



BRAINTREE

Economic Viability Study

Three Dragons and Troy Planning + Design

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

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

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Executive Summary

1. The Braintree District Council Viability Study provides the Council with evidence to assist it in drawing up its Local Plan, including its affordable housing policies. The evidence has been prepared in consultation with the development industry and has followed the relevant regulations and guidance and is in line with the National Planning Policy Framework. This assessment also takes into account the policies in the new Local Plan and its supporting evidence base.
2. Braintree District Council is aligning the development of its Local Plan with Colchester Borough Council and Tendring District Council (the Partner Authorities) to cover growth in North Essex to 2033 and beyond.
3. The Partner authorities are currently preparing a combined strategic Part 1 Local Plan which will set out the opportunity for cross-boundary Garden Communities. The Part 2 Local Plan will include the allocations and policies needed to jointly deliver the required growth within the boundaries up to 2033. Each council will produce a separate Part 2 Local Plan and this Viability Study is to inform the Pre-Submission consultation for the Part 2 Local Plan.
4. The councils recognise the importance of producing a plan that is viable and deliverable and has commissioned Troy Planning + Design and Three Dragons to assess viability. The viability assessment for Braintree has demonstrated that the council's Local Plan policies in relation to residential development are financially viable for most typologies tested and that a policy requiring 30% affordable housing in the main towns and 40% affordable housing elsewhere is achievable. In most cases the council's policies in relation to accessibility & adaptability of dwellings (Part M of Building Regulations 2016) are also achievable as are those for renewable energy.
5. The recent Housing White Paper (February 2017) suggests that all sites over 10 dwellings may have to meet a requirement for 10% of units to be affordable home ownership. If this becomes a national policy requirement it will not affect viability on the schemes tested in this study.
6. The testing undertaken uses a standard residual land value approach, using the Three Dragons Toolkit for residential development and the Three Dragons Non-Residential Model for non-residential development. The residual value of development (total value less all development and policy costs, including planning

obligations) is compared to a land value benchmark and the scheme is said to be viable if the residual value exceeds the benchmark. Note that the benchmark land value is an estimate of the lowest value that a landowner may accept, and does not preclude the possibility that some schemes may have enough value to pay more for land.

Residential Development

7. The testing for residential development was undertaken in two ways:
 - As a series of notional 1ha tiles at 25/30/35/40 dwellings per hectare (dph)
 - As a set of case studies, ranging from 1 to 1,900 dwellings, representative of sites identified in the Local Plan
8. A full list of the case studies is available at Appendix I.
9. The district was divided for testing purposes into two value areas; Central Corridor and Rural Fringe. House prices and land values are higher in the Rural Fringe than in the Central Corridor.
10. Two Broad Rental Market areas (BRMAs), Colchester and Chelmsford, cover the majority of the district and each scenario was tested in both value areas. Taking into account value areas and BRMAs, each case study was tested four times to make sure each combination was covered.
11. The testing has taken account of the policies in the council's Local Plan. In particular, the council wanted to include key housing policies liable to have an impact on viability:
 - Affordable housing – the Local Plan (LPP 27) requires 30% of units to be provided as affordable in the main towns (threshold of 15 units or 0.5ha) and 40% (threshold of 11 units¹ or 1,000 sqm) elsewhere, thus most site scenarios were tested at a proportion of both 30% and 40% affordable housing;
 - Accessible and Adaptable homes – testing took account of need for a higher level of accessibility & adaptability under Part M of the Building Regulations – 10% market housing and 5% affordable housing to be delivered to Part M(4) 3 adaptable standard; 5% affordable homes to be to Part M(4) 2;

