wixam Park public consultation