

APPENDIX I

SLAA Viability Study

Chelmsford SLAA

Viability Study – Final Report

On behalf of **Chelmsford City Council**

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1 Introduction

1.1 Commission

- 1.1.1 Peter Brett Associates has been instructed by Chelmsford City Council to prepare a viability assessment to assist the Council in the preparation of the Strategic Land Availability Assessment (SLAA) 2015.
- 1.1.2 The proposed methodology for undertaking the SLAA for Chelmsford City Council was published in February 2015 for consultation. This clearly identifies the need to identify the extent of land considered deliverable (i.e. available now, in a suitable location and achievable - i.e. viable - over the forthcoming five year period), thus forming the five year housing land supply, and to identify that land which is potentially developable over a longer period (i.e. 6- 15 years) on the basis that it is likely to be suitable, available, and viable over a longer period. This is a specific requirement of National Planning Policy Framework (NPPF).
- 1.1.3 As part of the preparation of Chelmsford City Council's new Local Plan, the Council has sought information from landowners and developers on sites they wish to promote for future development. The 'Call for Sites' ran from 3 November to 19 December 2014 and gave parties the opportunity to submit sites to the Council for the consideration of future development.
- 1.1.4 In assessing all sites submitted through the Call for Sites the Council has confirmed they will follow the latest National Guidance. To ensure the Council's assessment is transparent, a Draft Strategic Land Availability Assessment Methodology (the methodology) has been produced. This sets out the City Council's approach to assessing sites submitted through the Call for Sites, as well as the on-going assessment of land availability throughout the Local Plan process. The report that was submitted to committee on the 5th March contained a flow chart (copy enclosed in Chapter 3 of this report) which sets out the Council's approach and is consistent with National Planning Policy Guidance (NPPG).
- 1.1.5 This study will form part of the Stage 2 'Site/Broad location assessment'. The Council has confirmed that the purpose of this work is to focus on the viability of sites, and does not consider the suitability and availability of sites. The assessment of all sites 'suitability' and 'availability' is being carried out separately and the findings of this study will feed into this piece work.

1.2 Document status

- 1.2.1 The assessment of sites within this document is based upon information available at the time of writing (Summer 2015) and reflects the current assessment of sites based on the development plans and also current market conditions.
- 1.2.2 Identification of sites as potentially deliverable within this study does not provide any status to a site and should not be considered to be the Council's view with regard to a particular site. Government guidance is very clear "The assessment is an important evidence source to inform plan making but does not in itself determine whether a site should be allocated for development".¹
- 1.2.3 This document must be considered as part of the wider evidence base for the Development Plan but cannot be construed as committing the Council to allocate any particular parcel of land for a particular use, nor approve any application for its development. The document will however be used by the Council in its review of its Development Plan and will provide evidence in the preparation of the forthcoming Chelmsford Plan.

¹ NPPG (2014) *Does the assessment allocate land in development plans?(paragraph 3)*

1.3 Structure of Report

- 1.3.1 This report is set out as follows:

Section 2 Local and national policy context

- 1.3.2 This section of the report summarises the policy documents relevant to the future development of sites in the study area.

Section 3 Viability Methodology

- 1.3.3 This section describes the methodology that we have employed for the study, which is in accordance with the Council's Draft Strategic Land Availability Assessment Methodology.

Section 4 Market Assessment

- 1.3.4 This section of the report provides an assessment of the residential and commercial markets in 2015. This analysis was used to inform the revenue assumption in our appraisal, and the threshold land value. In our assessment we relied on recognised published data from Land Registry, Department for Communities and Local Government (DCLG), Focus, Lambert Smith Hampton, CBRE and JLL commercial research reports and the Harman Report². We also supplemented this information with consultation with local agents.

Section 5 Review of Identified Sites

- 1.3.5 This section provides our analysis of the SLAA sites. The analysis is to formulate a number of typologies (i.e. sample sites) representative of the range of sites put forward by developers, landowners and other promoters that we could use in our testing.

Section 6 Viability Assumptions

- 1.3.6 In this section of the report we set out our assessment of the cost and value inputs which are used to test the viability of potential development sites. As mentioned above the assumptions on values are taken from Section 4 of this report. Costs are based on recognised published data and industry standard assumptions. This method is widely recognised by the industry and is therefore deemed suitable for the purposes of this study.

Section 7 Results of Viability Testing

- 1.3.7 In this section we provide the results of the viability testing. A copy of the appraisals are contained in Appendix C of this report.

Section 8 Conclusions

- 1.3.8 This section of the report provides a conclusion of our analysis.

1.4 Limitations of Report

- 1.4.1 This report and the accompanying appraisals are documents in relation to the Strategic Land Availability Assessment (SLAA). As per Valuation Standards 1 of the RICS Valuation Standards - Global and UK Edition the advice expressly given in the preparation for, or during the course of negotiations or possible litigation does not form part of a formal "Red Book" valuation and should not be relied upon as such.

² Local Housing Delivery Group (June 2012) *Viability Testing Local Plans – Advice for planning practitioners*

2 Local and national policy context

2.1 Introduction

- 2.1.1 This piece of work forms part of the deliverability appraisal of the SLAA assessment. As such it is subject to the Local and National policy context. In this Chapter we have outlined a summary of the applicable policy context.

2.2 SLAA

- 2.2.1 The SLAA is an evidence base document, required by Government, which will identify land and buildings that may be suitable for development after 2021. The document is a key part of preparing a new Local Plan for the City Council's area until 2036.
- 2.2.2 Its purpose is to:
- Identify sites in the City with potential for housing or economic development;
 - Work out how many houses or units could be built on them; and
 - Work out when they could be provided.
- 2.2.3 The assessment does not allocate sites for development or grant planning permission.
- 2.2.4 The SLAA process commenced with the Council seeking information from landowners and developers on sites they wish to promote for future development in order to explore possible areas of land for future development within the Chelmsford administrative area. The 'Call for Sites' ran from 3 November to 19 December 2014 and gave parties the opportunity to submit sites to the Council for consideration for future development.
- 2.2.5 In assessing all sites submitted through the Call for Sites the City Council have confirmed they will follow the latest National Guidance on undertaking a SLAA as set out by the NPPF³, NPPG⁴, the Harman Report⁵ and RICS Guidance.⁶

2.3 The NPPF

- 2.3.1 The NPPF requires an assessment of Housing Land Availability to be undertaken. Specifically this assessment is required to identify the extent of land considered deliverable (i.e. available now, in a suitable location and achievable - i.e. viable - over the forthcoming five year period), thus forming the five year housing land supply, and to identify that land which is potentially developable over a longer period (i.e. 6- 15 years) on the basis that it is likely to be suitable, available, and viable over a longer period.

Local Plan

- 2.3.2 Paragraph 158 of the NPPF requires that local planning authorities should ensure that their Local Plan is based on adequate, up-to-date and relevant evidence about the economic, social and environmental characteristics and prospects of the area. Local planning authorities

³ National Planning Policy Framework (Dept. for Communities & Local Government) March 2012

⁴ National Planning Policy Guidance 'Housing and Economic Land Availability Assessment' (Dept. for Communities & Local Government)

⁵ Viability Testing Local Plans: Advice for Planning Practitioners (Local Housing Delivery Group Chaired by Sir John Harman) June 2012

⁶ RICS (2012) Financial Viability in Planning Guidance Note

should ensure that their assessment of and strategies for housing, employment and other uses are integrated, and that they take full account of relevant market and economic signals.

Housing

- 2.3.3 In respect of housing, paragraph 159 of the NPPF states that authorities should have a clear understanding of housing needs in their area. As part of this, local authorities should prepare a SLAA 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.
- 2.3.4 Paragraph 47 states that local planning authorities should seek to boost significantly the supply of housing through a number of avenues. Of relevance to this document, local authorities should:
- Use their evidence base to ensure that their Local Plan meets the full, objectively assessed needs for market and affordable housing in the housing market area as far as is consistent with the policies set out in the Framework (including identifying key sites which are critical to the delivery of the housing strategy over the plan period; and
 - Identify and update annually a supply of specific deliverables and sites sufficient to provide five years worth of housing against their housing requirements (with an additional buffer of 5% - moved forward from later in the plan period) to ensure choice and competition in the market for land.
- 2.3.5 The NPPF also states that where there has been a record of persistent under-delivery of housing, local planning authorities should increase the buffer to 20% (moved forward from later in the plan period) to provide a realistic prospect of achieving the planned supply and to ensure choice and competition in the market for land; identify a supply of specific, developable sites or broad locations for growth, for years 6-10 and, where possible, for years 11-15.

Employment

- 2.3.6 In respect of employment, paragraph 161 of the NPPF sets out the need to assess the existing and future supply of land available for economic development and its sufficiency and suitability to meet the identified needs. Reviews of land available for economic development should be undertaken at the same time as, or combined with, SLAA and should include a reappraisal of the suitability of previously allocated land.

Viability

- 2.3.7 A definition of viability in planning terms is provided in Paragraph 173 of the NPPF, which states:

“To ensure viability, the costs of any requirements likely to be applied to development, such as the 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”

2.4 The NPPG

- 2.4.1 The NPPG provides further guidance in relation to the undertaken of SLAA and in considering the issue of viability in planning.
- 2.4.2 Specifically, the Guidance indicates that the key principles for understanding viability issues are as follows:

- That the obtaining of an appropriate Evidence Base will require understanding of realistic costs and values and the operation of the local development market. It suggests that ensuring understanding of issues such as past delivery rates, and direct engagement with the local development sector may be useful in obtaining evidence;
- A collaborative approach is advocated to assist the understanding of deliverability and viability. Transparency of evidence is encouraged wherever possible; and
- That the Evidence Base for housing, employment and retail policy is underpinned by a comprehensive and consistent approach to viability across the area.

2.5 Viability Testing Local Plans: Advice for Planning Practitioners (June 2012) – The Harman Report

2.5.1 The Harman report provides advice on the role of viability appraisals in the planning process, specifically in relation to the assessment of Local Plan policies.

2.5.2 It defines 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 costs and availability of development finance, the scheme provides a competitive return to the developer to ensure that the 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.”

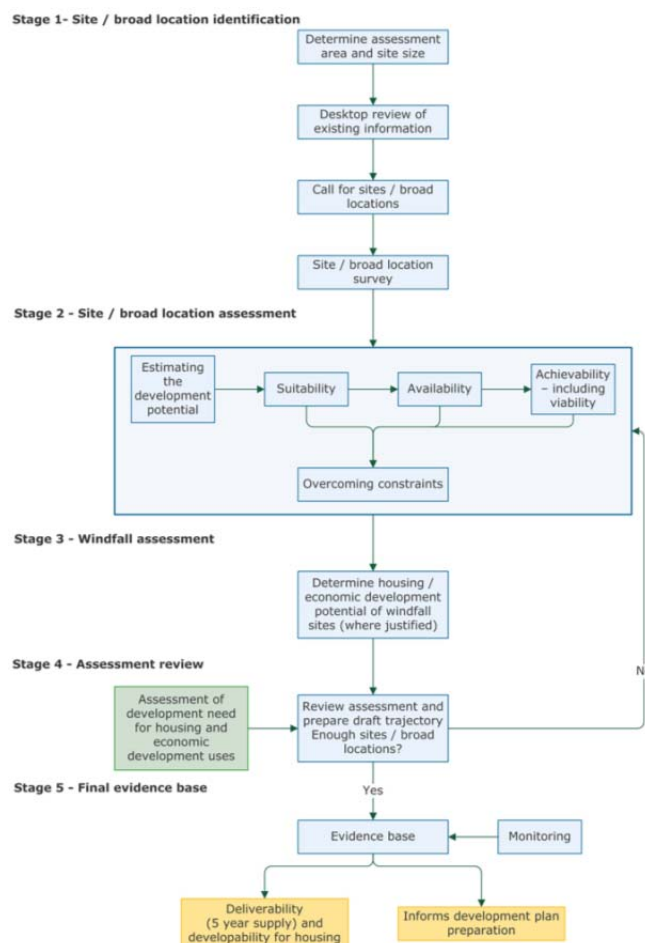
2.5.3 We can confirm that our viability methodology will adhere to the national guidance detailed above.

3 Viability Methodology

3.1 Introduction

- 3.1.1 In this section we provide an overview of the Study methodology which reflects the requirements of the NPPF and the NPPG, and takes account of the best practice and expertise we have amassed through undertaking viability work and numerous Strategic Housing Land Availability Assessments and SLAA studies across the country. Later sections provide greater detail in terms of the assessment of value areas, site typologies and the application of this to the choice of sites to be subject to viability testing.
- 3.1.2 At the outset it should be noted that this Study does not represent a full SLAA update – it is a housing and commercial viability study, the purpose of which is to provide recommendations on the viability housing and commercial sites identified through the ‘call for sites’ in the City. This work will then provide the evidence to inform the allocation of appropriate sites in the Council’s emerging SLAA.
- 3.1.3 In order to ensure the Council’s assessment is transparent, a Draft Strategic Land Availability Assessment Methodology (the methodology) has been produced. This sets out the City Council’s approach to assessing sites submitted through the Call for Sites, as well as the on-going assessment of land availability throughout the Local Plan process. The report submitted to committee on the 5th March contained the flowchart process detailed at Figure 3.1:

Figure 3.1 Draft Strategic Land Availability Assessment Methodology Flow Chart



Source: Chelmsford City Council

3.1.4 This report forms part of Stage 2 (Broad Location assessment) and considers in the following in the context of viability:

- Estimating Development Potential
- Achievability
- Overcoming Constraints
- Rate and Timescale of Development

3.1.5 In accordance with Chelmsford City Council's published SLAA methodology the viability of each site will be assessed against site typologies, developing on the strategic approach used to calculate the Community Infrastructure Levy (CIL). This approach has been tested as part of the CIL Examination and is therefore considered to be appropriate for use in this assessment. It is also considered to be consistent with the requirements of the NPPG.

3.1.6 As set out in the NPPG a site is considered achievable for development where there is a reasonable prospect that the particular type of development will be developed on the site at a particular point in time. This is essentially a judgement about the economic viability of a site, and the capacity of a developer to complete and let or sell the development over a certain period.

3.1.7 The City Council used a residual land valuation model to determine the viability of residential development in a strategic manner across the City when calculating CIL, and we also propose to use a RLV model in keeping with the CIL methodology. This methodology is also consistent with industry practice when assessing development site viability.

3.2 First Phase: High Level Achievability Assessments

3.2.1 The first phase of our analysis involves a high-level achievability assessment of all SLAA sites. This stage of work involves the research into and consideration of:

- Market issues at both the macro and micro levels across all land uses; and
- Other factors which are likely to influence / affect achievability, including known information relating to land values, geo-environmental factors, physical constraints and so on.

3.2.2 We have interpreted the evidence collected as part of this stage using our professional knowledge, forecasts of future market changes informed by past trends and general market forecasts from leading agents.

3.2.3 Completion of the First Phase of work has enabled us to develop a series of typologies (i.e. sample sites) which are representative of the range of identified sites. We talk about these typologies in Chapter 5.

3.3 Second Phase: Achievability Assessments – Viability Testing

3.3.1 The second phase of the assessment is to undertake viability testing for a representative sample of sites across the study area, which we have agreed with the Council as part of the First Phase. Viability testing is carried out through undertaking development viability appraisals. The purpose of the viability appraisals is two-fold:

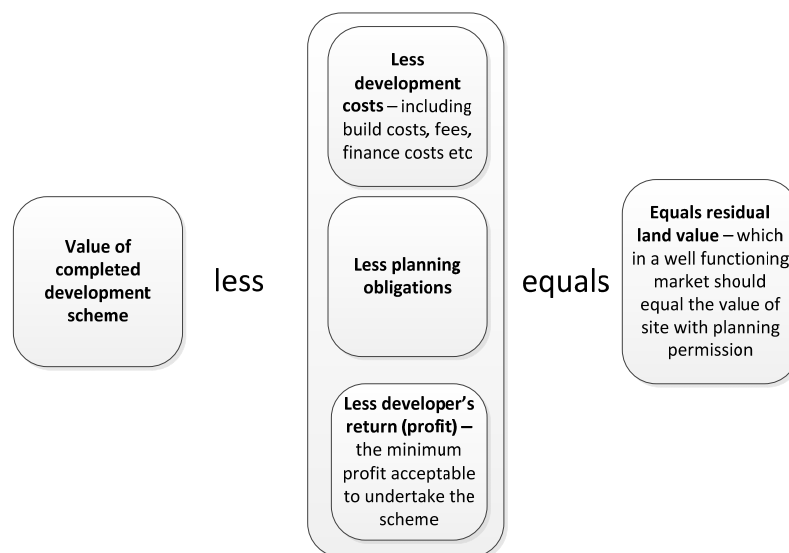
1. The appraisals demonstrate that our assumptions in the First Phase of the achievability assessments were robust; and

2. The appraisals provide the Council with a set of representative templates which can then be used as the basis for detailed assessment of any site as and when it is required.

3.4 Viability testing

- 3.4.1 Our viability assessments are based on development appraisals of sample schemes within the administrative area using the residual valuation method. The resulting residual land value is assessed against a threshold land value (sometimes called benchmark land value) to determine whether the sample schemes are viable. This approach is in line with accepted practice as recommended by RICS guidance and the Harman report.
- 3.4.2 The residual appraisals are applied to different sites, aiming to show typical values for each. They are based on the following formula in Figure 3.2:

Figure 3.2 Residual Value Calculation



- 3.4.3 For each of the development categories tested, we use this formula to estimate typical residual land values, which is what the site should be worth once it has full planning permission. The residual value calculation requires a wide range of inputs, or assumptions, including the costs of development and the required developer's return.
- 3.4.4 The arithmetic of residual appraisal is straightforward. However, the inputs to the calculation are hard to determine for a specific site (as demonstrated by the complexity of many S106 negotiations). Therefore our viability assessments are necessarily broad approximations, subject to a margin of uncertainty.

PBA Viability toolkit

- 3.4.5 We have used PBA's viability toolkit for the viability modelling exercise. All sites identified are assessed and the results reported to the SLAA Assessment Panel for input into the overall assessment.
- 3.4.6 The PBA development appraisal model is a Microsoft Excel model designed to be transparent, with all inputs visible and verifiable. Inputs into the model include:
 - Developable area (site area less land for open space or major site infrastructure);
 - Density of development (dwellings per ha);

- Type of residential properties;
- Tenure of residential properties (private / social rented / affordable rented /shared ownership);
- Residential sales values and sales rates (benchmarked against published data from recognised sources (mouseprice.com and rightmove.co.uk);
- Type of commercial properties;
- Rents and yields of commercial property;
- Construction costs (benchmarked against the latest quarter of Build Cost Information Services (BCIS) data re-based for Chelmsford);
- Overheads (including professional fees for architects, planning etc. & insurances);
- Land cost (the threshold land value);
- 'Residual' S.106 costs;
- Finance costs; and
- Abnormal costs.

Abnormal Costs

- 3.4.7 It is outside the scope of a strategic study of this nature to assess physical constraints of sites in detail. Thus, we have focused on obvious constraints, based on available knowledge and observations. For instance, for a large, undeveloped field cut off from existing housing, we would assume that significant new drainage etc will be required; conversely we would assume that a small site in a primarily residential area is capable of linking into existing road infrastructure and service provision.

3.5 Threshold Land Values

- 3.5.1 As mentioned above the residual land values are assessed against a threshold land value to assess whether the scenario is viable. In determining a suitable threshold land value we have regard to:

- Greenfield and brownfield land values
- HCA Guidance, The Harman Report and DCLG Guidance.
- Land values agreed for the site specific S.106 viability work which PBA has undertaken on behalf of the Council.