¹ This was amended from '10 units or more' to comply with national policy

- Self and Custom Build – As per policy LPP37, testing accommodated the requirement for 2% of homes to be available for self or custom builders;
 - Renewable Energy – Policy LPP77 requires new development to include renewable energy technology to provide at least 20% of the projected energy requirements of major developments, and 10% of minor developments and this was modelled in a separate sensitivity test.
12. No CIL charge was applicable and full S106 contributions were included in the modelling. These varied by different site sizes.
 13. Sensitivity testing was carried out using a high cost scenario, taking account of the potential for high infrastructure requirements or land remediation on sites of 300 dwellings or above.
 14. The testing undertaken for the notional 1 ha sites provides an overview of the viability of the whole plan. The residual values from notional sites are tested against the benchmark land value. The results vary from location to location but in all areas and in all scenarios produce a surplus over the benchmark land value.
 15. The majority of the case studies also produced a positive residual value over the benchmark land value, demonstrating that policies in the emerging Local Plan are achievable, including those outlined in paragraph 11 above.
 16. Of particular note is that larger schemes of 600 and 1,100 units are viable at the policy position with 30% or 40% affordable housing and remain so when tested at a higher cost scenario. A scheme of 1,900 units was also tested with 30% affordable housing and this also remained viable in both cost scenarios.
 17. Sheltered and extra care are also viable (tested at a 30% affordable housing level to reflect that these schemes will be delivered in the main towns).
 18. The 300 unit scheme was at the margins of viability when modelled using the ‘higher cost scenario’ and 40% affordable housing, especially within the Colchester BRMA. However the results were more comfortable in the ‘normal cost’ scenarios and at 30% affordable housing.
 19. In some instances a combination of policies requiring affordable housing at 40%, accessibility and renewable energy may require some flexibility on schemes of over 300 units. It is however considered that in most circumstances land values will flex or housing mix can be optimized to take account of any pressure on viability.

20. A rural exception site was modelled so as to evaluate whether the inclusion of market housing would assist deliverability. Using a mix arrived at following consultation, a level of 20% market housing was required to achieve viability. Clearly, in practice, this will need to be assessed on a site by site basis as the size and tenure of dwellings on such sites will vary according to local need.
21. There were some exceptions to the results where sites were clearly not financially viable. In particular, the flatted schemes and the single dwelling were not viable in either value area, reflecting the high cost of building out such schemes. In practice, policy requirements for affordable housing (flats only) and Part M would need to be relaxed to bring these schemes forward in the current market. Alternatively, they may be deliverable later in the plan period when values are likely to have risen in relation to costs.
22. The higher affordable housing threshold of 15 dwellings for the main towns made no difference to viability. Sites would be viable using a threshold of 10 dwellings as applied to the rest of the district.

Non-residential Development

23. The Report provides viability analysis of the non-residential development planned to come forward under the new local plan.
24. Of the uses tested, only retail warehouses, convenience retail and budget hotels are viable. These types of development are able to come forward subject to the availability of sites.
25. Based on the costs and values in this testing, speculative office, industrial and warehouse developments are unlikely to be brought forward by the market. However, this does not preclude local authorities developing new employment spaces, in order to deliver economic development benefits². In addition, public sector funding from sources such as the South East LEP can be used to reduce the costs of providing new employment space. It is also likely that businesses will continue to commission design and build workspace development.
26. High street comparison retail is not viable as modelled here. However, this is in part due to the relatively high existing use value assumed for the prime retail site. If a lower value site is available, then this type of retail may come forward.

² This combines a long-term view on returns as well as an ability to borrow cheaply.

27. Based on the costs and values in this testing, care homes are not viable.



1 Introduction

Purpose of the Economic Viability Assessment

- 1.1 The viability evidence provided in this report is to support Braintree District Council in drawing up its Local Plan, including Affordable Housing Policies. The evidence has been prepared in consultation with the development industry and has followed the relevant regulations and guidance and is in line with the National Planning Policy Framework. The council recognise the importance of producing a plan that is viable and deliverable and has commissioned Troy Planning + Design and Three Dragons to assess viability.
- 1.2 The testing undertaken uses a standard residual land value approach, using the Three Dragons Toolkit for residential development and the Three Dragons Non-Residential Model for non-residential development. The residual value of development (total value less all development and policy costs, including planning obligations) is compared to a land value benchmark and the scheme is said to be viable if the residual value exceeds the benchmark. Note that the benchmark land value is an estimate of the lowest value that a landowner may accept, and does not preclude the possibility that some schemes may have enough value to pay more for land.
- 1.3 Braintree District Council is aligning the development of its Local Plan with Colchester Borough Council and Tendring District Council (the Partner Authorities) to cover growth in North Essex to 2033 and beyond.