- 3.5.2 In our assessment of threshold land value we have followed the definition set out in the Harman Report. The Harman Report states:

*"Threshold Land Value should represent the value at which a typical willing landowner is likely to release land for development, before payment of taxes (such as capital gains tax)."*⁷

⁷ Local Housing Delivery Group (June 2012) *Viability Testing Local Plans – Advice for planning practitioners* (P28)

3.5.3 And recommends that:

“Threshold Land Value is based on a premium over current use values and credible alternative use values (noting the exceptions below).

Alternative use values are most likely to be relevant in cases where the Local Plan is reliant on sites coming forward in areas (such as town and city centres) where there is competition for land among a range of alternative uses. This approach is already used by many councils, allows realistic scope to provide for policy requirements and is capable of adjusting to local circumstances by altering the percentage of premium used in the model.

The precise figure that should be used as an appropriate premium above current use value should be determined locally. But it is important that there is evidence that it represents a sufficient premium to persuade landowners to sell.”⁸

3.5.4 To formulate suitable threshold land values we have examined a range of comparables, looking at residential development site values whilst taking into consideration existing commercial uses. This is to ensure that the threshold land value used in the Viability Study for individual sites is as robust as possible. Given the complexities of development across a whole plan area, and limited nature of publicly available transactional data, we propose to base this assessment on appropriate available evidence.

3.5.5 From our recent work we would highlight several key issues in assessing the threshold land value, as follows.

- It is important to stress that there is no single threshold land value at which land will come forward for development. Much depends on the land owner and their need to sell or wait in the hope that land values might improve and on the condition and location of the site.
- All sites vary in terms of the degree to which they are serviced or free of abnormal development conditions. Such associated costs vary considerably from site to site and it is difficult to adopt a generic figure with any degree of accuracy. Our starting point is to assume that the value of sites (when calculating the threshold level) relates to a full serviced development plot. In real terms, abnormal development costs or site servicing costs will be met by developers when the land is purchased. Careful analysis of transactions is required to assess the split between abnormal development and servicing costs (as a discount from the market value) from the premium sought by the land owner above the existing use value.
- The land transaction market is not transparent. Very little data is in the public domain and the subjective influences behind the deal are usually not available. We therefore place a strong emphasis on consultation with both landowners and developers to get an accurate picture as possible as to what the threshold value might be.

3.6 Determining Developability & Deliverability

3.6.1 The ‘deliverability’ and ‘developability’ of sites has been assessed on a systematic and transparent basis. The test of a site’s viability will depend on the scheme’s ability to generate a reasonable return for the developer, landowner after meeting policy requirements. A conclusion will be reached for each site about viability, and hence the likelihood of the site being delivered through the operation of the market.

3.6.2 As a broad approximation we have adopted the following criteria:

Viable – The residual land value is 20% or greater above the threshold land

⁸ Local Housing Delivery Group (June 2012) *Viability Testing Local Plans – Advice for planning practitioners* (P29)

Marginal - The residual land value is not less than 20% below the threshold land value and no greater than 20% above the threshold land

Unviable – The residual land value is 20% or greater below the threshold land value

- 3.6.3 We would note that deliverability is not just a question of viability. What is acceptable to one landowner could be unacceptable to another. A sense of built-up expectation of land value is a complicating factor in the housing and commercial markets, and landowners with a certain expectation may choose not to sell a site if that expectation is not reached. The psychology of landowner behaviour is a real issue that the Council will need to consider so that deliverability rates for housing and employment are not adversely affected.

4 Market Assessment

4.1 Introduction

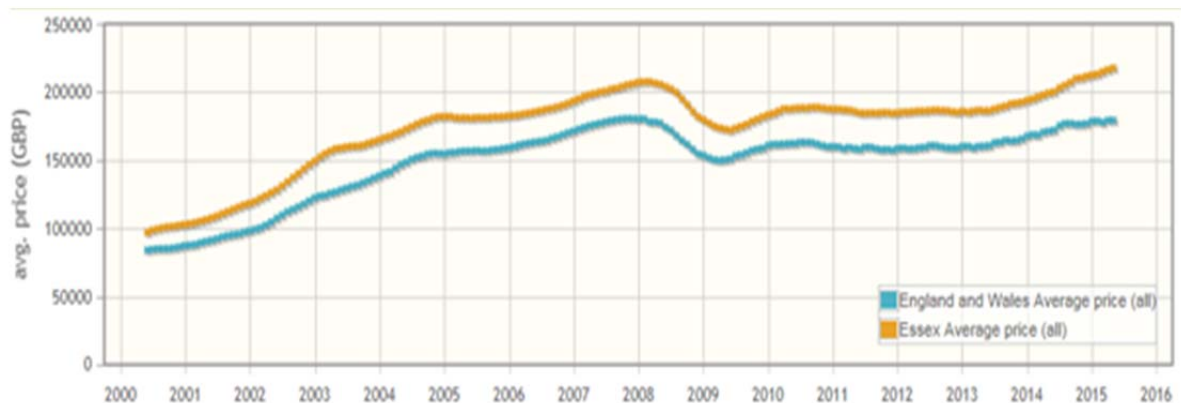
- 4.1.1 To assist in our analysis of the identified SLAA sites we also carried out a market assessment of housing, employment, and gypsy and traveler uses. This involved the consideration of market issues at both the macro and micro levels. The outputs of this analysis has informed the scenarios to test and capital values to use in the viability assessment.

4.2 Residential

National and county context

- 4.2.1 Following the economic crises in 2007 and the subsequent recession in 2008 the UK residential market experienced a period of prolonged stagnation. As a result of the recession house prices fell nationally by around 15% (Figure 4.1) from a peak of £180,000. At an Essex County level average house prices have been consistency higher than the UK average. House prices peaked in Essex at a similar time to the UK average with an average price of £208,000, but fell by a larger percentage (17.3%) to £172,000. Since 2009 average house prices in Essex have performed well, with prices rising faster than the UK average. The average price in Essex is above the 2007 peak at £219,500.

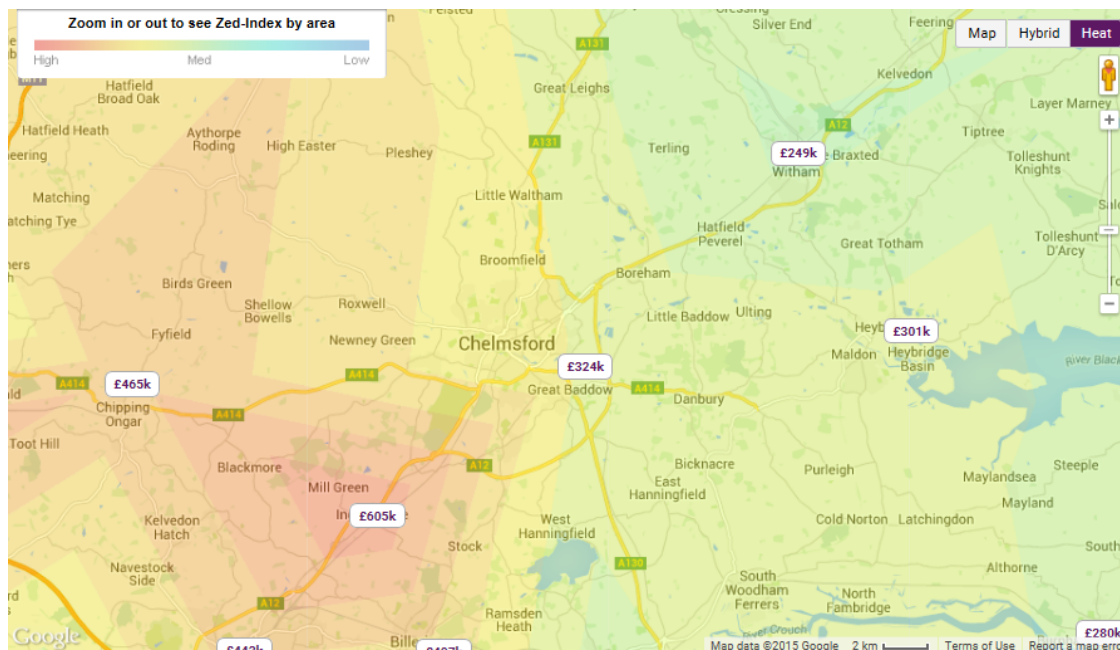
Figure 4.1 England & Wales & Essex Average house prices (all properties)



Source: Land Registry

- 4.2.2 Within Essex, the county wide analysis masks the variation in house prices at a district level. Figure 4.2 shows that in Chelmsford average house prices are higher than the county average at £324,000, with prices increasing further on the western side of the district. At the other end of the spectrum lower values are found on the eastern side of the district. This is due to their relative remoteness from the major commercial centres, whilst conversely the higher values areas are driven by their proximity to London.

Figure 4.2 Heatmap – Average Property Values



Source: zoopla.co.uk, last accessed 30 June 2015

New Build House Prices

- 4.2.3 Detailed analysis has been undertaken of the new build house prices in the Chelmsford area and is set out in **Error! Reference source not found.** The developments analysed range in size from small scale housing schemes to larger housing developments. They are distributed across the administrative area although there is a high concentration of development activity in and adjacent to Chelmsford. The table summarises the average asking prices on a £ per sq m bases across each of the developments (our calculations are based on the floor areas provided by the developers including an allowance for hallways, bathrooms and store cupboards, where these have been omitted from the measurements).

Table 4.1 New Build House Price Analysis

Name of Development	Average Purchase Price	Average Price per sqm	Allowance for 10% discount on asking price	Allowance for 10% discount on Average Asking Price per sqm	Average Size (sqm)
Aqua Verde - Bellway Homes	£404,995	£4,878	£364,496	£4,390	87
Woodlands - William Thompson Homes & Biminster Homes	£1,209,167	£4,898	£1,088,250	£4,408	249
Church Court - Tern Developments	£248,328	£3,956	£223,496	£3,561	63
Willowdene - Developer Unknown	£1,650,000	£3,986	£1,485,000	£3,587	414
The Waterfront - Taylor Wimpey	£214,545	£4,041	£193,091	£3,637	54
Marconi Evolution - Bellway Homes	£449,995	£3,913	£404,996	£3,522	115
Coval Lane - Marden Homes Ltd	£484,375	£3,703	£435,938	£3,333	131
Chignall Road - Marden Homes Ltd	£838,000	£4,067	£754,200	£3,660	206
St. John's - Inland Homes Ltd	£343,700	£4,568	£309,330	£4,111	76

Source: Zoopla/Rightmove/PBA

- 4.2.4 The data in Table 4.1 shows that average asking prices across the district ranges from £3,703 to £4,898 per sq m. If we apply a discount of 10% to reflect the typical reduction achieved in negotiating the actual price paid, then the revised rate is between £3,333 and £4,408 per sq m.

Conclusion on residential sale values

- 4.2.5 As agreed with the Council we have compared our analysis against earlier house price data prepared by BNP Paribas as part of the CIL Viability Report undertaken in February 2013. The purpose of this analysis is to form a view on a current single average house price £ per sq m that can be used in the SLAA viability testing.
- 4.2.6 BNP Paribas reported an average sales value of £269,056, equating to £2,990 per sq m assuming an average house size of 90 sq m. Land Registry data shows that since February 2013 average prices in Essex have increased by 17.50%. If we apply this to BNP Paribas figures, this provides a revised blended (apartments and houses) average rate of £3,513 per sq m. This falls within the range (just below the mid-point) of rates which we estimate will be achieved on new build schemes in the area. We have therefore of the opinion that £3,515 per sq m is a reasonable figure to use in the SLAA viability testing.

4.3 Office

National Outlook

- 4.3.1 There are ongoing changes to the nature of office occupier demand – for example centralisation, fewer office locations, less floorspace and the implementation of modern workplace strategies (for example hot desking). As the UK economy has been growing this has now filtered through to the regional office market.
- 4.3.2 CBRE report that the UK regional office markets have continued to build upon growth that firmly took hold in 2014....Occupier demand has grown, and has resulted in take-up tracking above long run averages.⁹ CBRE state that many of the core regional cities, pre-letting has returned in strength, with professional service firms in particular taking advantage of the new generation of office buildings that are about to emerge in cities such as Manchester, Leeds and Birmingham.⁹
- 4.3.3 Lambert Smith Hampton (LSH) report that the in the regional markets, speculative development doubled in 2014 to reach 390,000 sq m. Manchester, Edinburgh, Leeds and Reading are the key focus of activity.¹⁰

South East office market

- 4.3.4 The major office markets outside of Greater London are towards its west with towns such as Maidenhead and Reading having strong established markets able to attract blue chip occupiers. The office market towards the east is more marginal and has historically seen less development activity then towards the west.
- 4.3.5 The west / east divide is also reflective in prime rents achieved. Prime rents to the west are around £323 per sq m compared to £215 per sq m in the east.
- 4.3.6 CBRE report that the South East office markets have not seen the same acceleration as has been the case in the regional cities. It is not that the market is inactive, but more the case that larger floorplate deals are becoming scarcer.⁹ CBRE state that the effect of UK economic

⁹ CBRE (H1 2015) *National office market review*

¹⁰ LSH (2015) *Activating the workplace office market*

growth over the past two years is continuing to drive smaller requirements (under 1,850 sq m). Activity in this sector is very strong. Grade A stock levels are now noticeably low in some markets, resulting in rental growth.

- 4.3.7 With regard to yields, LSH report (Figure 4.3) that prime office yields are 5.25% in the South East with the average transaction at 6.85%. The average yield transaction in the South East is slightly below the UK average of 6.95%.

Figure 4.3 Office Yields

	Prime (Q4 14)	IPD (Q4 14)	2014 transaction average
West End	3.75%	3.39%	4.43%
City	4.25%	4.13%	4.94%
South East	5.25%	5.29%	6.85%
Rest of UK	5.25%	6.23%	6.95%

Source: LSH

Chelmsford office market

- 4.3.8 Chelmsford provides one of the prime office locations in Essex. LSH report that 2014 was Chelmsford's strongest year of take-up since 2008. With a marked improvement in demand in the latter half of 2014, 2015 is expected to outperform last year.¹⁰
- 4.3.9 The area around Chelmsford train station has seen the most new build development. Genesis completed 2,200 sq m of Grade A office space at City Park West. With Phase 2 recently obtaining consent for 3,800 sq m. LSH report that Bellway is seeking pre-lets for a proposed 6,000 sq m development on the former Marconi site, with quoting rents of £280 per sq m. The quoting rent of £280 per sq m at Marconi is the prime headline rent for Chelmsford. Prime office yields are 6.5%.
- 4.3.10 Secondary office rents vary across Chelmsford. Focus data indicates that refurbished office space typically achieves around £80 to £135 per sq m around the city centre. The space typically is finished to a specification of suspended ceilings with category 2 lighting and air-conditioning. Letting void periods are very noticeable of between 6 to 18 months which highlights the relatively slow letting market of secondary property in Chelmsford.
- 4.3.11 Bidwells report¹¹ that second half 2014 office take-up for Chelmsford was 1,468 sq m with demand during the same period at around 10 times the figure at 10,870 sq m. Bidwells state that during this period office availability in Chelmsford was around 11%.

Conclusion on office values

- 4.3.12 Taking the above into account we are of the opinion that a rental value of £250 per sq m and a yield of 7.5% are appropriate assumptions for new build Chelmsford office space as part of the SLAA testing.

¹¹ Bidwells (Spring 2015) *Business Space Data Book*

4.4 Industrial B2 / Distribution B8

National and South East Outlook

- 4.4.1 Prior the late 2000s economic crises there had been significant quantum of speculative development of Industrial B2 / Distribution B8 across the country. Speculative development came to a standstill in the late 2000s due to the lack of development finance, this combined with occupier demand weakening and the introduction of empty property rates on industrial buildings placed downward pressure on rents and yields increased.
- 4.4.2 Since the economy has improved combined with a greater reliance on on-line sales (on-line retail sales, as a percentage of market share, doubled from 5.6% to 12% from 2006 to 2013¹²) demand for distribution units has significantly increased. In prime areas of the UK agents are reporting that there is very limited vacancy as surplus supply has been absorbed and new opportunities have until recently been delivered through build to suit solutions. LSH report¹³ that in 2014, take-up reached record levels, investment activity saw an all-time high and speculative development returned in a meaningful way. However, the strong recovery in demand has put existing supply under acute pressure. These pronounced shortages are influencing the nature of occupier activity and Grade A take-up nationally was actually the lowest on record.
- 4.4.3 JLL report¹⁴ that the first half of 2015 saw 790,000 sq m of take-up of Grade A big box distribution (i.e. over 9,300 sq m). Nearly half of this take-up was from retailers and nearly one third logistic companies. JLL also report¹⁵ that during 2014 take-up in units from 930 to 9,300 sq m was slightly down (2%) of the year before with the annual supply diminishing by 16%.

Essex industrial market

- 4.4.4 At an Essex county level the industrial market prime areas are around the Thurrock, M25 and M11 corridors. Key transactions have been the investment sales (Table 4.2) of Sainsbury's 78,000 sq m distribution Centre at Waltham Abbey at a yield of 4.7% and Unilever Purfleet 17,600 sq m distribution unit at 6.8% yield. Notable lettings (Table 4.3) were the Slex Galileo deal at Sigma House, Basildon where they took 15,000 sq m at £124 per sq m, and Rowan International at Endeavour House, Basildon where they took a new 15 year lease at £68 per sq m.

Table 4.2 Investment sales: Essex June 2014 to June 2015

Address	Date	Size Sq m	Sale Price (£)	Yield	Notes
Sainsbury's Distribution Centre, Waltham Abbey	01/09/2014	78,199	110m	4.7%	Purchased by Legal & General Property
Unilever, Purfleet	05/08/2014	17,651	18.15m	6.8%	Purchased by UK Property Fund
Units 630-660 Skyline 120 Business Park, Braintree	01/01/2015	6,826	£17.9m	6.18%	Aviva Investors Global Services Ltd has purchased the freehold interest
2 Wyncolls Road, Colchester	05/06/2014	5,738	£3.17m	8.63%	Columbus Capital Management LLP has purchased the freehold interest

Source: Focus

¹² Experian retail

¹³ LSH (09/03/2015) *Industrial sector sheds its inhibitions*

¹⁴ JLL (Jan-June 2015) *UK Industrial & Logistics Big Box Key Indicators*

¹⁵ JLL (March 2015) *UK Industrial Property Trends today*

Table 4.3 Lettings: Essex June 2014 to June 2015

Address	Date	Size sq m	Rent £ psm	Comment
Sigma House, Basildon	15/01/2015	15,049	£124	Tenant: Selex Galileo Ltd. The passing rent of £1,860,000 per annum is subject to 5 year upward only rent reviews to open market rental value, with the 1 January 2010 review remaining outstanding.
1-2 Moss Road, Witham	31/12/2014	7,129	n/a	Simarco International Limited has taken a five year lease for an undisclosed rent. No break options or rent reviews were agreed. No rent free periods were agreed.
Endeavour House, Endeavour Drive, Basildon	04/11/2014	7,030	£68	Rowan International Limited has taken a 15-year lease subject to five yearly open market rent reviews underpinned by minimum fixed uplifts.
International Timber, Haven Road, Colchester	09/09/2014	5,090	n/a	First Essex Buses Limited has purchased the long-leasehold interest

Source: Focus

- 4.4.5 Bidwells report¹¹ that prime industrial rents in Thurrock (i.e. prime for Essex as well) are £94 per sq m, good secondary are £75 per sq m and poor secondary £54 per sq m.

Chelmsford Industrial Market

- 4.4.6 There is a solid market for both B2 and B8 stock in the wider Chelmsford City area, although it is not a recognised industrial market location compared to Norwich, Milton Keynes or Cambridge. There are currently a number of design and build opportunities available across the Chelmsford and wider Essex area. Prospective tenants are typically seeking accommodation close to the urban centres (such as Chelmsford) and in particular locations with good road access to London and the UK's road distribution network.
- 4.4.7 Estates Gazette Interactive (EGi) property data shows that rental levels for modern industrial accommodation vary across the Chelmsford area. Typical rents for B2 accommodation are around £71 per sq m for good quality second hand modern accommodation (space at the Chelmsford Industrial Estate on Tattersall Way was recently let at £71 per sq m), and new build development achieving a slight premium of up to £73 per sq m. As shown in Table 4.4 there is a lack of recorded transactions on EGi for B8 space in Chelmsford. All the space transacted is second-hand stock, with a large proportion being relatively small units of less than 200 sq m. Evidence of rents show that mid-range size units (500 to 2,000 sq m) achieve rents in between £64 and £73 per sq m.

Table 4.4 B8 Transactions in Chelmsford

Date	Address	Size sq m	per sq m	Purchaser/Lessee
15/04/2015	Unit 15, Chelmsford Industrial Estate, Tattersall Way	616	£73	
01/03/2015	Unit 5, Banters Lane Business Park, Banters Lane	433	£47	
09/01/2015	Unit 11, Chelmsford Industrial Estate, Tattersall Way,	1,109	£71	Currock Engineering
01/12/2014	Ground Floor, Highland Farm, Southend Road, Rettendon Common	622	£2.50	

Date	Address	Size sq m	per sq m	Purchaser/Lessee
01/12/2014	Unit 13, Chelmsford Industrial Estate, Tattersall Way	7,717	£7	
10/11/2014	Unit 4, Drakes Lane Industrial Estate - Greenacres, Drakes Lane, Boreham	93	£88	
04/11/2014	Unit 12, Chelmsford Industrial Estate, Tattersall Way	822	£67	Illuminati Lighting UK Limited
01/08/2014	57A Haltwhistle Road, South Woodham Ferrers	168	£65	
01/06/2014	Unit 18, East Hanningfield Industrial Estate, 34 Old Church Road	167	£66	
01/06/2014	Unit 33, Widford Industrial Estate, Hanbury Road	782	£64	
01/05/2014	Unit 1, Dukes Park Industrial Estate, 1 Atholl Road	1,491	£58	
01/04/2014	Unit 11, Widford Industrial Estate, Robjohns Road	169	£71	DrainFix Pipeline Solutions Limited

Source: EGi

- 4.4.8 Analysis of EGi data and consultation with agents indicates that that yields for industrial units in Chelmsford are currently around 7% for B2 accommodation and 6% for slightly more desirable B8 accommodation.
- 4.4.9 With regards managed workspace in Chelmsford there is little evidence of transacted and available space. The main managed workspace centre in the region is Essex Technology & Innovation Centre in Ongar. The centre has 30 units which range in size from 14 and 56 sq m with all-inclusive rents of between £150 and £484 per sq m. On-site management, utilities rates and voids will mean the true net rent is likely to be around a one third of that quoted.

Conclusion on Industrial Values

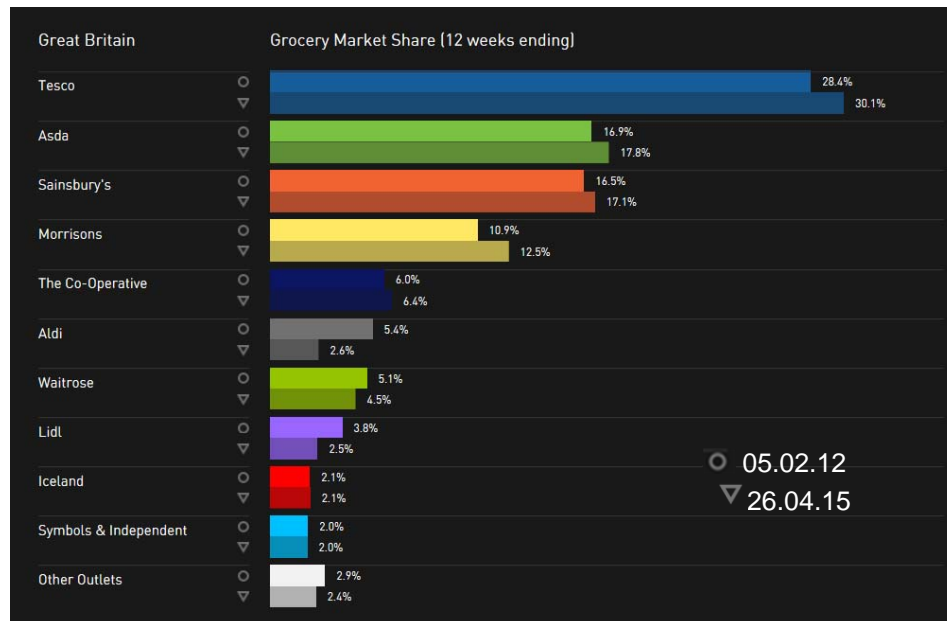
- 4.4.10 Based on the above analysis we have applied the following values in the SLAA viability analysis:
- B2 industrial – rent of £72 per sq m and yield of 7%
 - B8 distribution – rent of £70 per sq m and yield of 6.5%
 - Managed workspace – rent of £40 and yield of 9.5%

4.5 Convenience Retail

- 4.5.1 The convenience retail sector has seen a significant change since the financial crises of 2007/08. In the years following 2008 the supermarkets appeared to have weathered the economic storm with most operators aggressively expanding (commonly referred to as the race for space). Operators were able to competitively bid for sites as they were able to take advantage of other sectors in the property market being much weaker. During this period of growth there was a strong appetite from operators to open large format stores of up to circa 11,150 sq m. With this format of store providing a mixture of convenience and comparison retail.
- 4.5.2 In recent years shopping patterns have changed significantly: there is more reliance for online shopping combined along with customers supplementing a 'big' shopping trip with regular

smaller shops during the week. Also some customers are splitting their shopping trips between the big four supermarkets (as defined in Figure 4.4) and discounters such as Aldi and Lidl. As shown discount supermarkets and Waitrose have gained market share over the last three years and this has been at the expense of the big four.

Figure 4.4: Supermarkets % by share, February 2012 to 2015



Source: kantarworldpanel.com

- 4.5.3 The change in shopping patterns in tandem with previous aggressive expansion from the big four has led to them issuing profit warnings. This itself has been compounded by Tesco overstating their profit by £250 million due to the accelerated recognition of commercial income and delayed accrual of costs. A recent Tesco trading statement¹⁶ stated, amongst other things, that they are closing 43 unprofitable stores, consolidating the Head Office location to Welwyn Garden City and disposing of Tesco Broadband and Blinkbox to TalkTalk.
- 4.5.4 Tesco's situation is not unique to the sector with Sainsbury's and Morrison's also reporting problems.
- 4.5.5 Sainsbury's announced in November 2014 that it was scaling back new store openings after the company reported a half year loss before tax of £290 million. In a recent trading statement¹⁷ Sainsbury's announced that their total retail sales for third quarter 2014 were down 2.5 per cent (including fuel) and like-for-like retail sales for third quarter down 3.9% (including fuel). Sainsbury's outlook for the remainder of the financial year is that it is set to remain challenging, with food price deflation likely to continue.
- 4.5.6 Morrison's Chief Executive Dalton Philips recently announced that he was stepping down from his role after they announced in their January 2015 trading statement that total sales (excluding VAT and fuel) were down 1.3% over the six weeks to 4 January.
- 4.5.7 Moving away from the big four operators the discount operators are performing well. Aldi reported in September 2014 that their pre-tax profits had grown by 65.2%, with group turnover up by 35.7%. Lidl has also been reporting strong retail growth. In August 2014 Lidl's managing

¹⁶ Tesco (08 January 2015) *Trading statement for 19 weeks ending 3 January 2015*

¹⁷ Sainsbury's (08 January 2015) *3rd quarter trading statement for 14 weeks ending 3 January 2015*

director stated that sales would grow 20% during 2014 and that they planned to double in size in the UK over the next decade as it looks to expand to between 1,200 and 1,500 stores.

- 4.5.8 Convenience retailers are now therefore looking to focus on the acquisition of smaller sites and the refurbishment/expansion of existing stores rather than delivering non-food retail and 'mega-stores' (stores over circa 9,290 sq m), but despite this research by CBRE¹⁸ indicates that the development pipeline remains robust, with construction activity increasing by over 50% in 2014, the highest level since 2009.

Convenience Retail Investment Market

- 4.5.9 Commercial agents tell us that the uncertainty in the market is started to be felt in yield shifts and investors being more selective on the tenant profile and location. In addition operators themselves are being more selective on store locations and lease terms. Agents' have commented as follows:
- Yields have moved out on those leases which have open market rent reviews (OMR)
 - Yields are holding firm with those leases with RPI fixed increases
 - Large institutional investors are quite exposed to Tesco's and Sainsbury's meaning other covenants are comparatively more keenly priced
 - Morrisons is an attractive covenant in the investment market as they have not historically undertaken sale and leasebacks and they have a large freehold portfolio so are seen to be on a strong footing
 - Size and location impacts yield. Larger formats are particularly unattractive as growth in the sector is now for smaller format
 - Strength of location is an important factor in attracting operators. Weaker locations will have to offer heavily incentivised terms.
 - Power lies with the tenant rather than the landlord in negotiating terms.
 - 25 year lease with 5 yearly fixed RPI sub 5% yield, but with OMR then there is a yield of at least 0.5%. Aldi and Lidl will commit to a 15 year lease with OMR. Therefore you would expect the yield to be above 6%.
- 4.5.10 As shown in Table 4.5 yields where leases have a fixed uplift at review are generally under 5%, with a range of 4.17% to 6%. Those which have open market rent reviews and a term of 10 years or more unexpired, are achieving higher yields of between 5.75% and 6.15%. The evidence also shows that Tesco yields are slightly higher than that of Asda and Sainsbury's. This could be a reflection of funds seeking to reduce their exposure to this covenant.
- 4.5.11 The yield pricing shows that a difference of around 25 basis points for a lease of 7.5 years longer unexpired with Sainsbury's as the covenant. Rental evidence is very wide ranging. Analysis of the capital values shows rents of between £61 and £334 psm (£5.70 and £31 psf). The average rent is around £215 psm (£20 psf).

¹⁸ CBRE United Kingdom Shopping Centre Pipeline H1 2015

Table 4.5 Supermarket rents and yields – fixed reviews

Property	GIA Sq m	Tenant	WAULTC (years)	Date	Price	Initial Yield	Capital value £ psf	RPI Uplifts
107 Dunton Road, Southwark, London	5,790	Tesco	21.80	Jan 2015	£43.00M	4.50%	£690	RPI annual uplifts (5% cap, 0% collar)
Pentwyn Road, Cardiff	3,526	Waitrose	13.77	Jun 2014	£15.30M	4.73%	£403	Fixed 2.5% pa uplifts.
Lower Road, Belvedere	6,308	ASDA	18.18	Mar 2014	£32.40M	4.75%	£477	Fixed 3% pa uplifts.
2 Strafford Road, Wallington, Greater London	5,613	Sainsbury's	20.40	Jan 2014	£35.10M	4.24%	£581	RPI uplifts received 5 yearly (4% cap, 1% collar).
Sainsbury's Way, Kingston-upon- Hull	10,147	Sainsbury's	10.88	Aug 2013	£38.83M	5.50%	£356	Annual RPI uplifts (3.5% cap, 1.5% collar). Current rent £20.69 psf.
Nottingham Street Rotherham	10,235	Tesco	30.00	Mar 2013	£38.50M	5.10%	£349	RPI uplifts (4% cap, 1% collar). Current rent £20.50 psf
Fakenham Road Norwich	2,129	Tesco	10.80	Mar 2013	£6.50M	6.00%	£284	Annual RPI uplifts capped at 4%.

Source: PBA/Savills

- 4.5.12 As shown in Table 4.6 leases with open market reviews with a term of 10 years or more unexpired are showing to have rents between £178 and £312 psm (£16.50 and £29 psf). Current rents for leases with fixed uplifts are between £226 and £248 psm (£21 and £23 psf).

Table 4.6 Supermarket rents and yields – open market reviews

Property	GIA Sq m	Tenant	U/X Lease Term (years)	Current Rent (£ psf)	Sale Date	Price	Initial Yield
Westfield Road, Edinburgh	10,001	Sainsbury's	17.81	£18.53	Available	£32.85M	5.75%
Friar Street, Reading	3,366	Sainsbury's	4.07	£11.04	Available	£6.75M	5.60%
London Road North, Lowestoft	3,553	Tesco	5.41	£5.75	Available	£2.77M	7.51%
Etruria Road, Stoke- on-Trent	5,912	Sainsbury's	10.39	£16.50	Aug 2014	£16.50M	6.01%
Spring Lane, Bury	4,809	ASDA	8.92	£16.94	Dec 2013	£13.63M	5.78%
Lewes Road, Brighton	6,202	Sainsbury's	12.87	£29.07	May 2013	£29.85M	6.15%

Source: PBA/Savills

Conclusion on Convenience Retail Values

- 4.5.13 Taking the above into account we are of the opinion that a rental value of £200 per sq m and a yield of 5.5% are appropriate assumptions for new build convenience retail as part of the SLAA testing.

4.6 Gypsy & Traveller Accommodation

- 4.6.1 The Council's adopted Core Strategy and Development Control Policies DPD recognises the differing accommodation needs within Gypsy and Traveller communities via Policy DC34. In order to meet the identified need for Gypsy and Traveller accommodation up to 2016 the need for two ten pitch sites has been identified in the Core Strategy and Development Control Policies Development Plan Document. However, the Council recognises that beyond 2016 potential sites may need to be identified to meet an unmet need in the future.
- 4.6.2 In our experience gypsy and traveller sites are usually brought forward as part of large development proposals, where it forms only a small proportion of the overall scheme. The reason for this is that by their very nature, gypsy and traveller sites do not generate any revenue and are therefore purely a cost. As such the private sector is unlikely to develop these sites in isolation unless it is a planning policy requirement for a development scheme. Similarly they may also be included within the development itself. For instance, a ten pitch site (0.2ha) is to be provided by Countryside Zest at their Greater Beaulieu urban extension to the north of Chelmsford. In this instance a contribution of £612,000 towards the cost of building out the 10 pitches will be incurred by the developer in addition to the land contribution from the overall site.

Conclusion on Gypsy & Traveller Accommodation

- 4.6.3 Since these sites are a pure cost and therefore unviable to provide in isolation we have excluded them from our viability assessment. Should the Council intend to allocate sites for this use, through updating its Gypsy and Traveller Policy, then we would recommend that these are considered separately via an appropriate accommodation assessment.

5 Review of Identified Sites

- 5.1.1 It was agreed with the Council that for the purposes of this study, it was not necessary to do a detailed assessment of each site. Instead a high level assessment of the identified sites was carried out. This entailed reviewing key site characteristics and identifying common constraints, which are likely to influence/affect achievability, such as geo-environmental factors, physical constraints, and so on.
- 5.1.2 This then enabled us to develop a series of typologies (i.e. sample sites) representative of the range of sites put forward by developers, landowners and other promoters.
- 5.1.3 As a result of this work, 18 typologies were developed, which are set out in detail at Appendix A. We have provided a brief summary of each of the typologies in Table 5.1.

Table 5.1 Site Typologies

Site Type	Location	Land Type (BF/GF)	Site Size (Gross)	Land Use	Form and Scale
1	Central Chelmsford	BF	0.4 ha	Residential	Flats only – 6+ storeys
2	Central Chelmsford	BF	1 ha	Residential	Flats only – 6+ storeys
3	Urban Area	BF	0.4 ha	Residential	Flats only – between 2 & 3 storeys
4	Urban Area	BF	1 ha	Residential	Flats only – between 2 & 3 storeys
5	Urban Area	GF	0.4 ha	Residential	Flats only – between 2 & 3 storeys
6	Chelmsford Outer Fringe	GF	50 ha	Residential, offices, industrial (B2), and convenience retail.	75% Residential (consisting of 20% flats, 16% 2 bed houses, 39% 3 bed houses & 25% 4+ bed houses); 5% convenience retail (465 sqm); 5% offices (2,000 sqm) & 15% B2 industrial (5,000 sqm)
7	Key Rural Villages Strategic Sites	GF	20 ha	Residential and convenience retail.	95% Residential (consisting of 20% flats, 16% 2 bed houses, 39% 3 bed houses & 25% 4+ bed houses) and 5% convenience retail (465 sqm)
8	Key Rural Villages	GF	0.4 ha	Residential	Houses only (consisting of 36% 2 beds, 39% 3 beds & 25% 4+ beds.)
9	Key Rural Villages	GF	2 ha	Residential	Houses only (consisting of 36% 2 beds, 39% 3 beds & 25% 4+ beds.)

Site Type	Location	Land Type (BF/GF)	Site Size (Gross)	Land Use	Form and Scale
10	Key Rural Villages	GF	5 ha	Residential	100% Residential (consisting of 20% flats, 16% 2 bed houses, 39% 3 bed houses & 25% 4+ bed houses)
11	Other Rural Villages	GF	0.4 ha	Residential	Houses only (consisting of 36% 2 beds, 39% 3 beds & 25% 4+ beds.)
12	Central Chelmsford	BF	0.4 ha	Residential and convenience retail.	95% Residential (consisting of 100% flats at 6+ storeys) and 5% convenience retail (465 sqm)
13	Central Chelmsford	BF	1 ha	Residential, offices and convenience retail.	60% Residential (consisting of 100% flats at 6+ storeys); 30% offices (2,000 sqm) and 10% convenience retail (930 sqm)
14	Central Chelmsford	BF	0.19 ha	Offices	100% offices (2,000 sqm)
15	District Wide	GF	0.10 ha	Managed Workspace	100% managed workspace (465 sqm)
16	District Wide	GF	1 ha	Industrial – B2	100% B2 industrial (2,000 sqm)
17	District Wide	GF	1 ha	Industrial – B8	100% B8 industrial (4,000 sqm)
18	District Wide	BF	0.04 ha	Retail - Convenience	100% convenience retail (465 sqm)

Source: PBA

- 5.1.4 From the information provided by the Council, no sites have been formally put forward solely for convenience retail. However, the Authorities Core Strategy indicates that up to 100,000 sq.m of retail floorspace is needed in the Town Centre up to 2021. Although the majority of the growth is for comparison retail we have assumed that a small amount of convenience retail may also be needed.

6 Viability Assumptions

6.1 Introduction

- 6.1.1 Viability assessments require us to make a series of assumptions about the development in question. We have therefore used industry standard cost and value assumptions in addition to market evidence. A full list of the assumptions used in the development appraisals are contained in Appendix B

6.2 Sales Values

- 6.2.1 To establish suitable sale values for the study a high level market assessment was undertaken which updates the assessment carried as part of CIL. This is documented in Chapter 4 of this report. For residential this involved analysing a range of data from zoopla.co.uk, Land Registry and rightmove.co.uk. For the employment uses this involved reviewing published market data from Focus, EGi, JLL, CBRE, Bidwells and LSH as well as PBA's own in-house data gathered from undertaking a number of site specific S.106 viability studies in the administrative area.

- 6.2.2 Table 6.1 sets out the values used in the viability model.

Table 6.1 Sales Values by Land Use

Land Use	Value per sq.m
Residential – Flats	£3,513
Residential – Houses	£3,513
Offices	£250
Managed Workspace	£40
Industrial – B2	£72
Industrial – B8	£70
Retail – Convenience	£200

Source: Various

- 6.2.3 In terms of the commercial uses, the values above have been capitalised by applying an appropriate yield. These are based on our analysis of yield evidence as set out in Chapter 4 of this report. Table 6.2 summarises the yields applied for each use.