National Planning Context

- 1.4 The National Planning Policy Framework (NPPF) paragraph 173 sets out how the Government expects viability to be considered in planning:

*'Pursuing sustainable development requires careful attention to viability and costs in plan-making and decision-taking. Plans should be deliverable. Therefore, the sites and the scale of development identified in the plan should not be subject to such a scale of obligations and policy burdens that their ability to be developed viably is threatened. To ensure viability, the costs of any requirements likely to be applied to development, such as requirements for affordable housing, standards, infrastructure contributions or other requirements should, when taking account of the normal cost of development and mitigation, provide competitive returns to a willing land owner and willing developer to enable the development to be deliverable.'*³

- 1.5 The NPPF explicitly recognises the need to provide competitive returns to a willing land owner and willing developer, and local planning authorities are to assess the 'likely cumulative impact' of their proposed development standards and policies.

- 1.6 Planning Practice Guidance⁴ (PPG) provides further detail about how the NPPF should be used. PPG contains general principles for understanding viability (which are relevant to CIL viability) as well as specific CIL viability guidance⁵. It also notes that a range of sector-led guidance is available⁶. In order to understand viability, a realistic understanding of the costs and the value of development is required and direct engagement with development sector may be helpful⁷. Evidence should be proportionate to ensure plans are underpinned by a broad understanding of viability, with further detail where viability may be marginal or for strategic sites with high infrastructure requirements⁸. However not every site requires testing and site typologies may be used to determine policy⁹. For private rented sector, self build

³ DCLG, 2012, NPPF Para 173

⁴ DCLG, Planning Practice Guidance

⁵ PPG Paragraph: 003 Reference ID: 10-003-20140306

⁶ PPG Paragraph: 002 Reference ID: 10-002-20140306

⁷ PPG Paragraph: 004 Reference ID: 10-004-20140306

⁸ PPG Paragraph: 005 Reference ID: 10-005-20140306

⁹ PPG Paragraph: 006 Reference ID: 10-006-20140306

and older people's housing, the specific scheme format and projected sales rates (where appropriate) may be a factor in assessing viability¹⁰.

- 1.7 PPG requires that a buffer should be allowed and that current costs and values should be used (except where known regulation/policy changes are to take place)¹¹. On retail and commercial development, broad assessment of value in line with industry practice may be necessary¹². Generally, values should be based on comparable, market information, using average figures and informed by specific local evidence¹³. For an area wide viability assessment, a broad assessment of costs is required, based on robust evidence which is reflective of local market conditions. All development costs should be taken into account, including infrastructure and policy costs as well as the standard development costs¹⁴.
- 1.8 Developer returns should be proportionate to risk¹⁵. The return to the landowner will need to provide an incentive for the land owner to sell in comparison with the other options such as current use value or policy compliant alternative use value¹⁶.
- 1.9 Recent Ministerial guidance on affordable housing policy (28th November 2015) and associated changes to PPG¹⁷ have made the following changes:

contributions should not be sought from developments of 10-units or less, and which have a maximum combined gross floorspace of no more than 1000sqm in designated rural areas, local planning authorities may choose to apply a lower threshold of 5-units or less. No affordable housing or tariff-style contributions should then be sought from these developments. In addition, in a rural area where the lower 5-unit or less threshold is applied, affordable housing and tariff style contributions should be sought from developments of between 6 and 10-units in the form of cash payments which are commuted until after completion of units within the development.

¹⁰ PPG Paragraph: 018 Reference ID: 10-018-20150326

¹¹ PPG Paragraph: 008 Reference ID: 10-008-20140306

¹² PPG Paragraph: 012 Reference ID: 10-012-20140306

¹³ PPG Paragraph: 012 Reference ID: 10-012-20140306

¹⁴ PPG Paragraph: 013 Reference ID: 10-013-20140306

¹⁵ PPG Paragraph: 015 Reference ID: 10-015-20140306

¹⁶ PPG Paragraph: 015 Reference ID: 10-015-20140306

¹⁷ PPG Paragraph 031 Reference ID: 23b-031-20161116

- 1.10 For specific topics, the PPG provides information on the different types of policy requirements that authorities may decide to implement through their Local Plans. This provides greater clarity on how these requirements may affect the cost of development and provides a starting point for how they should be taken into account. For example, the PPG sets out optional technical standards for internal space standards, water consumption and accessibility against which additional costs may be calculated¹⁸.
- 1.11 For other areas such as the implementation of Sustainable Drainage Systems (SUDs), PPG sets out a clear approach to deliver schemes against the hierarchy provided by the government's non-statutory technical standards, so far as is reasonably practical¹⁹. The costs of implementing the standards should not normally exceed the requirement to meet building regulations, accepting that development and land value assumptions for brownfield land should "*clearly reflect the levels of mitigation and investment required to bring sites back into use*"²⁰.

Other Guidance on Viability Testing for Residential Development

- 1.12 Guidance has been published to assist practitioners in undertaking viability studies for policy making purposes – "*Viability Testing Local Plans – Advice for planning practitioners*"²¹. The Foreword to the Advice for planning practitioners includes support from DCLG, the LGA, the HBF, PINS and POS. PINS and the POS²² state that:
- "The Planning Inspectorate and Planning Officers Society welcome this advice on viability testing of Local Plans. The use of this approach will help enable local authorities to meet their obligations under NPPF when their plan is examined."*
- 1.13 The approach to viability testing adopted for this study follows the principles set out in the Advice. The Advice re-iterates that:

¹⁸ PPG Paragraph: 001 Reference ID: 56-001-20150327

¹⁹ PPG Paragraph: 080 Reference ID: 7-080-20150323

²⁰ PPG Paragraph: 025 Reference ID: 10-025-20140306

²¹ The guide was published in June 2012 and is the work of the Local Housing Delivery Group, chaired by Sir John Harman, which is a cross-industry group, supported by the Local Government Association and the Home Builders Federation.

²² Acronyms for the following organisations – Department of Communities and Local Government, The Local Government Association, Environment and Housing Board, Home Builders Federation, Planning Inspectorate, Planning Officers Society

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

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

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

But that:

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

Local Plan Policies

- 1.15 The NPPF is clear that viability testing should take into account, ‘...*the costs of any requirements likely to be applied to development...*’ (Para 173). Therefore, a planning policy review has been undertaken – see Appendix II – Local Plan Policies.
- 1.16 Once adopted, the Local Plan will be the main planning document for Braintree District Council. It will set out the overarching spatial strategy and development principles for the area, along with the joint ‘Part 1’ strategy with Colchester Borough Council and Tendring District Council.
- 1.17 This Study does not specifically take account of the policies from the combined ‘Part 1’ Local Plan, which is primarily concerned with setting the spatial strategy and requirements for development as well as identifying allocations for three new Garden Communities. The proposed Garden Communities have been subject to separate viability testing.
- 1.18 The policies of the ‘Part 2’ Plan are fully assessed within this Viability Study. These give effect to the spatial strategy and meeting the requirements for growth in the district as set out in the ‘Part 1’ Plan. This is achieved through the allocation of sites together with more detailed policies for development management, standards and measures to secure the levels of infrastructure required to support development. The Local Plan will be used to help determine planning applications in the district. The main elements of the Local Plan are:
- Providing strategic objectives and a vision for the District
 - Setting out an overarching strategy for the location of new development
 - Delivering the scale of new employment, housing and retail provision required
 - Identification of strategic development sites
 - Identifying and providing for future infrastructure requirements
 - Managing key environmental constraints and opportunities
 - Include strategic policies for development control purposes and setting out the standards that new development is expected to meet.
- 1.19 The Local Plan includes a number of policies which can have an impact on the viability of development. Impacts of policies are of four main types:

- Because they require the developer to make provision for a particular type of development within their scheme (e.g. affordable housing, specialist housing for older people);
- Because they require development to provide for planning obligations to ensure its acceptability in planning terms (see '*CIL and S106 requirements below*')
- Because they impact on the form of development and hence its costs e.g. in meeting design or environmental standards; or
- Because they mean that an area within a development scheme has to be set aside for a use that does not generate an income (e.g. in meeting an open space requirement)

1.20 We have worked with the Council to analyse the policies of the Local Plan. This is necessary to identify those which may add costs and/or reduce the anticipated revenue from development. Appendix II provides a summary of each policy, potential impact on viability and implications for viability testing or reflecting policy requirements within the methodology for testing.

1.21 This is also important to inform the types of development that viability testing should take into account based on the outputs the Local Plan supports – for example specialist housing for older people or 'Rural Exception Sites' for affordable housing outside of settlement limits.