Table 6.2 Capitalisation Rates

Land Use	Yield
Offices	7.5%
Managed Workspace	9%
Industrial – B2	7%
Industrial – B8	6%
Retail – Convenience	5.5%

Source: Various

6.3 Affordable Housing Transfer Values

- 6.3.1 The affordable housing transfer values have been calculated in conjunction with the Council given their established relationship with Registered Providers operating in the administrative area.
- 6.3.2 We have analysed these figures against industry standard transfer values for both affordable rent and intermediate housing.
- 6.3.3 Table 6.3 summarises the allowances including in the viability model.

Table 6.3 Affordable Housing Transfer Values

Type	Size (sqm)	Average Market Value	Affordable Rent @ 50% of Market Value	Shared Ownership @ 60% of Market Value
2 bed flat	51	£143,330	£71,665	£85,998
2 bed house	79	£277,527	£138,764	£166,516
3 bed house	102	£358,326	£179,163	£214,996
4 bed house	124	£435,612	£217,806	£261,367

Source: PBA/Chelmsford City Council

6.4 BCIS Costs - Unit build costs

- 6.4.1 Build costs have been based on industry recognised data sources such as Build Cost Information Service (BCIS) and comparable schemes PBA has been involved in.
- 6.4.2 Table 6.4 sets out the BCIS rate per use that have been applied. The BCIS data has been re-based for Essex (last updated on 27th June 2015 & 25th July 2015). We have applied the median build cost for each use. This has been used as it is the middle statistic (NOT the middle of the range), therefore unlike the mean, it is not as easily affected by rogue figures.

Table 6.4 BCIS Build Costs – All Uses

House Type	BCIS Description	BCIS Rate (psm)
Apartment	New build flats (apartments), 3-5 storeys	£1,134
Apartment	New build flats (apartments), 6+ storeys	£1,438
House	New build estate housing, generally	£964
Offices	New build, generally and air conditioned	£1,494
Managed Workspace	New build, generally	£1,394
Industrial – B2	New build factories, 500 to 2,000 sq.m.	£767
Industrial – B8	New build warehouses, over 2,000 sq.m	£472
Retail – Local Convenience	New build, up to 1,000 sq.m	£1,164

Source: BCIS online (last updated on 27th June 2015 & 25th July 2015)

6.5 Site Externals

- 6.5.1 External site costs relate to the on-site works in providing service connections, driveways, gardens, estate roads, sustainable urban drainage (SUDs) and swales etc. This will vary from site to site but typically range between 10% to 15% of build cost, depending on the mix, type of site and use. We have therefore assumed different allowances, depending on whether the site is a greenfield or brownfield site. These are summarised in Table 6.5.

Table 6.5: Site Externals

Land Type	Percentage of Build Cost
Brownfield	10%
Greenfield	15%

Source: PBA

6.6 Remediation/Demolition

- 6.6.1 It is envisaged that some of the future development supply will come from brownfield sites. We would therefore expect some remediation work and/or demolition to be needed on these sites prior to them being built out. To reflect the additional costs associated with this we have included an allowance of £200,000 per hectare, based on industry standards.

6.7 Flood Mitigation

- 6.7.1 The extent of flood mitigation will vary from site to site and will depend on many factors such as development size, development type, gross to net site area and site topography. To reflect the additional costs involved for flood mitigation measures we have allowed for the following increases in BCIS costs.

6.7.2 Table 6.6 sets out the allowances included in the viability model.

Table 6.6 Flood Risk Cost Allowances by Flood Zone

Flood Zone	Flood Risk Score	Cost Allowance Uplift on BCIS Costs
Zone 1: Low Probability	1	3%
Zone 2: Medium Probability	2	8%
Zone 3a: High Probability	3a	15%
Zone 3b: The Functional Floodplain	3b	20%

Source: Environment Agency/PBA

6.8 Professional fees

6.8.1 Professional fees reflect costs associated for items such as project management, planning, surveyors, architects, masterplanning, landscape architect, engineers, ecology, transport, building control, heritage and arboriculture.

6.8.2 The Harman report states that: *Figures for fees relating to design, planning and other professional fees can range from 8 -10% for straightforward sites to 20% for the most complex, multi-phase*¹⁹

6.8.3 In our viability model, we have applied professional fees at 10% of build which is in line with industry standards.

6.9 Sales and Marketing Costs

6.9.1 Sales and marketing costs are based on comparable schemes which we have assessed and are in line with industry standards. They have been applied as follows:

- Marketing & sale costs on open market dwellings – 3% of market housing Gross Development Value (GDV). The Harman report provides a range of sales and marketing costs, and states that ‘an allowance should be made for these costs of around 3-5% of the GDV.’ Therefore, the cost applied is reasonable, all be it at the lower end of the range.
- Legal fees on open market dwellings - £500 per unit. This is cost is in line with industry standards.
- Sales and marketing costs for the employment uses have been assumed at 1% of the GDV.
- Letting costs for the employment uses have been assumed at 10% of the rental value which is in line with industry standards.
- Legal fees on sale have been assumed at 0.5% of the GDV, whilst for a letting an allowance of 5% of the rental income has been assumed. In both cases these allowances are in line with industry standards.
- Stamp duty and tax – HMRC prevailing rates.

¹⁹ Local Housing Delivery Group (June 2012) *Viability Testing Local Plans – Advice for planning practitioners*

6.10 Contingency

- 6.10.1 Contingency is based upon the risk associated with each site and is calculated as a percentage of build cost. Contingency allowances typically range between 3% to 10%. We have adopted a rate of 5% which falls within this range.

6.11 Affordable Housing

- 6.11.1 The current affordable housing policy for the administrative area is a target of 35% on sites of 0.5ha or above 15 dwellings - as set out in Policy DC31 of the Council's Local Development Framework (LDF).
- 6.11.2 Under paragraph 5.8 of the City Council's Planning Obligations Supplementary Planning Document (SPD), adopted June 2014 the mix of affordable housing is to include 23.45% of the total number of dwellings within the development as social rented accommodation and the balance of the 35% Affordable Housing, to be intermediate housing.
- 6.11.3 The apportionment between the different tenure types is summarised in Table 6.7.

Table 6.7 Affordable Housing Requirement by Tenure Type

Affordable Housing Policy (District wide)	Affordable Rent	Intermediate Housing
35%	67%	33%

Source: Chelmsford City Council Planning Obligations Supplementary Planning Document (SPD), adopted June 2014.

6.12 Section 106 contributions

- 6.12.1 In addition to affordable housing contributions the Council seeks planning obligations through its Planning Obligations SPD (June 2014) for education, health, public transport improvements etc. These contributions are based on data provided by the Council as well as PBA's experience of undertaking SLAA viability studies. We have assumed the rates set out in Table 6.8.

Table 6.8 S.106 Contributions

Description	S.106 per unit
Non-Strategic Sites	£1,000
Strategic Sites	£5,000

Source: Chelmsford City Council/PBA

6.13 CIL

- 6.13.1 CIL allows authorities to raise funds from developers who are undertaking new building projects in their area. The funds raised are used to provide infrastructure which is needed in order to support the growth of the area administered by Chelmsford City Council.
- 6.13.2 CIL is applied as a charge per gross square metre of new building and is payable on new residential and retail developments in Chelmsford. Site specific contributions will still be required via S.106 agreements in addition to the provision of affordable housing.
- 6.13.3 On 1st June 2014, Chelmsford's CIL came into effect via its CIL Charging Schedule and applies to all development permitted after this date.
- 6.13.4 Table 6.9 sets out the rates payable on new residential and retail development.

Table 6.9: Community Infrastructure Levy for Retail and Residential Development

Use	Rate per sq.m
Residential	£125
Retail - Convenience	£150

Source: Chelmsford City Council's CIL Charging Schedule

6.14 Developers' profit

- 6.14.1 Profit is a reward for the developers' risk in undertaken the development. RICS guidance states:

*...developer's profit allowance, should be at a level reflective of the market at the time of the assessment being undertaken. It will include the risks attached to the specific scheme. This will include both property-specific risk, i.e. the direct development risks within the scheme being considered, and also broader market risk issues, such as the strength of the economy and occupational demand, the level of rents and capital values, the level of interest rates and availability of finance'*²⁰

- 6.14.2 Based on our experience of recent comparable schemes and the market's appetite for risk, a profit margin of 17.5% of Gross Development Value (GDV) on the market housing and 6% GDV of affordable housing has been applied (i.e. a contractors profit on the affordable housing). These rates are also in line with industry standards.
- 6.14.3 On the commercial units we have applied a profit of 15% on GDV. This is again in line with industry standards and reflective of the level of return required by the market.

6.15 Finance

- 6.15.1 Included within our viability model is a cashflow. This methodology is in line with both the Harman and the RICS Viability for planning guidance. The cashflow assumes the scheme is 100% debt financed at an interest rate of 7% - this is based on typical current market interest rates.

6.16 Threshold Land Values

- 6.16.1 We have based our approach to the threshold land values by:

- Analysing greenfield and brownfield land values
- Reference to HCA Guidance, The Harman Report and DCLG Guidance.
- Analysis of land values agreed for the site specific S.106 viability work which PBA has undertaken on behalf of the Council.

Greenfield Land

- 6.16.2 In calculating a greenfield land value we started with an existing use value. We have based the existing use value on agricultural use. Analysis of quoted farmland prices in the Essex area suggests an average of £24,000 per gross hectare.
- 6.16.3 The HCA Transparent Viability Assumptions Report recommends to incentivise agricultural land to come forward for development a multiplier of between 10 and 20 times agricultural value should be applied. Applying these multipliers would result in a gross land value per

²⁰ RICS (2012) *Financial viability in planning guidance GN 94/2012 (16)*

hectare of between £240,000 and £480,000. We have cross referenced this with the DCLG Turner Morum report which suggests that land values for greenfield land are typically between £246,000 and £369,000 per gross hectare.

- 6.16.4 We are of the view that Chelmsford has a much stronger housing market than other parts of Essex and therefore recommend assuming the upper end of this range i.e. £480,000 per gross hectare. To this figure we need to add the cost of site servicing (infrastructure and utility costs) and make an adjustment for gross to net site area. We can then come to a conclusion on a greenfield site value per net developable hectare.
- 6.16.5 Analysis of the sample greenfield sites in Chapter 5 shows that the average gross to net is 60%. If we apply this ratio to our land value figure of £480,000 per gross hectare results in an adjusted land value of £686,000 per net hectare for an unserviced site.
- 6.16.6 The Harman report²¹ provides a range of £17,000 to £23,000 per plot for strategic infrastructure and utility costs. Taking the bottom of the range and applying it to the average development density of our greenfield scenario i.e. 35 per hectare results in a site servicing cost of £800,000 per net hectare.
- 6.16.7 If we add the site servicing costs of £595,000 per net hectare to our unserviced land value of £800,000 per net hectare equates to greenfield serviced land value for an unallocated site of £1.4 million per net hectare.

Brownfield Land

- 6.16.8 Through our experience of Section 106 viability assessments on behalf of the Council shows that there is a significant variance across Chelmsford's brownfield sites. This is due to the specific characteristics and issues of each individual site. We have seen a general trend across the area of central brownfield sites struggling to achieve policy contributions. At the same time we are also seeing instances where the premium/hope value is over-inflated due to landowners unrealistic expectations on what the land/premises are worth.
- 6.16.9 The starting position of our analysis is to consider the existing use values of brownfield sites. Our analysis of existing use values for offices in Chelmsford is circa. £1.7 million per net hectare. Average industrial land values are £688,000 per hectare. These two figures provide a range of values for our analysis.
- 6.16.10 Standard industry practice, which is supported by planning case law, suggests a premium of between 15% to 30% is applied over the existing use value of a site. The chosen percentage is derived from our assessment of the quality of the brownfield sites in the SLAA. The bulk of the sites in the urban area are either blocks of garages or traditional secondary industrial sites. Also, few are protected employment sites which typically command a lower premium as they are less likely to obtain permission for residential development. The potential therefore for these sites to be developed for housing is greater, and this is reflected by applying a higher premium. Landowners expectations will also be higher for these reasons.
- 6.16.11 In the city centre, the sites identified in the SLAA are a combination of vacant industrial land, Council owned buildings, car parks and industrial premises. Many of these are identified in the Local Plan as 'opportunity areas', which recognises their inherent development potential for other higher value uses such as residential. We are of the opinion that on these sites a 30% premium is appropriate rather than the traditional 15% to 20% as there is more certainty that higher value uses will be granted planning permission.

²¹ Local Housing Delivery Group (June 2012) *Viability Testing Local Plans – Advice for planning practitioners (P44)*

- 6.16.12 If we add a 30% premium (this is the hope value associated with the sites inherent development potential/incentive for landowner to sell) to both averages, this produces a land value for offices of £2.2 million per net hectare and a land value for industrial of £894,000 per net hectare.
- 6.16.13 Our assessment of the additional sites put forward through the latest SLAA call for sites has shown that around 30% of all sites are brownfield with only 23% of these located outside of the settlement boundaries. Given that the majority of the housing supply from these sites is likely to come from the main urban areas, where sites constraints are likely to impact on viability, we are of the opinion that a lower land value of £894,000 per net hectare for an unallocated site is appropriate as this value more adequately reflects the nuisances of these sites.

7 Results of Viability Testing

7.1 Introduction

- 7.1.1 This chapter sets out our viability analysis of the 18 sites tested. Appraisal summaries can be found in Appendix C based on current affordable housing policy, Section 106 and CIL contributions set out in Chapter 6.

7.2 The Results

- 7.2.1 The results of the viability testing (Table 7.1) of the purely residential scenarios has shown that 6 out of the 9 typologies produce a positive residual land value and also achieve the threshold land value (i.e. a landowners return is achieved) and are therefore classified as being viable. However, the two Central Chelmsford sites, Site Type 1 & 2, are marginal and unviable respectively. This is due to site constraints such as flood risk and contamination generating additional development costs.
- 7.2.2 In the Urban Area, Site Type 5 is also on the margins of viability. This is because sales values are not enough to support all policy contributions and the remediation of its previous use. Nevertheless, it still produces a residual land value and therefore the landowner may take a view on the threshold land value assumed i.e. by accepting a lower price for the land, thereby allowing the development to come forward.

Table 7.1 Site Typologies - Residential

									Viable?
Site Type No.	Location	Land Use Type	SHLAA Ref	Address	Net site area ha	No of dwellings	Density dph	Per Ha	
				Central Chelmsford					
1	Central Chelmsford	Brownfield	CFS241	Civic Centre Land Site, Duke Street, Chelmsford	0.32	51	160	Marginal	
				Central Chelmsford					
2	Central Chelmsford	Brownfield	CFS278	County Library Headquarters, Goldlay Gardens, Chelmsford	0.80	60	75	No	
3	Urban Area	Brownfield	CFS266	Waterhouse Lane Depot and Nursery Waterhouse Lane, Chelmsford	0.32	21	65	Yes	
4	Urban Area	Brownfield	CFS32	Allotment Gardens Seymour Street Chelmsford Essex	0.80	52	65	Yes	
5	Urban Area	Greenfield	CFS250	Play Area, Cherwell Drive, Chelmsford	0.32	21	65	Marginal	
				Key Rural Villages					
8	Key Rural Villages	Greenfield	CFS104	Horseshoe Farm, Main Road, Bicknacre, Chelmsford, Essex, CM3 4EX	0.32	11	35	Yes	
9	Key Rural Villages	Greenfield	CFS116	Land East of 1-15 Millfields, Danbury, Chelmsford, Essex	1.50	53	35	Yes	
10	Key Rural Villages	Greenfield	CFS46	67 Peartree Lane Bicknacre Chelmsford Essex CM3 4LS	3.50	123	35	Yes	
				Other Rural Villages					
11	Other Rural Villages	Greenfield	CFS25	Land South West of 21 Seven Ash Green Chelmsford	0.32	10	30	Yes	

Source: PBA

- 7.2.3 In terms of the employment typologies (see Table 7.2), three of the five scenarios are viable – they include, the office scheme, B8 industrial scenario and the convenience retail store. In the case of the office scheme and convenience retail store the viability testing shows that at these values, the sites can withstand the additional brownfield remediation costs and still be viable.
- 7.2.4 On the other hand the managed workspace and B2 industrial typologies are unviable and both generate a negative residual land value. In the case of the B2 industrial scheme, the actual cost of the external works maybe lower for those parcels of land in established industrial estates which can connect easily to the existing infrastructure without the need for expensive service connections and upgrades. Similarly if a major occupier can be secured with excellent covenant strength then viability will improve greatly, producing a positive land value. In reality

there maybe instances whereby certain B2 industrial schemes do come forward for development on this basis and contribute to the future supply of employment land. However, the results show that in the immediate term the deliverability of B2 industrial land is uncertain and it is unlikely to improve unless market conditions improve.

- 7.2.5 In terms of the managed workspace site, the short flexible lease terms are geared to attract small businesses. Whilst Chelmsford is a prime office location in Essex in terms of managed workspace it is not a major location for this use when compared against established locations such as London. The nature of the tenants and the flexible lease terms often creates a high level of voids and poor covenant strength, which subsequently impacts on viability. However, that is not to say that all centres will be unviable. For instance, established business centres in Chelmsford, with an experienced and effective team are highly profitable and for these reasons may require additional accommodation to expand. However, the amount of land needed for this uses will be small and it is highly likely that viability will be an issue.

Table 7.2 Site Typologies – Employment

Site Type No.	Site	SHLAA Ref	Address	Net site area ha	Total Floorspace	Viable?
						Per Ha
14	Offices	CFS241	Civic Centre Land Site, Duke Street, Chelmsford	0.06	2,000	Yes
15	Managed Workspace	CFS153	206 and 208 Main Road Broomfield Chelmsford Essex CM1 7AJ	0.12	395	No
16	Industrial - B2	CFS166	Land West of Hanbury Road, Chelmsford	1.00	2,000	No
17	Industrial - B8	CFS117	BAE Works, West Hanningfield Road, Great Baddow, Chelmsford	1.00	4,000	Yes
18	Retail - Convenience	CFS148	Land North of Cuton Hall Lane Chelmer Village Springfield Chelmsford Essex	0.05	465	Yes

Source: PBA

- 7.2.6 In addition to the above scenarios a number of mixed use typologies were also tested (see Table 7.3), these range from large strategic urban extension sites to small intensively developed city centre sites.

Table 7.3 Site Typologies - Mixed

Site Type	Location	Land Use Type	SHLAA Ref	Address	Net site area ha	No of dwellings	Employment Uses	Viable?
								Per Ha
6	Chelmsford Outer Fringe	Greenfield	CFS182	Land North and South of Brick Barns Farm, Mashbury Road, Chignal St James, Chelmsford, Essex	21	840	Convenience retail (465 sqm); Offices (2,000 sqm) & Industrial (5,000 sqm)	Yes
7	Key Rural Villages	Greenfield	CFS173	Land Adjacent Danbury Mission Evangelical Church, Maldon Road, Danbury, Chelmsford, Essex	10.4	416	Convenience retail (465 sqm)	Yes
12	Central Chelmsford	Brownfield	CFS255	45/47 Baddow Road + area at rear Baddow Road Chelmsford CM2 0DD	0.32	48.64	Convenience retail (465 sqm)	No
13	Central Chelmsford	Brownfield	CFS263	Baddow Road Car Park Baddow Road Chelmsford CM2 0DD	0.8	76.8	Offices (2,000 sqm) & Convenience retail (930 sqm)	Yes

Source: PBA

- 7.2.7 It can be seen that the majority of the mixed typologies are viable, providing a positive land value in excess of the threshold land value. From a viability perspective, these sites have the potential to contribute towards the authorities development land supply.
- 7.2.8 Typology 12 is the only mixed use scheme that is unviable. This is a city centre apartment scheme with ground floor convenience retail on a former brownfield site. It does generate a small positive residual land value. This suggests that the combination of site constraints i.e.

flood risk and contamination, in addition to the Council's policy contributions are too much of a burden on the scheme and as such it is unable support all these costs whilst also providing a profitable scheme. City centre sites without these constraints may be more viable. Similarly a more intensely developed apartment scheme may also improve viability. In these instances some small city centre residential and retail schemes will come forward for development. Furthermore, if the Council is prepared to be flexible with their affordable housing policy on these sites then this may generate viable development.

8 Conclusions

- 8.1.1 Based on the information available to us at present, in our assessment the majority of sites tested appear viable. In some instances the Council's policy contributions may need to be 'flexed' on mixed use and apartment city centre schemes that have abnormalities such as flood risk or remediation, to facilitate viable development.
- 8.1.2 In the case of the small apartment schemes in the main urban areas (Typology 5), the testing has shown that these sites are more marginal as although a positive residual land value is generated it is not sufficient for the landowner to sell. These sites may come forward and contribute towards the Council's development land supply but will depend more on the negotiations between the two parties.
- 8.1.3 In terms of the remaining residential scenarios, the results of the viability exercise has shown that medium to large apartment schemes in and around the main urban areas are developable and have the potential to contribute to the authorities development supply in the future. Similarly, the Council can expect greenfield sites in and around the key rural villages and other villages to be viable.
- 8.1.4 The testing of mixed use sites, involved city centre scenarios and strategic urban extension sites in and around Chelmsford and the Key Rural Villages. Apart from the city centre retail and residential scenario (Typology 12), all the scenarios produced a positive residual land value and exceeded the threshold land value. This shows that these different development scenarios are capable of supporting the Council's policy contributions and have the potential to contribute to the areas development needs in the future.
- 8.1.5 Similarly, the majority of employment sites tested are viable. Only the B2 Industrial (Typology 16) and managed workspace (Typology 15) were unviable and in the case of the latter substantially below the threshold land value. Site specific schemes of this nature may be more viable than our high level assessment, however, in general these sites are only likely to come forward if the market improves and/or a landowner is willing to accept a lower margin.
- 8.1.6 If we extrapolate the findings of the sample sites tested in our viability assessment and apply them to the total number of SLAA sites, we can broadly say the following quantum of development sites are viable, marginal or unviable across the city, as shown in Table 8.1. However, in applying them our approach was based on the data provided by the Council at the time of writing this report. Where information relating to the proposed use was unavailable, a residential end use was assumed.

Table 8.1 Viability status and development quantum of SLAA sites as a percentage

Scenario	Total Sites	Viable sites	Marginal sites	Unviable sites
	%	% of sites	% of sites	% of sites
Residential	71%	95.5%	4%	0.5%
Office	1%	100%	0%	0%
Managed workspace	1%	0%	0%	100%
Industrial – B2	3%	0%	0%	100%
Industrial – B8	1%	100%	0%	0%
Convenience retail	0%	0%	0%	0%
Mixed use	17%	98%	0%	2%
Other	6%	n/a	n/a	n/a

Source: PBA

Appendix A List of Site Typologies

Site Typology – Employment & Mixed Use

Site Type No.	Location	Land Type	SHLAA Reference	Proposed Development	Gross site area	Net site area	Net:Gross Ratio	Net yield	Dwellings per ha	Form and Scale
6	Chelmsford Outer Fringe	Greenfield	CFS182	Residential, offices, B2 industrial & convenience retail	50	21	80%	840	40	75% Residential (consisting of 20% flats, 16% 2 bed houses, 39% 3 bed houses & 25% 4+ bed houses); 5% convenience retail (465 sqm); 5% offices (2,000 sqm) & 15% B2 industrial (5,000 sqm)
7	Key Villages Strategic Site	Greenfield	CFS173	Residential & convenience retail	20	10.4	80%	416	40	95% Residential (consisting of 20% flats, 16% 2 bed houses, 39% 3 bed houses & 25% 4+ bed houses) and 5% convenience retail (465 sqm)
12	Central Chelmsford	Brownfield	CFS255	Residential & convenience retail	0.4	0.32	80%	49	160	95% Residential (consisting of 100% flats at 6+ storeys) and 5% convenience retail (465 sqm)
13	Central Chelmsford	Brownfield	CFS263	Residential, offices & convenience retail	1	0.80	80%	77	160	60% Residential (consisting of 100% flats at 6+ storeys); 30% offices (2,000 sqm) and 10% convenience retail (930 sqm)
14	Central Chelmsford	Brownfield	CFS241	Offices	0.06	0.048	80%	0	0	100% offices (2,000 sqm)

Site Typology – Employment & Mixed Use

15	District Wide	Greenfield	CFS153	Managed Workspace	0.12	0.48	40%	0	0	100% managed workspace (465 sqm)
16	District Wide	Greenfield	CFS166	Industrial – B2	2.5	1	40%	0	0	100% B2 industrial (2,000 sqm)
17	District Wide	Greenfield	CFS117	Industrial – B8	2.5	1	40%	0	0	100% B8 industrial (4,000 sqm)
18	District Wide	Brownfield	CFS148	Convenience Retail	0.05	0.04	80%	0	0	100% convenience retail (465 sqm)

Site Typology – Residential

(Including housing phases for the strategic sites)

Site Type No.	Location	Land Type	SHLAA Reference	Size Category	Gross site area	Net site area	Net:Gross Ratio	Gross yield	Net yield	Dwellings per ha	Form and Scale
1	Central Chelmsford	Brownfield	CFS241	Small	0.4	0.32	80%	64	51	160	Flats only – 6+ storeys
2	Central Chelmsford	Brownfield	CFS278	Medium	1	0.80	80%	75	60	75	Flats only – 6+ storeys
3	Urban Area	Brownfield	CFS266	Small	0.4	0.32	80%	26	21	65	Flats only – between 2 & 3 storeys
4	Urban Area	Brownfield	CFS32	Medium	1	0.80	80%	65	52	65	Flats only – between 2 & 3 storeys
5	Urban Area	Greenfield	CFS250	Small	0.4	0.32	80%	26	21	65	Flats only – between 2 & 3 storeys
6	Chelmsford Outer Fringe	Greenfield	CFS182	Large	50	25.00	55%	2000	825	40 (average)	80% houses & 20% flats
7	Key Rural Villages Strategic Sites	Greenfield	CFS173	Large	20	10	55%	800	418	40	80% houses & 20% flats
8	Key Rural Villages	Greenfield	CFS104	Small	0.4	0.32	80%	14	11	35	Houses only
9	Key Rural Villages	Greenfield	CFS116	Medium	2	1.5	75%	70	53	35	Houses only
10	Key Rural Villages	Greenfield	CFS46	Large	5	3.5	70%	175	123	35	80% houses & 20% flats
11	Other Rural Villages	Greenfield	CFS25	Small	0.4	0.32	80%	12	10	30	Houses only

Appendix B Appraisal Assumptions

Assumption	Source	Notes																				
Revenue																						
Sales values of residential and employment uses	EGI, CoStar, Land Registry, market comparables & Consultation	<p>Property values are derived from different sources, depending on land use. For housing, Land Registry data forms a basis for analysis. This provides a full record of all individual transactions. This data is then supplemented with conversations with local agents, which allows us to form a view on new build sales values.</p> <p>In terms of the employment, EGI and CoStar data forms the basis of our analysis, which we have supplement with our own in-house data gathered from undertaking a number of site specific S.106 viability studies in the administrative area.</p> <p>The values used are as follows:</p> <p>Houses - £3,513 per sq.m Flats - £3,513 per sq.m Offices - £250 per sq m capitalised at 7.5% Managed Workspace - £40 per sq m capitalised at 9.5% Industrial – B2 - £72 per sq m capitalised at 7%. Industrial – B8 - £83 per sq m capitalised at 6.75%. Convenience - £200 per sq m capitalised at 5.5%.</p>																				
Affordable housing transfer values	PBA and Chelmsford City Council	<p>We have assumed the following price paid per unit as a percentage of market value as follows:</p> <ul style="list-style-type: none">Affordable Rent = 50% of open market value;Intermediate Housing = 60% of market value. <p>This equates to the following values per sq.m:</p> <p>Affordable Rent</p> <table><tr><th>Type</th><th>Value per sq.m</th></tr><tr><td>Houses</td><td>£1,757</td></tr><tr><td>Flats</td><td>£2,108</td></tr></table> <p>Intermediate Housing</p> <table><tr><th>Type</th><th>Value per sq.m</th></tr><tr><td>Houses</td><td>£1,757</td></tr><tr><td>Flats</td><td>£2,108</td></tr></table>	Type	Value per sq.m	Houses	£1,757	Flats	£2,108	Type	Value per sq.m	Houses	£1,757	Flats	£2,108								
Type	Value per sq.m																					
Houses	£1,757																					
Flats	£2,108																					
Type	Value per sq.m																					
Houses	£1,757																					
Flats	£2,108																					
Construction costs																						
Construction	BCIS Online	<p>BCIS is published by RICS on a quarterly basis. BCIS offers a range of prices dependent on the final specification and are derived from BCIS Review of Building Prices data of actual prices in the marketplace.</p> <p>The build costs used in the model are based on median rates adjusted for location. They exclude any allowance for externals which is treated separately.</p> <p>The following build costs used are rebased for Essex:</p> <table><tr><td>Market houses</td><td>£964 per sq.m</td></tr><tr><td>Affordable rent houses</td><td>£964 per sq.m</td></tr><tr><td>Intermediate houses</td><td>£964 per sq.m</td></tr><tr><td>Market flats (3 – 5 storeys)</td><td>£1,136 per sq.m</td></tr><tr><td>Affordable rent flats (3 – 5 storeys)</td><td>£1,136 per sq.m</td></tr><tr><td>Intermediate flats (3 – 5 storeys)</td><td>£1,136 per sq.m</td></tr><tr><td>Market flats (6+ storeys)</td><td>£1,438 per sq.m</td></tr><tr><td>Affordable rent flats (6+ storeys)</td><td>£1,438 per sq.m</td></tr><tr><td>Intermediate flats (6+ storeys)</td><td>£1,438 per sq.m</td></tr><tr><td>Offices (Generally & Air Conditioned)</td><td>£1,494 per sq.m</td></tr></table>	Market houses	£964 per sq.m	Affordable rent houses	£964 per sq.m	Intermediate houses	£964 per sq.m	Market flats (3 – 5 storeys)	£1,136 per sq.m	Affordable rent flats (3 – 5 storeys)	£1,136 per sq.m	Intermediate flats (3 – 5 storeys)	£1,136 per sq.m	Market flats (6+ storeys)	£1,438 per sq.m	Affordable rent flats (6+ storeys)	£1,438 per sq.m	Intermediate flats (6+ storeys)	£1,438 per sq.m	Offices (Generally & Air Conditioned)	£1,494 per sq.m
Market houses	£964 per sq.m																					
Affordable rent houses	£964 per sq.m																					
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Affordable rent flats (6+ storeys)	£1,438 per sq.m																					
Intermediate flats (6+ storeys)	£1,438 per sq.m																					
Offices (Generally & Air Conditioned)	£1,494 per sq.m																					

		Managed Workspace (Generally)	£1,394 per sq.m															
		Industrial – B2 (New Build Factories, 500 to 2,000 sqm)	£767 per sq.m															
		Industrial – B8 (New Build Warehouses, over 2,000 sqm)	£472 per sq.m															
		Retail – Local Convenience (up to 1,000 sqm)	£1,164 per sq.m															
Remediation/ Demolition	Industry Standards	We have assumed the following remediation costs: Greenfield £0 per hectare Brownfield £200,000 per hectare																
Plot external	Industry Standards	These covers external build costs for site preparation and includes items such as internal access roads, landscaping, open space, drainage, utilities and services within the site. We have allowed the following percentage of build costs for these items: <table><tr><td>Greenfield</td><td>15%</td></tr><tr><td>Brownfield</td><td>10%</td></tr></table> These exclude abnormal site development costs and exceptional offsite infrastructure.		Greenfield	15%	Brownfield	10%											
Greenfield	15%																	
Brownfield	10%																	
CIL	Council Policy	The Community Infrastructure Levy (CIL) is based on the City Council's Charging Schedule. The following rates have been assumed for residential and convenience retail: Residential - £125 per sq.m Convenience Retail - £150 per sq.m																
Developer Contributions (S106/S278)	Planning policy, PBA & Council's Database	In addition to affordable housing contributions the Council seeks planning obligations through its Planning Obligations SPD (June 2014) for education, health, public transport improvements etc. These contributions are based on the S.106 Infrastructure Assumptions included in Chelmsford City Council's CIL Viability Evidence Base Report (February 2013). We have applied the following. <table><tr><td>S.106</td><td>£1,000 per unit</td></tr><tr><td>S.106 – Strategic Sites</td><td>£5,000 per unit</td></tr></table>		S.106	£1,000 per unit	S.106 – Strategic Sites	£5,000 per unit											
S.106	£1,000 per unit																	
S.106 – Strategic Sites	£5,000 per unit																	
Flood Mitigation	Allowance	The extent of flood risk mitigation will vary from site to site and will depend on many factors such as: development size, development type, site area gross to net, and site topography. To reflect additional costs involved for flood mitigation measures we have allowed for the following increases in BCIS costs. <table><tr><td></td><td>Flood risk score</td><td>Cost allowance uplift</td></tr><tr><td>Zone 1: Low Probability</td><td>1</td><td>3%</td></tr><tr><td>Zone 2: Medium Probability</td><td>2</td><td>8%</td></tr><tr><td>Zone 3a: High Probability</td><td>3a</td><td>15%</td></tr><tr><td>Zone 3b: Functional Floodplain</td><td>3b</td><td>20%</td></tr></table>			Flood risk score	Cost allowance uplift	Zone 1: Low Probability	1	3%	Zone 2: Medium Probability	2	8%	Zone 3a: High Probability	3a	15%	Zone 3b: Functional Floodplain	3b	20%
	Flood risk score	Cost allowance uplift																
Zone 1: Low Probability	1	3%																
Zone 2: Medium Probability	2	8%																
Zone 3a: High Probability	3a	15%																
Zone 3b: Functional Floodplain	3b	20%																
Contingency	Industry Standards	Contingency is an expression of risk relating to a specific scheme and will vary from site to site. We have adopted a generic average of 5% though in practice it will vary.																
Fees																		
Professional fees	Industry Standards	We have assumed 10% of development costs based on accepted industry standards.																
Sale costs/Letting Fees	Industry Standards	We have not allowed for marketing or letting fees for the convenience retail scenarios as we have assumed the development would be pre-let. Fees associated with the lettings and the investment sale are based upon the																

		following industry standards:		
			Sales	Lettings
		Surveyor -	1.00%	10.00%
		Legal -	0.50%	5.00%
		Stamp duty has been charged at the prevailing rate.		
Finance costs	Industry standards	Finance costs assume an interest rate of 7%.		
Stamp Duty on Land Purchase	HMRC	Stamp duty has been charged on the land purchase at the prevailing rate.		
Professional fees on Land Purchase	Industry standards	Fees associated with the land purchase are based upon the following industry standards:		
		Surveyor -	1.00%	
		Legal -	0.75%	
Profit				
Profit	Industry standards	Developer profit is a reflection of development risk, the more risk associated with a project the greater return is sought to off-set the risk. It is industry practice that a lower developer profit is applied to the affordable housing units as the risk here is mitigated through having a end-user in place (i.e. pre-sales) prior to construction. The following rates have been applied based on market comparables of similar schemes:		
		Private Housing	17.50% of value	
		Affordable	6% of value	
		Employment	15% of value	
Threshold Land Value per net developable ha				
Threshold Land Value	PBA & market comparables	We have examined a cross section of residential and commercial land comparables. We aim to arrive at the price that a landowner will accept for a serviced site, with roads and major utilities to the site boundary. Note that where sites require remediation this has been dealt with by way of a separate cost to the developer.		
		In setting a suitable threshold land value we have considered the Harman report that: "Threshold Land Value is based on a premium over current use values and credible alternative use values (noting the exceptions below)." Therefore, where the site has been identified as brownfield we have considered this to be an employment value plus landowners premium (applied at 30%), with greenfield sites assessed against residential values. Employment land values vary across the District depending on location and actual employment use. Residential values depend on local market conditions and are therefore subject to change. The existing use value plus premium is an acceptable methodology set out in the Harman report.		
		The following land values have been used:		
		Brownfield	£894,000	per net ha
		Greenfield	£1,400,000	per net ha
Other				
Time-scales - build rate	Industry Standards	For the residential e have assumed the following build out period:		
		Small	24 per annum	
		Medium	32 per annum	
		Large	32 per annum	
		Key Rural Villages Strategic Sites	50 per annum	
		Chelmsford Outer Fringe	150 per annum	

		For the commercial schemes we have assumed the following build out period:																						
		<table><tr><td>Offices</td><td colspan="3">9 months</td></tr><tr><td>Managed Workspace</td><td colspan="3">6 months</td></tr><tr><td>Industrial – B2</td><td colspan="3">9 months</td></tr><tr><td>Industrial – B8</td><td colspan="3">9 months</td></tr><tr><td>Convenience Retail</td><td colspan="3">6 months</td></tr></table>			Offices	9 months			Managed Workspace	6 months			Industrial – B2	9 months			Industrial – B8	9 months			Convenience Retail	6 months		
Offices	9 months																							
Managed Workspace	6 months																							
Industrial – B2	9 months																							
Industrial – B8	9 months																							
Convenience Retail	6 months																							
Threshold Land Value	PBA & market comparables	<p>We have examined a cross section of residential and commercial land comparables. We aim to arrive at the price that a landowner will accept for a serviced site, with roads and major utilities to the site boundary. Note that where sites require remediation this has been dealt with by way of a separate cost to the developer.</p> <p>In setting a suitable threshold land value we have considered the Harman report that: "Threshold Land Value is based on a premium over current use values and credible alternative use values (noting the exceptions below)." Therefore, where the site has been identified as brownfield we have considered this to be an employment value plus landowners premium (applied at 30%), with greenfield sites assessed against residential values. Employment land values vary across the District depending on location and actual employment use. Residential values depend on local market conditions and are therefore subject to change. The existing use value plus premium is an acceptable methodology set out in the Harman report.</p> <p>The following land values have been used:</p> <table><tr><td>Brownfield</td><td>£894,000</td><td>per net ha</td></tr><tr><td>Greenfield</td><td>£1,400,000</td><td>per net ha</td></tr></table>			Brownfield	£894,000	per net ha	Greenfield	£1,400,000	per net ha														
Brownfield	£894,000	per net ha																						
Greenfield	£1,400,000	per net ha																						
Average unit size	Industry standards, market comparables & Nationally Described Space Standards	<p>In terms of the residential units the average sizes assumed are based on the Nationally Described Space Standard – Technical Requirements Consultation Draft (September 2014). The following unit sizes have been assumed in the model:</p> <p>Residential</p> <table><tr><td>Houses – 2 bed</td><td>79 sq.m</td></tr><tr><td>Houses – 3 bed</td><td>102 sq.m</td></tr><tr><td>Houses – 4+ bed</td><td>124 sq.m</td></tr><tr><td>Flats NIA</td><td>51 sq.m</td></tr><tr><td>Flats GIA</td><td>60 sq.m</td></tr></table> <p>Employment</p> <table><tr><td>Offices</td><td>2,000 sq.m</td></tr><tr><td>Managed Workspace</td><td>465 sq.m</td></tr><tr><td>Industrial B2</td><td>2,000 sq.m</td></tr><tr><td>Industrial B8</td><td>4,000 sq.m</td></tr><tr><td>Convenience Retail</td><td>465 sq.m</td></tr></table>			Houses – 2 bed	79 sq.m	Houses – 3 bed	102 sq.m	Houses – 4+ bed	124 sq.m	Flats NIA	51 sq.m	Flats GIA	60 sq.m	Offices	2,000 sq.m	Managed Workspace	465 sq.m	Industrial B2	2,000 sq.m	Industrial B8	4,000 sq.m	Convenience Retail	465 sq.m
Houses – 2 bed	79 sq.m																							
Houses – 3 bed	102 sq.m																							
Houses – 4+ bed	124 sq.m																							
Flats NIA	51 sq.m																							
Flats GIA	60 sq.m																							
Offices	2,000 sq.m																							
Managed Workspace	465 sq.m																							
Industrial B2	2,000 sq.m																							
Industrial B8	4,000 sq.m																							
Convenience Retail	465 sq.m																							