1.22 Below, we highlight examples of policies which are likely to have an impact on viability:

- Affordable housing (see next section)
- Meeting policy targets for accessible and adaptable homes
- Providing new dwellings in accordance with nationally described space standards
- Transport infrastructure and public right of way
- Provision of community facilities e.g. schools, healthcare
- Providing plots for self-build and custom build housing
- Ensuring provision of land and monies for open space and leisure facilities.
- Providing for renewable energy generation within new development

Policy LPP33: Affordable housing

- 1.23 A key policy that affects development viability is LPP 33: affordable housing provision. The policy states that:
- A target of 30% of the total number of residential units on sites located in the main towns of Braintree (including Great Notley, Bocking and High Garrett), Witham, Halstead, Sible Hedingham and development sites directly adjacent to these areas.
 - A target of 40% of the total number of residential units from sites in all other areas.
 - A threshold of 15 dwellings or 0.50ha will apply in the main towns of Braintree (including Great Notley, Bocking and High Garrett), Witham and Halstead.
 - A threshold of 10 dwellings or more with a maximum combined gross floor space of 1,000sqm will apply in all other areas of the District.
- 1.24 Standalone new settlements by virtue of their size will be subject to separate viability appraisals, including on affordable housing; however, the starting point should be 30% for affordable housing provision.
- 1.25 Off-site provision or a financial contribution may be accepted where on-site delivery is impractical. A viability appraisal will be required and will be independently verified if applicants seek to demonstrate that requirements cannot be achieved. The mix of units should reflect local need.
- 1.26 In assessing viability, we have modelled the requirements for affordable housing as set out in the policy. Modelling of affordable housing contributions of a proportion of total site capacity are included on schemes comprising 11 or more dwellings with the relevant target determined by the location of development, except where the Council's policies indicate a higher threshold of 15 dwellings should apply. This approach is also consistent with National Planning Practice Guidance in identifying the scales of development where the provision of affordable housing should be required. Modelling makes further specific assumptions about the type of affordable housing to be provided. Details of the assumptions used are set out in the next chapter and Appendix I.