Appendix C Detailed Appraisals

Peter Brett Associates

Development Appraisal

Report Date: 14 August 2015

Summary Appraisal for Phase 1 Offices
REVENUE
Rental Area Summary

	Units	m ²	Rate m ²	Initial MRV/Unit	Net Rent at Sale
Offices	1	1,700.00	£250.00	£425,000	425,000

Investment Valuation

Offices					
Current Rent	425,000	YP @	7.5000%	13.3333	5,666,667

NET REALISATION
5,666,667
OUTLAY
ACQUISITION COSTS

Residualised Price (0.06 Ha £13,568,784.96 pHect)			814,127	
Stamp Duty		4.00%	32,565	
Agent Fee		1.00%	8,141	
Legal Fee		0.75%	6,106	
				860,939

CONSTRUCTION COSTS

Construction	m ²	Rate m ²	Cost	
Offices	2,000.00	£1,494.00	2,988,000	2,988,000
Contingency		5.00%	149,400	
Remediation/Demolition	0.06 ha	200,000.00 /ha	12,000	
				161,400
Other Construction				
External Works		10.00%	298,800	
				298,800

PROFESSIONAL FEES

Architect	10.00%	328,680	
			328,680

MARKETING & LETTING

Letting Agent Fee	10.00%	42,500	
Letting Legal Fee	5.00%	21,250	
			63,750

DISPOSAL FEES

Sales Agent Fee	1.00%	56,667	
Sales Legal Fee	0.50%	28,333	
			85,000

FINANCE

Debit Rate 7.000% Credit Rate 0.000% (Nominal)			
Land		56,607	
Construction		84,358	
Total Finance Cost			140,965

TOTAL COSTS
4,927,534
PROFIT
739,132
Performance Measures

Profit on Cost%	15.00%
Profit on GDV%	13.04%
Profit on NDV%	13.04%
Development Yield% (on Rent)	8.63%
Equivalent Yield% (Nominal)	7.50%
Equivalent Yield% (True)	7.87%
IRR	39.24%

Rent Cover
Profit Erosion (finance rate 7.000%)

1 yr 9 mths
2 yrs

Peter Brett Associates

Development Appraisal

Report Date: 14 August 2015

Summary Appraisal for Phase 1 Managed Workspace
REVENUE
Rental Area Summary

	Units	m ²	Rate m ²	Initial MRV/Unit	Net Rent at Sale	Initial MRV
Managed Workspace	1	395.25	£40.00	£15,810	15,810	15,810

Investment Valuation
Managed Workspace

Current Rent	15,810	YP @	9.5000%	10.5263	166,421	
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NET REALISATION
166,421
OUTLAY
ACQUISITION COSTS

Residualised Price			(677,168)	(677,168)		
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CONSTRUCTION COSTS
Construction

	m ²	Rate m ²	Cost	
Managed Workspace	465.00	£1,394.00	648,210	648,210
Contingency		5.00%	32,410	32,410

Other Construction

External Works		10.00%	64,821	64,821
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PROFESSIONAL FEES

Architect		10.00%	71,303	71,303
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MARKETING & LETTING

Letting Agent Fee		10.00%	1,581	
Letting Legal Fee		5.00%	791	
				2,372

DISPOSAL FEES

Sales Agent Fee		1.00%	1,664	
Sales Legal Fee		0.50%	832	
				2,496

FINANCE

Debit Rate 7.000% Credit Rate 0.000% (Nominal)				
Land			(10,990)	
Construction			11,259	
Total Finance Cost				269

TOTAL COSTS
144,714
PROFIT
21,707
Performance Measures

Profit on Cost%	15.00%
Profit on GDV%	13.04%
Profit on NDV%	13.04%
Development Yield% (on Rent)	10.93%
Equivalent Yield% (Nominal)	9.50%
Equivalent Yield% (True)	10.09%
IRR	(13.13)%
Rent Cover	1 yr 4 mths
Profit Erosion (finance rate 7.000%)	2 yrs

Peter Brett Associates

Development Appraisal

Report Date: 14 August 2015

Summary Appraisal for Phase 1 Supermarket
REVENUE
Rental Area Summary

	Units	m ²	Rate m ²	Initial MRV/Unit	Net Rent at Sale
Retail - Convenience	1	465.00	£200.00	£93,000	93,000

Investment Valuation
Retail - Convenience

Current Rent	93,000	YP @	5.5000%	18.1818	1,690,909
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NET REALISATION
1,690,909
OUTLAY
ACQUISITION COSTS

Residualised Price (0.05 Ha	£11,870,908.37 pHect)		593,545		
Stamp Duty		4.00%	23,742		
Agent Fee		1.00%	5,935		
Legal Fee		0.75%	4,452		
				627,674	

CONSTRUCTION COSTS
Construction

	m ²	Rate m ²	Cost		
Retail - Convenience	465.00	£1,164.00	541,260	541,260	
Contingency		5.00%	27,063		
Remediation/Demolition	0.05 ha	200,000.00 /ha	10,000		
CIL	465.00 m ²	150.00 pm ²	69,750		
				106,813	

Other Construction

External Works		10.00%	54,126		
				54,126	

PROFESSIONAL FEES

Architect		10.00%	59,539		
				59,539	

MARKETING & LETTING

Letting Agent Fee		10.00%	9,300		
Letting Legal Fee		5.00%	4,650		
				13,950	

DISPOSAL FEES

Sales Agent Fee		1.00%	16,909		
Sales Legal Fee		0.50%	8,455		
				25,364	

FINANCE

Debit Rate 7.000% Credit Rate 0.000% (Nominal)					
Land			29,764		
Construction			11,865		
Total Finance Cost				41,630	

TOTAL COSTS
1,470,355
PROFIT
220,554
Performance Measures

Profit on Cost%	15.00%
Profit on GDV%	13.04%
Profit on NDV%	13.04%
Development Yield% (on Rent)	6.33%
Equivalent Yield% (Nominal)	5.50%
Equivalent Yield% (True)	5.69%

IRR	39.82%
Rent Cover	2 yrs 4 mths
Profit Erosion (finance rate 7.000%)	2 yrs

Initial
MRV
93,000

Peter Brett Associates

Development Appraisal

Report Date: 14 August 2015

Summary Appraisal for Phase 1 Industrial - B8
REVENUE
Rental Area Summary

	Units	m ²	Rate m ²	Initial MRV/Unit	Net Rent at Sale
Industrial - B8	1	4,000.00	£70.00	£280,000	280,000

Investment Valuation
Industrial - B8

Current Rent	280,000	YP @	6.7500%	14.8148	4,148,148
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NET REALISATION
4,148,148
OUTLAY
ACQUISITION COSTS

Residualised Price (1.00 Ha £950,398.85 pHect)			950,399	
Stamp Duty	4.00%		38,016	
Agent Fee	1.00%		9,504	
Legal Fee	0.75%		7,128	
				1,005,047

CONSTRUCTION COSTS
Construction

	m ²	Rate m ²	Cost	
Industrial - B8	4,000.00	£472.00	1,888,000	1,888,000
Contingency		5.00%	94,400	94,400

Other Construction

External Works	10.00%	188,800		188,800
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PROFESSIONAL FEES

Architect	10.00%	207,680		207,680
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MARKETING & LETTING

Letting Agent Fee	10.00%	28,000		
Letting Legal Fee	5.00%	14,000		42,000

DISPOSAL FEES

Sales Agent Fee	1.00%	41,481		
Sales Legal Fee	0.50%	20,741		62,222

FINANCE

Debit Rate 7.000% Credit Rate 0.000% (Nominal)				
Land			66,082	
Construction			52,854	
Total Finance Cost				118,936

TOTAL COSTS
3,607,085
PROFIT
541,064
Performance Measures

Profit on Cost%	15.00%
Profit on GDV%	13.04%
Profit on NDV%	13.04%
Development Yield% (on Rent)	7.76%
Equivalent Yield% (Nominal)	6.75%
Equivalent Yield% (True)	7.04%
IRR	35.13%

Rent Cover
Profit Erosion (finance rate 7.000%)

1 yr 11 mths
2 yrs

Peter Brett Associates

Development Appraisal

Report Date: 14 August 2015

Summary Appraisal for Phase 1 Industrial B2
REVENUE
Rental Area Summary

	Units	m ²	Rate m ²	Initial MRV/Unit	Net Rent at Sale
Industrial - B2	1	2,000.00	£72.00	£144,000	144,000

Investment Valuation
Industrial - B2

Current Rent	144,000	YP @	7.0000%	14.2857	2,057,143
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NET REALISATION
2,057,143
OUTLAY
ACQUISITION COSTS

Residualised Price			(229,513)	(229,513)	
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CONSTRUCTION COSTS
Construction

	m ²	Rate m ²	Cost	
Industrial - B2	2,000.00	£767.00	1,534,000	1,534,000
Contingency		5.00%	76,700	76,700

Other Construction

External Works		10.00%	153,400	153,400
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PROFESSIONAL FEES

Architect		10.00%	168,740	168,740
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MARKETING & LETTING

Letting Agent Fee		10.00%	14,400	
Letting Legal Fee		5.00%	7,200	21,600

DISPOSAL FEES


Sales Agent Fee		1.00%	20,571	
Sales Legal Fee		0.50%	10,286	30,857

FINANCE

Debit Rate 7.000% Credit Rate 0.000% (Nominal)				
Land			(9,908)	
Construction			42,944	
Total Finance Cost				33,036

TOTAL COSTS
1,788,820
PROFIT
268,322
Performance Measures

Profit on Cost%	15.00%
Profit on GDV%	13.04%
Profit on NDV%	13.04%
Development Yield% (on Rent)	8.05%
Equivalent Yield% (Nominal)	7.00%
Equivalent Yield% (True)	7.32%
IRR	69.03%
Rent Cover	1 yr 10 mths
Profit Erosion (finance rate 7.000%)	2 yrs

Typology	SHLAA Reference	Size Category	Net site area	Net yield	Land Use Type		
Central Chelmsford - Mixt	CFS263	Medium	0.8	77	Brownfield		
							
			No. of private units	No. of affordable units			
Residual Land Value			-£402,905	per ha	50	27	
Development Value							
Private Units			No. of units	Size sq.m	Total sq.m	£psm	Total Value
Flats		50	51	2,546	£3,513	£8,943,817	
Houses - 2 bed		0	79	0	£3,513	£0	
Houses - 3 bed		0	102	0	£3,513	£0	
Houses - 4+ bed		0	124	0	£3,513	£0	
		50		2,546			
Intermediate			No. of units	Size sq.m		£psm	Total Value
Flats		9	51	452	£2,108	£953,548	
Houses - 2 bed		0	79	0	£2,108	£0	
Houses - 3 bed		0	102	0	£2,108	£0	
Houses - 4+ bed		0	124	0	£2,108	£0	
		9		452			
Affordable rent			No. of units	Size sq.m		£psm	Total Value
Flats		18	51	918	£1,757	£1,613,327	
Houses - 2 bed		0	79	0	£1,757	£0	
Houses - 3 bed		0	102	0	£1,757	£0	
Houses - 4+ bed		0	124	0	£1,757	£0	
		18		918			
Gross Development Value			77		3,917		£11,510,692
Development Cost							
Site Acquisition							
Site Value						-£322,324	
Purchaser Costs						1.75%	
Residual Land Value						-£327,964	
Build Costs							
Private units			No. of units	Size sq.m	Cost per sq.m		Total Costs
Flats		50	60	£1,438		£4,307,098	
Houses - 2 bed		0	79	£964		£0	
Houses - 3 bed		0	102	£964		£0	
Houses - 4+ bed		0	124	£964		£0	
		50					
Intermediate			No. of units	Size sq.m	Cost per sq.m		Total Costs
Flats		9	60	£1,438		£765,338	
Houses - 2 bed		0	79	£964		£0	
Houses - 3 bed		0	102	£964		£0	
Houses - 4+ bed		0	124	£964		£0	
		9					
Affordable rent			No. of units	Size sq.m	Cost per sq.m		Total Costs
Flats		18	60	£1,438		£1,553,868	
Houses - 2 bed		0	79	£964		£0	
Houses - 3 bed		0	102	£964		£0	
Houses - 4+ bed		0	124	£964		£0	
		18					
			77	4608			£6,626,304
Externals							
Plot external				10%	as a percentage of build costs	£662,630	
Remediation/Demolition				£200,000	per ha	£160,000	
Flood risk mitigation		Flood zone 3a	Approx. % site effected 50%	15%	cost uplift as a percentage of build costs		£496,973
						£1,319,603	
Professional Fees							
as percentage of construction costs (build and externals)				10%		£794,591	
						£794,591	
Contingency							
as percentage of construction costs (build and externals)				5%		£331,315	
						£331,315	
Developer contributions							
S.106				£1,000	per unit	£76,800	
CIL				£125	per sq m	£374,400	
						£451,200	
Sale cost							
Legals -				£500		£38,400	
Sales & Marketing cost -				3.00%		£345,321	
						£383,721	
TOTAL DEVELOPMENT COSTS						£9,578,770	
Developers' Profit							
Private Housing				Rate 17.50%	of sales	£1,565,168	
Affordable Housing				6%	of sales	£154,013	
						£1,719,180	
TOTAL PROJECT COSTS [EXCLUDING INTEREST]						£11,297,950	
TOTAL INCOME - TOTAL COSTS [EXCLUDING INTEREST]						£212,742	
Finance Costs				APR 7.00%	PCM 0.565%	-£212,742	
TOTAL PROJECT COSTS [INCLUDING INTEREST]						£11,510,692	
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Typology	SHLAA Reference	Size Category	Net site area	Net yield	Land Use Type
Central Chelmsford - Mixed Use	CFS255	Small	0.3	49	Brownfield



Residual Land Value	No. of private units	No. of affordable units
-£552,588 per ha	32	17

Development Value

Private Units		No. of units	Size sq.m	Total sq.m	£psm	Total Value
Flats		32	51	1,612	£3,513	£5,664,417
Houses - 2 bed		0	79	0	£3,513	£0
Houses - 3 bed		0	102	0	£3,513	£0
Houses - 4+ bed		0	124	0	£3,513	£0
		32		1,612		
Intermediate		No. of units	Size sq.m		£psm	Total Value
Flats		6	51	287	£2,108	£603,914
Houses - 2 bed		0	79	0	£2,108	£0
Houses - 3 bed		0	102	0	£2,108	£0
Houses - 4+ bed		0	124	0	£2,108	£0
		6		287		
Affordable rent		No. of units	Size sq.m		£psm	Total Value
Flats		11	51	582	£1,757	£1,021,774
Houses - 2 bed		0	79	0	£1,757	£0
Houses - 3 bed		0	102	0	£1,757	£0
Houses - 4+ bed		0	124	0	£1,757	£0
		11		582		

Gross Development Value	49	2,481	£7,290,105
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Development Cost

Site Acquisition

Site Value	-£176,828
Purchaser Costs	1.75%

Residual Land Value	-£179,923
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Build Costs

Private units		No. of units	Size sq.m	Cost per sq.m	Total Costs
Flats		32	60	£1,438	£2,727,828
Houses - 2 bed		0	79	£964	£0
Houses - 3 bed		0	102	£964	£0
Houses - 4+ bed		0	124	£964	£0
		32			
Intermediate		No. of units	Size sq.m	Cost per sq.m	Total Costs
Flats		6	60	£1,438	£484,714
Houses - 2 bed		0	79	£964	£0
Houses - 3 bed		0	102	£964	£0
Houses - 4+ bed		0	124	£964	£0
		6			
Affordable rent		No. of units	Size sq.m	Cost per sq.m	Total Costs
Flats		11	60	£1,438	£984,117
Houses - 2 bed		0	79	£964	£0
Houses - 3 bed		0	102	£964	£0
Houses - 4+ bed		0	124	£964	£0
		11			

	49	2918	£4,196,659
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Externals

Plot external	10%	as a percentage of build costs	£419,665.92
Remediation/Demolition	£200,000	per ha	£64,000
Flood risk mitigation	Flood zone 3a	Approx. % site effected 50% 15%	cost uplift as a percentage of build costs £314,749

	£798,415
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Professional Fees

as percentage of construction costs (build and externals)	10%	£499,507
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	£499,507
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Contingency

as percentage of construction costs (build and externals)	5%	£209,833
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	£209,833
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Developer contributions

S.106	£1,000	per unit	£48,640
CIL	£125	per sq m	£237,120

	£285,760
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Sale cost

Legals -	£500	£24,320
Sales & Marketing cost -	3.00%	£218,703

	£243,023
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TOTAL DEVELOPMENT COSTS

	£6,053,275
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Developers' Profit

Private Housing	Rate 17.50%	of sales	£991,273
Affordable Housing	6%	of sales	£97,541

	£1,088,814
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TOTAL PROJECT COSTS [EXCLUDING INTEREST]	£7,142,090
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TOTAL INCOME - TOTAL COSTS [EXCLUDING INTEREST]	£148,015
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Finance Costs	APR 7.00%	PCM 0.565%	-£148,015
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TOTAL PROJECT COSTS [INCLUDING INTEREST]	£7,290,105
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Typology	SHLAA Reference	Size Category	Net site area	Net yield	Land Use Type
Other Rural Villages	CFS25	Small	0.3	10	Greenfield



Residual Land Value		No. of private units	No. of affordable units
£2,347,442	per ha	6	3

Development Value

Private Units		No. of units	Size sq.m	Total sq.m	£psm	Total Value
	Flats	1	51	64	£3,513	£223,595
	Houses - 2 bed	1	79	79	£3,513	£277,083
	Houses - 3 bed	2	102	248	£3,513	£872,022
	Houses - 4+ bed	2	124	193	£3,513	£679,555
		6		584		
Intermediate		No. of units	Size sq.m		£psm	Total Value
	Flats	0	51	11	£2,108	£23,839
	Houses - 2 bed	0	79	14	£2,108	£29,541
	Houses - 3 bed	0	102	44	£2,108	£92,971
	Houses - 4+ bed	0	124	34	£2,108	£72,451
		1		104		
Affordable rent		No. of units	Size sq.m		£psm	Total Value
	Flats	0	51	23	£1,757	£40,333
	Houses - 2 bed	0	79	28	£1,757	£49,982
	Houses - 3 bed	1	102	90	£1,757	£157,299
	Houses - 4+ bed	1	124	70	£1,757	£122,581
		2		211		

Gross Development Value	10	899	£2,641,253
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Development Cost

Site Acquisition

Site Value	£751,182
Purchaser Costs	5.75%

Residual Land Value	£794,374
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Build Costs

Private units		No. of units	Size sq.m	Cost per sq.m	Total Costs
	Flats	1	60	£1,134	£84,914
	Houses - 2 bed	1	79	£964	£76,034
	Houses - 3 bed	2	102	£964	£239,291
	Houses - 4+ bed	2	124	£964	£186,476
		6			
Intermediate		No. of units	Size sq.m	Cost per sq.m	Total Costs
	Flats	0	60	£1,134	£15,089
	Houses - 2 bed	0	79	£964	£13,511
	Houses - 3 bed	0	102	£964	£42,520
	Houses - 4+ bed	0	124	£964	£33,135
		1			
Affordable rent		No. of units	Size sq.m	Cost per sq.m	Total Costs
	Flats	0	60	£1,134	£30,634
	Houses - 2 bed	0	79	£964	£27,431
	Houses - 3 bed	1	102	£964	£86,329
	Houses - 4+ bed	1	124	£964	£67,275
		2			

	10	916	£902,639
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Externals

Plot external		15%	as a percentage of build costs	£135,396
Remediation/Demolition		£0	per ha	£0
Flood risk mitigation	Flood zone 0	Approx. % site effected 0%	FALSE cost uplift as a percentage of build costs	£0

	£135,396
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Professional Fees

as percentage of construction costs (build and externals)	10%	£103,803
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	£103,803
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Contingency

as percentage of construction costs (build and externals)	5%	£45,132
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	£45,132
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Developer contributions

S.106	£1,000	per unit	£9,600
CIL	£125	per sq m	£74,428

	£84,028
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Sale cost

Legals -	£500	£4,800
Sales & Marketing cost -	3.00%	£79,238

	£84,038
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TOTAL DEVELOPMENT COSTS	£2,149,410
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Developers' Profit

Private Housing Affordable Housing	Rate		
	17.50%	of sales	£359,145
	6%	of sales	£35,340

	£394,485
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TOTAL PROJECT COSTS [EXCLUDING INTEREST]	£2,543,894
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TOTAL INCOME - TOTAL COSTS [EXCLUDING INTEREST]	£97,358
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Finance Costs	APR 7.00%	PCM 0.565%	-£97,358
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TOTAL PROJECT COSTS [INCLUDING INTEREST]	£2,641,253
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Typology	SHLAA Reference	Size Category	Net site area	Net yield	Land Use Type		
Key Rural Villages	CFS46	Large	3.5	123	Greenfield		
			No. of private units	No. of affordable units			
Residual Land Value			80	43			
£2,523,296 per ha							
Development Value							
Private Units			No. of units	Size sq.m	Total sq.m	£psm	Total Value
Flats			16	51	812	£3,513	£2,853,171
Houses - 2 bed			13	79	1,006	£3,513	£3,535,694
Houses - 3 bed			31	102	3,167	£3,513	£11,127,366
Houses - 4+ bed			20	124	2,468	£3,513	£8,671,401
			80		7,454		
Intermediate			No. of units	Size sq.m		£psm	Total Value
Flats			3	51	144	£2,108	£304,192
Houses - 2 bed			2	79	179	£2,108	£376,959
Houses - 3 bed			6	102	563	£2,108	£1,186,348
Houses - 4+ bed			4	124	439	£2,108	£924,505
			14		1325		
Affordable rent			No. of units	Size sq.m		£psm	Total Value
Flats			6	51	293	£1,757	£514,668
Houses - 2 bed			5	79	363	£1,757	£637,785
Houses - 3 bed			11	102	1,143	£1,757	£2,007,206
Houses - 4+ bed			7	124	891	£1,757	£1,564,187
			29		2689		
Gross Development Value			123		11,468		£33,703,483
Development Cost							
Site Acquisition							
Site Value							£8,831,537
Purchaser Costs							5.75%
Residual Land Value							£9,339,350
Build Costs							
Private units			No. of units	Size sq.m	Cost per sq.m		Total Costs
Flats			16	60	£1,134		£1,083,537
Houses - 2 bed			13	79	£964		£970,227
Houses - 3 bed			31	102	£964		£3,053,453
Houses - 4+ bed			20	124	£964		£2,379,514
			80				
Intermediate			No. of units	Size sq.m	Cost per sq.m		Total Costs
Flats			3	60	£1,134		£192,536
Houses - 2 bed			2	79	£964		£172,402
Houses - 3 bed			6	102	£964		£542,575
Houses - 4+ bed			4	124	£964		£422,821
			14				
Affordable rent			No. of units	Size sq.m	Cost per sq.m		Total Costs
Flats			6	60	£1,134		£390,907
Houses - 2 bed			5	79	£964		£350,028
Houses - 3 bed			11	102	£964		£1,101,592
Houses - 4+ bed			7	124	£964		£858,455
			29				
			123	11689			£11,518,048
Externals							
Plot external				15%	as a percentage of build costs		£1,727,707.17
Remediation/Demolition				£0	per ha		£0
Flood risk mitigation		Flood zone	0	Approx. % site effected	0%	FALSE	cost uplift as a percentage of build costs
							£0
							£1,727,707
Professional Fees							
as percentage of construction costs (build and externals)				10%			£1,324,575
							£1,324,575
Contingency							
as percentage of construction costs (build and externals)				5%			£575,902
							£575,902
Developer contributions							
S.106				£1,000	per unit		£122,500
CIL				£125	per sq m		£949,727
							£1,072,227
Sale cost							
Legals -				£500			£61,250
Sales & Marketing cost -				3.00%			£1,011,104
							£1,072,354
TOTAL DEVELOPMENT COSTS							£26,630,165
Developers' Profit							
Private Housing				Rate			
Affordable Housing				17.50%	of sales		£4,582,836
				6%	of sales		£450,951
							£5,033,787
TOTAL PROJECT COSTS [EXCLUDING INTEREST]							£31,663,951
TOTAL INCOME - TOTAL COSTS [EXCLUDING INTEREST]							£2,039,531
Finance Costs					APR	PCM	
					7.00%	0.565%	-£2,039,531
TOTAL PROJECT COSTS [INCLUDING INTEREST]							£33,703,483
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Typology	SHLAA Reference	Size Category	Net site area	Net yield	Land Use Type	
Key Rural Villages	CFS116	Medium	1.5	53	Greenfield	
Residual Land Value			No. of private units	No. of affordable units		
£2,986,807 per ha			34	18		
Development Value						
Private Units		No. of units	Size sq.m	Total sq.m	£psm	Total Value
	Flats	0	51	0	£3,513	£0
	Houses - 2 bed	12	79	971	£3,513	£3,409,419
	Houses - 3 bed	13	102	1,357	£3,513	£4,768,871
	Houses - 4+ bed	9	124	1,058	£3,513	£3,716,315
		34		3,386		
Intermediate		No. of units	Size sq.m		£psm	Total Value
	Flats	0	51	0	£2,108	£0
	Houses - 2 bed	2	79	172	£2,108	£363,497
	Houses - 3 bed	2	102	241	£2,108	£508,435
	Houses - 4+ bed	2	124	188	£2,108	£396,216
		6		602		
Affordable rent		No. of units	Size sq.m		£psm	Total Value
	Flats	0	51	0	£1,757	£0
	Houses - 2 bed	4	79	350	£1,757	£615,007
	Houses - 3 bed	5	102	490	£1,757	£860,231
	Houses - 4+ bed	3	124	382	£1,757	£670,366
		12		1222		
Gross Development Value			53	5,209	£15,308,357	
Development Cost						
Site Acquisition						
Site Value						
Purchaser Costs						
Residual Land Value						
Build Costs						
Private units		No. of units	Size sq.m	Cost per sq.m	Total Costs	
	Flats	0	60	£1,134	£0	
	Houses - 2 bed	12	79	£964	£935,576	
	Houses - 3 bed	13	102	£964	£1,308,623	
	Houses - 4+ bed	9	124	£964	£1,019,792	
		34				
Intermediate		No. of units	Size sq.m	Cost per sq.m	Total Costs	
	Flats	0	60	£1,134	£0	
	Houses - 2 bed	2	79	£964	£166,245	
	Houses - 3 bed	2	102	£964	£232,532	
	Houses - 4+ bed	2	124	£964	£181,209	
		6				
Affordable rent		No. of units	Size sq.m	Cost per sq.m	Total Costs	
	Flats	0	60	£1,134	£0	
	Houses - 2 bed	4	79	£964	£337,527	
	Houses - 3 bed	5	102	£964	£472,111	
	Houses - 4+ bed	3	124	£964	£367,909	
		12				
			53	5209	£5,021,524	
Externals						
Plot external			15%	as a percentage of build costs		
Remediation/Demolition			£0	per ha		
Flood risk mitigation			0	Approx. % site effected		
			FALSE	cost uplift as a percentage of build costs		
£753,229						
Professional Fees						
as percentage of construction costs (build and externals)			10%			
£577,475						
Contingency						
as percentage of construction costs (build and externals)			5%			
£251,076						
£251,076						
Developer contributions						
S.106			£1,000	per unit		
CIL			£125	per sq m		
£475,735						
Sale cost						
Legals -			£500			
Sales & Marketing cost -			3.00%			
£485,501						
TOTAL DEVELOPMENT COSTS						
£12,302,363						
Developers' Profit						
Private Housing			Rate			
Affordable Housing			17.50%	of sales		
			6%	of sales		
£2,081,556						
£204,825						
£2,286,381						
TOTAL PROJECT COSTS [EXCLUDING INTEREST]						
£14,588,744						
TOTAL INCOME - TOTAL COSTS [EXCLUDING INTEREST]						
£719,613						
Finance Costs						
			APR	PCM		
			7.00%	0.565%	-£719,613	
TOTAL PROJECT COSTS [INCLUDING INTEREST]						
£15,308,357						
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Typology	SHLAA Reference	Size Category	Net site area	Net yield	Land Use Type		
Key Rural Villages	CFS104	Small	0.3	11	Greenfield		
Residual Land Value			No. of private units	No. of affordable units			
£3,073,143 per ha			7	4			
Development Value							
Private Units			No. of units	Size sq.m	Total sq.m	£psm	Total Value
	Flats		0	51	0	£3,513	£0
	Houses - 2 bed		3	79	207	£3,513	£727,343
	Houses - 3 bed		3	102	290	£3,513	£1,017,359
	Houses - 4+ bed		2	124	226	£3,513	£792,814
			7		722		
Intermediate			No. of units	Size sq.m		£psm	Total Value
	Flats		0	51	0	£2,108	£0
	Houses - 2 bed		0	79	37	£2,108	£77,546
	Houses - 3 bed		1	102	51	£2,108	£108,466
	Houses - 4+ bed		0	124	40	£2,108	£84,526
			1		128		
Affordable rent			No. of units	Size sq.m		£psm	Total Value
	Flats		0	51	0	£1,757	£0
	Houses - 2 bed		1	79	75	£1,757	£131,201
	Houses - 3 bed		1	102	104	£1,757	£183,516
	Houses - 4+ bed		1	124	81	£1,757	£143,011
			3		261		
Gross Development Value			11	1,111		£3,265,783	
Development Cost							
Site Acquisition							
Site Value						£983,406	
Purchaser Costs						5.75%	
Residual Land Value						£1,039,952	
Build Costs							
Private units			No. of units	Size sq.m	Cost per sq.m	Total Costs	
	Flats		0	60	£1,134	£0	
	Houses - 2 bed		3	79	£964	£199,590	
	Houses - 3 bed		3	102	£964	£279,173	
	Houses - 4+ bed		2	124	£964	£217,556	
			7				
Intermediate			No. of units	Size sq.m	Cost per sq.m	Total Costs	
	Flats		0	60	£1,134	£0	
	Houses - 2 bed		0	79	£964	£35,466	
	Houses - 3 bed		1	102	£964	£49,607	
	Houses - 4+ bed		0	124	£964	£38,658	
			1				
Affordable rent			No. of units	Size sq.m	Cost per sq.m	Total Costs	
	Flats		0	60	£1,134	£0	
	Houses - 2 bed		1	79	£964	£72,006	
	Houses - 3 bed		1	102	£964	£100,717	
	Houses - 4+ bed		1	124	£964	£78,487	
			3				
			11	1111	£1,071,258		
Externals							
Plot external				15%	as a percentage of build costs		£160,688.77
Remediation/Demolition				£0	per ha		£0
Flood risk mitigation		Flood zone 0	Approx. % site effected 0%	FALSE	cost uplift as a percentage of build costs		£0
						£160,689	
Professional Fees							
as percentage of construction costs (build and externals)				10%	£123,195		
						£123,195	
Contingency							
as percentage of construction costs (build and externals)				5%	£53,563		
						£53,563	
Developer contributions							
S.106				£1,000	per unit		£11,200
CIL				£125	per sq m		£90,290
						£101,490	
Sale cost							
Legals -				£500	£5,600		
Sales & Marketing cost -				3.00%	£97,973		
						£103,573	
TOTAL DEVELOPMENT COSTS						£2,653,720	
Developers' Profit							
Private Housing				Rate 17.50%	of sales		£444,065
Affordable Housing				6%	of sales		£43,696
						£487,761	
TOTAL PROJECT COSTS [EXCLUDING INTEREST]						£3,141,482	
TOTAL INCOME - TOTAL COSTS [EXCLUDING INTEREST]						£124,301	
Finance Costs				APR 7.00%	PCM 0.565%	-£124,301	
TOTAL PROJECT COSTS [INCLUDING INTEREST]						£3,265,783	
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Typology	SHLAA Reference	Size Category	Net site area	Net yield	Land Use Type
Key Rural Villages Strategy	CFS173	Large	10.4	416	Greenfield



Residual Land Value		No. of private units	No. of affordable units
£2,431,963	per ha	270	146

Development Value

Private Units		No. of units	Size sq.m	Total sq.m	£psm	Total Value
	Flats	54	51	2,758	£3,513	£9,689,135
	Houses - 2 bed	43	79	3,418	£3,513	£12,006,928
	Houses - 3 bed	105	102	10,757	£3,513	£37,787,627
	Houses - 4+ bed	68	124	8,382	£3,513	£29,447,371
		270		25,315		
Intermediate		No. of units	Size sq.m		£psm	Total Value
	Flats	10	51	490	£2,108	£1,033,011
	Houses - 2 bed	8	79	607	£2,108	£1,280,123
	Houses - 3 bed	19	102	1,911	£2,108	£4,028,742
	Houses - 4+ bed	12	124	1,489	£2,108	£3,139,543
		48		4498		
Affordable rent		No. of units	Size sq.m		£psm	Total Value
	Flats	20	51	995	£1,757	£1,747,771
	Houses - 2 bed	16	79	1,233	£1,757	£2,165,865
	Houses - 3 bed	38	102	3,881	£1,757	£6,816,307
	Houses - 4+ bed	24	124	3,024	£1,757	£5,311,853
		98		9133		

Gross Development Value	416	38,946	£114,454,276
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Development Cost

Site Acquisition

Site Value	£25,292,416
Purchaser Costs	5.75%

Residual Land Value	£26,746,730
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Build Costs

Private units		No. of units	Size sq.m	Cost per sq.m	Total Costs
	Flats	54	60	£1,134	£3,679,603
	Houses - 2 bed	43	79	£964	£3,294,813
	Houses - 3 bed	105	102	£964	£10,369,278
	Houses - 4+ bed	68	124	£964	£8,080,634
		270			
Intermediate		No. of units	Size sq.m	Cost per sq.m	Total Costs
	Flats	10	60	£1,134	£653,837
	Houses - 2 bed	8	79	£964	£585,463
	Houses - 3 bed	19	102	£964	£1,842,541
	Houses - 4+ bed	12	124	£964	£1,435,866
		48			
Affordable rent		No. of units	Size sq.m	Cost per sq.m	Total Costs
	Flats	20	60	£1,134	£1,327,488
	Houses - 2 bed	16	79	£964	£1,188,667
	Houses - 3 bed	38	102	£964	£3,740,916
	Houses - 4+ bed	24	124	£964	£2,915,244
		98			

	416	39695	£39,114,350
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Externals

Plot external		15%	as a percentage of build costs	£5,867,153
Remediation/Demolition		£0	per ha	£0
Flood risk mitigation	Flood zone 0	Approx. % site effected 0%	FALSE cost uplift as a percentage of build costs	£0

	£5,867,153
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Professional Fees

as percentage of construction costs (build and externals)	10%	£4,498,150
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	£4,498,150
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Contingency

as percentage of construction costs (build and externals)	5%	£1,955,718
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	£1,955,718
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Developer contributions

S.106	£5,000	per unit	£2,080,000
CIL	£125	per sq m	£3,225,196

	£5,305,196
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Sale cost

Legals -	£500	£208,000
Sales & Marketing cost -	3.00%	£3,433,628

	£3,641,628
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TOTAL DEVELOPMENT COSTS	£87,128,925
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Developers' Profit

Private Housing	Rate 17.50%	of sales	£15,562,936
Affordable Housing	6%	of sales	£1,531,393

	£17,094,329
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TOTAL PROJECT COSTS [EXCLUDING INTEREST]	£104,223,253
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TOTAL INCOME - TOTAL COSTS [EXCLUDING INTEREST]	£10,231,022
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Finance Costs	APR 7.00%	PCM 0.565%	-£10,231,022
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TOTAL PROJECT COSTS [INCLUDING INTEREST]	£114,454,276
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Typology	SHLAA Reference	Size Category	Net site area	Net yield	Land Use Type		
Chelmsford Outer Fringe	CFS182	Large	21.0	840	Greenfield		
Residual Land Value			No. of private units	No. of affordable units			
£3,655,110 per ha			546	294			
Development Value							
Private Units			No. of units	Size sq.m	Total sq.m	£psm	Total Value
	Flats		109	51	5,569	£3,513	£19,564,600
	Houses - 2 bed		87	79	6,901	£3,513	£24,244,759
	Houses - 3 bed		213	102	21,720	£3,513	£76,301,938
	Houses - 4+ bed		137	124	16,926	£3,513	£59,461,038
			546		51,117		
Intermediate			No. of units	Size sq.m		£psm	Total Value
	Flats		19	51	990	£2,108	£2,085,887
	Houses - 2 bed		16	79	1,226	£2,108	£2,584,864
	Houses - 3 bed		38	102	3,859	£2,108	£8,134,961
	Houses - 4+ bed		24	124	3,008	£2,108	£6,339,461
			97		9083		
Affordable rent			No. of units	Size sq.m		£psm	Total Value
	Flats		39	51	2,009	£1,757	£3,529,153
	Houses - 2 bed		32	79	2,490	£1,757	£4,373,381
	Houses - 3 bed		77	102	7,836	£1,757	£13,763,696
	Houses - 4+ bed		49	124	6,106	£1,757	£10,725,856
			197		18441		
Gross Development Value			840	78,641		£231,109,595	
Development Cost							
Site Acquisition							
Site Value						£76,757,310	
Purchaser Costs						5.75%	
Residual Land Value						£81,170,855	
Build Costs							
Private units			No. of units	Size sq.m	Cost per sq.m	Total Costs	
	Flats		109	60	£1,134	£7,429,968	
	Houses - 2 bed		87	79	£964	£6,652,988	
	Houses - 3 bed		213	102	£964	£20,937,964	
	Houses - 4+ bed		137	124	£964	£16,316,664	
			546				
Intermediate			No. of units	Size sq.m	Cost per sq.m	Total Costs	
	Flats		19	60	£1,134	£1,320,248	
	Houses - 2 bed		16	79	£964	£1,182,185	
	Houses - 3 bed		38	102	£964	£3,720,515	
	Houses - 4+ bed		24	124	£964	£2,899,346	
			97				
Affordable rent			No. of units	Size sq.m	Cost per sq.m	Total Costs	
	Flats		39	60	£1,134	£2,680,504	
	Houses - 2 bed		32	79	£964	£2,400,193	
	Houses - 3 bed		77	102	£964	£7,553,773	
	Houses - 4+ bed		49	124	£964	£5,886,550	
			197				
			840	80153		£78,980,899	
Externals							
Plot external				15%		as a percentage of build costs	
				£11,847,134.88			
Remediation/Demolition				£0		per ha	
				£0			
Flood risk mitigation				0		Flood zone	
				0%		Approx. % site effected	
				FALSE		cost uplift as a percentage of build costs	
				£0			
						£11,847,135	
Professional Fees							
as percentage of construction costs (build and externals)				10%		£9,082,803	
						£9,082,803	
Contingency							
as percentage of construction costs (build and externals)				5%		£3,949,045	
						£3,949,045	
Developer contributions							
S.106				£5,000		per unit	
CIL				£125		per sq m	
						£10,712,415	
Sale cost							
Legals -				£500		£420,000	
Sales & Marketing cost -				3.00%		£6,933,288	
						£7,353,288	
TOTAL DEVELOPMENT COSTS						£203,096,441	
Developers' Profit							
Private Housing				Rate			
Affordable Housing				17.50%		of sales	
				6%		of sales	
						£31,425,159	
						£3,092,236	
						£34,517,394	
TOTAL PROJECT COSTS [EXCLUDING INTEREST]						£237,613,835	
TOTAL INCOME - TOTAL COSTS [EXCLUDING INTEREST]						-£6,504,240	
Finance Costs				APR		PCM	
				7.00%		0.565%	
						-£28,013,154	
TOTAL PROJECT COSTS [INCLUDING INTEREST]						£265,626,989	
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Typology	SHLAA Reference	Size Category	Net site area	Net yield	Land Use Type
Urban Area	CFS250	Small	0.3	21	Greenfield

Residual Land Value		No. of private units	No. of affordable units
£1,378,095	per ha	14	7

Development Value						
Private Units		No. of units	Size sq.m	Total sq.m	£psm	Total Value
	Flats	14	51	690	£3,513	£2,422,284
	Houses - 2 bed	0	79	0	£3,513	£0
	Houses - 3 bed	0	102	0	£3,513	£0
	Houses - 4+ bed	0	124	0	£3,513	£0
		14		690		
Intermediate		No. of units	Size sq.m		£psm	Total Value
	Flats	2	51	123	£2,108	£258,253
	Houses - 2 bed	0	79	0	£2,108	£0
	Houses - 3 bed	0	102	0	£2,108	£0
	Houses - 4+ bed	0	124	0	£2,108	£0
		2		123		
Affordable rent		No. of units	Size sq.m		£psm	Total Value
	Flats	5	51	249	£1,757	£436,943
	Houses - 2 bed	0	79	0	£1,757	£0
	Houses - 3 bed	0	102	0	£1,757	£0
	Houses - 4+ bed	0	124	0	£1,757	£0
		5		249		
						£0
Gross Development Value		21		1,061		£3,117,479
Development Cost						
Site Acquisition						
Site Value						£440,990
Purchaser Costs						4.75%
Residual Land Value						£461,937
Build Costs						
Private units		No. of units	Size sq.m	Cost per sq.m		Total Costs
	Flats	14	60	£1,134		£919,901
	Houses - 2 bed	0	79	£964		£0
	Houses - 3 bed	0	102	£964		£0
	Houses - 4+ bed	0	124	£964		£0
		14				
Intermediate		No. of units	Size sq.m	Cost per sq.m		Total Costs
	Flats	2	60	£1,134		£163,459
	Houses - 2 bed	0	79	£964		£0
	Houses - 3 bed	0	102	£964		£0
	Houses - 4+ bed	0	124	£964		£0
		2				
Affordable rent		No. of units	Size sq.m	Cost per sq.m		Total Costs
	Flats	5	60	£1,134		£331,872
	Houses - 2 bed	0	79	£964		£0
	Houses - 3 bed	0	102	£964		£0
	Houses - 4+ bed	0	124	£964		£0
		5				
						£1,415,232
Externals						
Plot external			15%	as a percentage of build costs		£212,284.80
Remediation/Demolition			£0	per ha		£0
Flood risk mitigation		Flood zone 0	Approx. % site effected 0%	FALSE	cost uplift as a percentage of build costs	£0
						£212,285
Professional Fees						
as percentage of construction costs (build and externals)			10%			£162,752
						£162,752
Contingency						
as percentage of construction costs (build and externals)			5%			£70,762
						£70,762
Developer contributions						
S.106			£1,000	per unit		£20,800
CIL			£125	per sq m		£101,400
						£122,200
Sale cost						
Legals -			£500			£10,400
Sales & Marketing cost -			3.00%			£93,524
						£103,924
TOTAL DEVELOPMENT COSTS						£2,549,092
Developers' Profit						
Private Housing			Rate 17.50%	of sales		£423,900
Affordable Housing			6%	of sales		£41,712
						£465,611
TOTAL PROJECT COSTS [EXCLUDING INTEREST]						£3,014,703
TOTAL INCOME - TOTAL COSTS [EXCLUDING INTEREST]						£102,776
Finance Costs			APR 7.00%	PCM 0.565%		-£102,776
TOTAL PROJECT COSTS [INCLUDING INTEREST]						£3,117,479

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Typology	SHLAA Reference	Size Category	Net site area	Net yield	Land Use Type
Urban Area	CFS32	Medium	0.8	52	Brownfield

Residual Land Value		No. of private units	No. of affordable units
£1,369,118	per ha	34	18

Development Value						
Private Units		No. of units	Size sq.m	Total sq.m	£psm	Total Value
	Flats	34	51	1,724	£3,513	£6,055,709
	Houses - 2 bed	0	79	0	£3,513	£0
	Houses - 3 bed	0	102	0	£3,513	£0
	Houses - 4+ bed	0	124	0	£3,513	£0
		34		1,724		
Intermediate		No. of units	Size sq.m		£psm	Total Value
	Flats	6	51	306	£2,108	£645,632
	Houses - 2 bed	0	79	0	£2,108	£0
	Houses - 3 bed	0	102	0	£2,108	£0
	Houses - 4+ bed	0	124	0	£2,108	£0
		6		306		
Affordable rent		No. of units	Size sq.m		£psm	Total Value
	Flats	12	51	622	£1,757	£1,092,357
	Houses - 2 bed	0	79	0	£1,757	£0
	Houses - 3 bed	0	102	0	£1,757	£0
	Houses - 4+ bed	0	124	0	£1,757	£0
		12		622		
Gross Development Value		52		2,652		£7,793,698
Development Cost						
Site Acquisition						
Site Value						£1,095,294
Purchaser Costs						5.75%
Residual Land Value						£1,158,274
Build Costs						
Private units		No. of units	Size sq.m	Cost per sq.m		Total Costs
	Flats	34	60	£1,134		£2,299,752
	Houses - 2 bed	0	79	£964		£0
	Houses - 3 bed	0	102	£964		£0
	Houses - 4+ bed	0	124	£964		£0
		34				
Intermediate		No. of units	Size sq.m	Cost per sq.m		Total Costs
	Flats	6	60	£1,134		£408,648
	Houses - 2 bed	0	79	£964		£0
	Houses - 3 bed	0	102	£964		£0
	Houses - 4+ bed	0	124	£964		£0
		6				
Affordable rent		No. of units	Size sq.m	Cost per sq.m		Total Costs
	Flats	12	60	£1,134		£829,680
	Houses - 2 bed	0	79	£964		£0
	Houses - 3 bed	0	102	£964		£0
	Houses - 4+ bed	0	124	£964		£0
		12				
		52	3120			£3,538,080
Externals						
Plot external			10%	as a percentage of build costs		£353,808.00
Remediation/Demolition			£200,000	per ha		£160,000
Flood risk mitigation		Flood zone 0	Approx. % site effected 0%	FALSE	cost uplift as a percentage of build costs	£0
						£513,808
Professional Fees						
as percentage of construction costs (build and externals)			10%			£405,189
						£405,189
Contingency						
as percentage of construction costs (build and externals)			5%			£176,904
						£176,904
Developer contributions						
S.106			£1,000	per unit		£52,000
CIL			£125	per sq m		£253,500
						£305,500
Sale cost						
Legals -			£500			£26,000
Sales & Marketing cost -			3.00%			£233,811
						£259,811
TOTAL DEVELOPMENT COSTS						£6,357,566
Developers' Profit						
Private Housing			Rate 17.50%	of sales		£1,059,749
Affordable Housing			6%	of sales		£104,279
						£1,164,028
TOTAL PROJECT COSTS [EXCLUDING INTEREST]						£7,521,594
TOTAL INCOME - TOTAL COSTS [EXCLUDING INTEREST]						£272,104
Finance Costs			APR 7.00%	PCM 0.565%		-£272,104
TOTAL PROJECT COSTS [INCLUDING INTEREST]						£7,793,698

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Typology	SHLAA Reference	Size Category	Net site area	Net yield	Land Use Type
Urban Area	CFS266	Small	0.3	21	Brownfield



Residual Land Value		No. of private units	No. of affordable units
£1,399,189	per ha	14	7

Development Value

Private Units		No. of units	Size sq.m	Total sq.m	£psm	Total Value
	Flats	14	51	690	£3,513	£2,422,284
	Houses - 2 bed	0	79	0	£3,513	£0
	Houses - 3 bed	0	102	0	£3,513	£0
	Houses - 4+ bed	0	124	0	£3,513	£0
		14		690		
Intermediate		No. of units	Size sq.m		£psm	Total Value
	Flats	2	51	123	£2,108	£258,253
	Houses - 2 bed	0	79	0	£2,108	£0
	Houses - 3 bed	0	102	0	£2,108	£0
	Houses - 4+ bed	0	124	0	£2,108	£0
		2		123		
Affordable rent		No. of units	Size sq.m		£psm	Total Value
	Flats	5	51	249	£1,757	£436,943
	Houses - 2 bed	0	79	0	£1,757	£0
	Houses - 3 bed	0	102	0	£1,757	£0
	Houses - 4+ bed	0	124	0	£1,757	£0
		5		249		

Gross Development Value	21	1,061	£3,117,479
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Development Cost

Site Acquisition

Site Value	£447,741
Purchaser Costs	4.75%

Residual Land Value	£469,008
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Build Costs

Private units		No. of units	Size sq.m	Cost per sq.m	Total Costs
	Flats	14	60	£1,134	£919,901
	Houses - 2 bed	0	79	£964	£0
	Houses - 3 bed	0	102	£964	£0
	Houses - 4+ bed	0	124	£964	£0
		14			
Intermediate		No. of units	Size sq.m	Cost per sq.m	Total Costs
	Flats	2	60	£1,134	£163,459
	Houses - 2 bed	0	79	£964	£0
	Houses - 3 bed	0	102	£964	£0
	Houses - 4+ bed	0	124	£964	£0
		2			
Affordable rent		No. of units	Size sq.m	Cost per sq.m	Total Costs
	Flats	5	60	£1,134	£331,872
	Houses - 2 bed	0	79	£964	£0
	Houses - 3 bed	0	102	£964	£0
	Houses - 4+ bed	0	124	£964	£0
		5			

	21	1248	£1,415,232
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Externals

Plot external		10%	as a percentage of build costs	£141,523.20
Remediation/Demolition		£200,000	per ha	£64,000
Flood risk mitigation	Flood zone 0	Approx. % site effected 0%	FALSE	cost uplift as a percentage of build costs £0

	£205,523
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Professional Fees

as percentage of construction costs (build and externals)	10%	£162,076
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	£162,076
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Contingency

as percentage of construction costs (build and externals)	5%	£70,762
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	£70,762
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Developer contributions

S.106	£1,000	per unit	£20,800
CIL	£125	per sq m	£101,400

	£122,200
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Sale cost

Legals -	£500	£10,400
Sales & Marketing cost -	3.00%	£93,524

	£103,924
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TOTAL DEVELOPMENT COSTS	£2,548,725
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Developers' Profit

Private Housing	Rate 17.50%	of sales	£423,900
Affordable Housing	6%	of sales	£41,712

	£465,611
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TOTAL PROJECT COSTS [EXCLUDING INTEREST]	£3,014,336
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TOTAL INCOME - TOTAL COSTS [EXCLUDING INTEREST]	£103,143
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Finance Costs

APR 7.00%	PCM 0.565%	-£103,143
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TOTAL PROJECT COSTS [INCLUDING INTEREST]	£3,117,479
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Typology	SHLAA Reference	Size Category	Net site area	Net yield	Land Use Type			
Central Chelmsford	CFS278	Medium	0.8	60	Brownfield			
Residual Land Value			No. of private units	No. of affordable units				
-£376,966		per ha	39	21				
Development Value								
Private Units			No. of units	Size sq.m	Total sq.m	£psm	Total Value	
	Flats		39	51	1,989	£3,513	£6,987,357	
	Houses - 2 bed		0	79	0	£3,513	£0	
	Houses - 3 bed		0	102	0	£3,513	£0	
	Houses - 4+ bed		0	124	0	£3,513	£0	
			39		1,989			
Intermediate			No. of units	Size sq.m		£psm	Total Value	
	Flats		7	51	353	£2,108	£744,960	
	Houses - 2 bed		0	79	0	£2,108	£0	
	Houses - 3 bed		0	102	0	£2,108	£0	
	Houses - 4+ bed		0	124	0	£2,108	£0	
			7		353			
Affordable rent			No. of units	Size sq.m		£psm	Total Value	
	Flats		14	51	718	£1,757	£1,260,412	
	Houses - 2 bed		0	79	0	£1,757	£0	
	Houses - 3 bed		0	102	0	£1,757	£0	
	Houses - 4+ bed		0	124	0	£1,757	£0	
			14		718			
Gross Development Value			60		3,060		£8,992,728	
Development Cost								
Site Acquisition								
Site Value						-£301,573		
Purchaser Costs						1.75%		
Residual Land Value						-£306,850		
Build Costs								
Private units			No. of units	Size sq.m	Cost per sq.m		Total Costs	
	Flats		39	60	£1,438		£3,364,920	
	Houses - 2 bed		0	79	£964		£0	
	Houses - 3 bed		0	102	£964		£0	
	Houses - 4+ bed		0	124	£964		£0	
			39					
Intermediate			No. of units	Size sq.m	Cost per sq.m		Total Costs	
	Flats		7	60	£1,438		£597,920	
	Houses - 2 bed		0	79	£964		£0	
	Houses - 3 bed		0	102	£964		£0	
	Houses - 4+ bed		0	124	£964		£0	
			7					
Affordable rent			No. of units	Size sq.m	Cost per sq.m		Total Costs	
	Flats		14	60	£1,438		£1,213,960	
	Houses - 2 bed		0	79	£964		£0	
	Houses - 3 bed		0	102	£964		£0	
	Houses - 4+ bed		0	124	£964		£0	
			14					
			60	3600			£5,176,800	
Externals								
Plot external				10%	as a percentage of build costs		£517,680.00	
Remediation/Demolition				£200,000	per ha		£160,000	
Flood risk mitigation			Flood zone 3a	Approx. % site effected 50%	15%	cost uplift as a percentage of build costs		£388,260
						£1,065,940		
Professional Fees								
as percentage of construction costs (build and externals)				10%		£624,274		
						£624,274		
Contingency								
as percentage of construction costs (build and externals)				5%		£258,840		
						£258,840		
Developer contributions								
S.106				£1,000	per unit		£60,000	
CIL				£125	per sq m		£292,500	
						£352,500		
Sale cost								
Legals -				£500		£30,000		
Sales & Marketing cost -				3.00%		£269,782		
						£299,782		
TOTAL DEVELOPMENT COSTS						£7,471,286		
Developers' Profit								
Private Housing				Rate 17.50%	of sales		£1,222,787	
Affordable Housing				6%	of sales		£120,322	
						£1,343,110		
TOTAL PROJECT COSTS [EXCLUDING INTEREST]						£8,814,395		
TOTAL INCOME - TOTAL COSTS [EXCLUDING INTEREST]						£178,333		
Finance Costs				APR 7.00%	PCM 0.565%	-£178,333		
TOTAL PROJECT COSTS [INCLUDING INTEREST]						£8,992,728		
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Typology	SHLAA Reference	Size Category	Net site area	Net yield	Land Use Type		
Central Chelmsford	CFS241	Small	0.3	51	Brownfield		
Residual Land Value			No. of private units	No. of affordable units			
-£558,296 per ha			33	18			
Development Value							
Private Units			No. of units	Size sq.m	Total sq.m	£psm	Total Value
Flats			33	51	1,697	£3,513	£5,962,545
Houses - 2 bed			0	79	0	£3,513	£0
Houses - 3 bed			0	102	0	£3,513	£0
Houses - 4+ bed			0	124	0	£3,513	£0
			33		1,697		
Intermediate			No. of units	Size sq.m		£psm	Total Value
Flats			6	51	302	£2,108	£635,699
Houses - 2 bed			0	79	0	£2,108	£0
Houses - 3 bed			0	102	0	£2,108	£0
Houses - 4+ bed			0	124	0	£2,108	£0
			6		302		
Affordable rent			No. of units	Size sq.m		£psm	Total Value
Flats			12	51	612	£1,757	£1,075,551
Houses - 2 bed			0	79	0	£1,757	£0
Houses - 3 bed			0	102	0	£1,757	£0
Houses - 4+ bed			0	124	0	£1,757	£0
			12		612		
Gross Development Value			51	2611		£7,673,795	
Development Cost							
Site Acquisition							
Site Value							-£178,655
Purchaser Costs							1.75%
Residual Land Value							-£181,781
Build Costs							
Private units			No. of units	Size sq.m	Cost per sq.m	Total Costs	
Flats			33	60	£1,438	£2,871,398	
Houses - 2 bed			0	79	£964	£0	
Houses - 3 bed			0	102	£964	£0	
Houses - 4+ bed			0	124	£964	£0	
			33				
Intermediate			No. of units	Size sq.m	Cost per sq.m	Total Costs	
Flats			6	60	£1,438	£510,225	
Houses - 2 bed			0	79	£964	£0	
Houses - 3 bed			0	102	£964	£0	
Houses - 4+ bed			0	124	£964	£0	
			6				
Affordable rent			No. of units	Size sq.m	Cost per sq.m	Total Costs	
Flats			12	60	£1,438	£1,035,912	
Houses - 2 bed			0	79	£964	£0	
Houses - 3 bed			0	102	£964	£0	
Houses - 4+ bed			0	124	£964	£0	
			12				
			51	3072	£4,417,536		
Externals							
Plot external				10%	as a percentage of build costs		£441,753.60
Remediation/Demolition				£200,000	per ha		£64,000
Flood risk mitigation		Flood zone 3a	Approx. % site effected 50%	15%	cost uplift as a percentage of build costs		£331,315
							£837,069
Professional Fees							
as percentage of construction costs (build and externals)				10%	£525,460		
							£525,460
Contingency							
as percentage of construction costs (build and externals)				5%	£220,877		
							£220,877
Developer contributions							
S.106				£1,000	per unit		£51,200
CIL				£125	per sq m		£249,600
							£300,800
Sale cost							
Legals -				£500	£25,600		
Sales & Marketing cost -				3.00%	£230,214		
							£255,814
TOTAL DEVELOPMENT COSTS							£6,375,775
Developers' Profit							
Private Housing				Rate 17.50%	of sales		£1,043,445
Affordable Housing				6%	of sales		£102,675
							£1,146,120
TOTAL PROJECT COSTS [EXCLUDING INTEREST]							£7,521,895
TOTAL INCOME - TOTAL COSTS [EXCLUDING INTEREST]							£151,900
Finance Costs					APR 7.00%	PCM 0.565%	-£151,900
TOTAL PROJECT COSTS [INCLUDING INTEREST]							£7,673,795
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