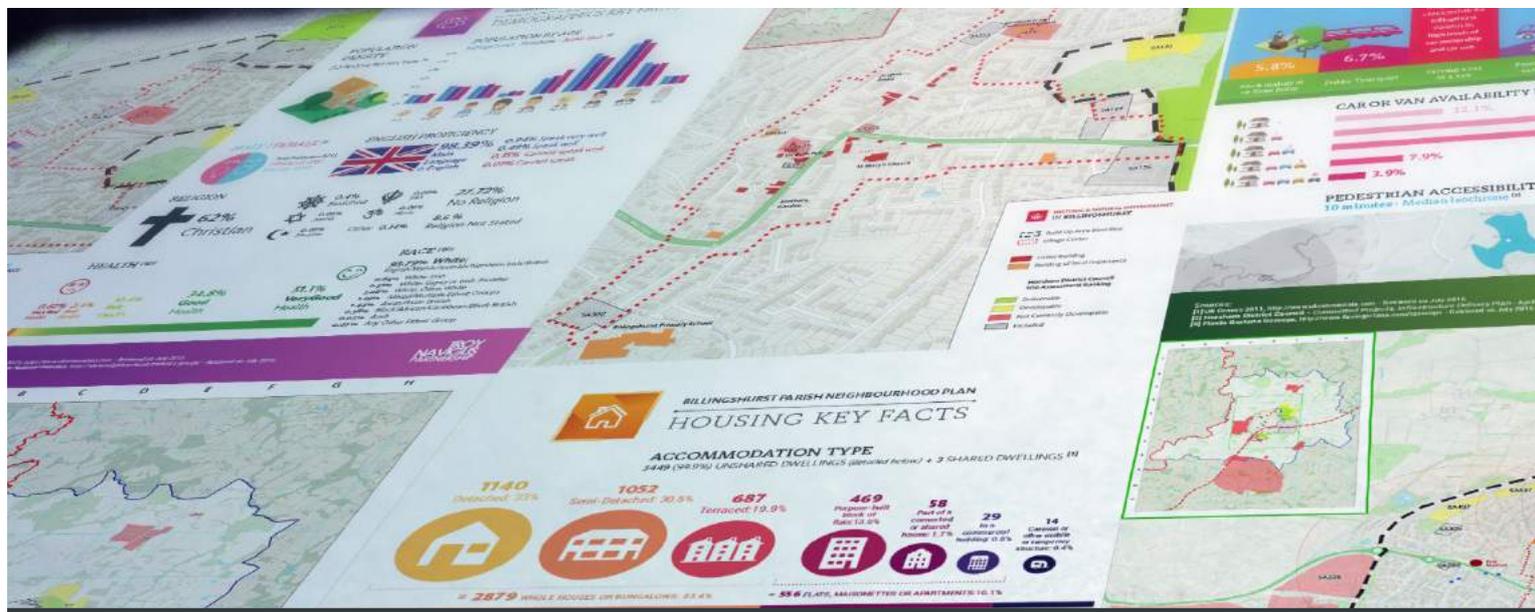
CIL and S106 Requirements

- 1.27 Braintree District Council has not adopted a Community Infrastructure Levy (CIL) and therefore this study has not taken such a levy into consideration. Neither is it designed to provide evidence to support a CIL charging schedule. S106 contributions have therefore not been scaled back (as would be the case if a CIL charge was in place) but will nonetheless have to meet the three tests:
- Necessary to make the development acceptable in planning terms;
 - Directly related to the development; and
 - Fairly and reasonably related in scale and kind to the development.
- 1.26 The testing assumptions set out in Chapter 2 detail the assumptions for future levels of planning obligations that new developments will be expected to provide for (see paragraph 2.20).

Research Evidence

- 1.28 The research which underpins the Economic Viability Assessment includes:
- Analysis of information held by the authority, including the profile of land supply identified in the Strategic Housing Land Availability Assessment and sites proposed for allocation in the emerging Local Plan; a review of historic planning permissions; and reviewing records of planning contributions;
 - A stakeholder workshop was undertaken on 13 March 2017 and held jointly on behalf of the three authorities of Braintree District Council along with Colchester Borough Council and Tendring District Council. The session was attended by around 25 delegates, spanning the public and private sector and including representatives from planning, housing and the development industry. Notes of the session are included at Appendix III.
 - Telephone interviews with Registered Providers operating in the district;
 - Follow up discussions with stakeholders and estate agents were used to validate assumptions for land values and property prices, particularly for new-build stock;
 - On-going dialogue with council officers, in-particular from planning and housing; and
 - Analysis of publicly available data to identify the range of values and costs needed for the viability assessment.

- 1.29 All the residential viability testing uses the Three Dragons Toolkit, adapted for Braintree, to analyse scheme viability for residential development and the Three Dragons bespoke model for the analysis of non-residential schemes.



2 Viability Testing – Residential Development

Principles and Approach

- 2.1 The Advice for planning practitioners summarises viability as follows:
- 2.2 *‘An individual development can be said to be viable if, after taking account of all costs, including central and local government policy and regulatory costs and the cost and availability of development finance, the scheme provides a competitive return to the developer to ensure that development takes place and generates a land value sufficient to persuade the land owner to sell the land for the development proposed. If these conditions are not met, a scheme will not be delivered.’²³*
- 2.3 As is standard practice²⁴, we have adopted a residual value approach to our analysis. Residual value is the value of the completed development (known as the Gross Development Value or GDV) less the development costs. The remainder is the residual value and is available to pay for the land. The value of the scheme includes both the value of the market housing and affordable housing. Scheme costs include

²³ P 14 Viability Testing Local Plans: Advice for Planning Practitioners Harman 2012

²⁴ See page 25 of Viability Testing Local Plans: Advice for Planning Practitioners Harman 2012 – “We recommend that the residual land value approach is taken when assessing the viability of plan-level policies and further advice is provided below on the considerations that should be given to the assumptions and inputs to a model of this type.”

the costs of building the development, plus professional fees, scheme finance and a return to the developer as well as any planning obligations.

Figure 2.1 – Residual Value Approach

<p>Total development value (market and affordable)</p> <p><i>Minus</i></p> <p>Development costs (incl. build costs and return to developer)</p> <p>=</p> <p>Gross residual value</p> <p><i>Minus</i></p> <p>CIL + planning obligations (including AH)</p> <p>=</p> <p>Net residual value (available to pay for land)</p>
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Land Value Benchmarks

- 2.4 To assess viability, the residual value generated by a scheme is compared with a benchmark land value, which reflects a competitive return for a landowner.
- 2.5 In terms of benchmark land values, Viability Testing Local Plans sets out a preferred approach in the following extract from page 29:

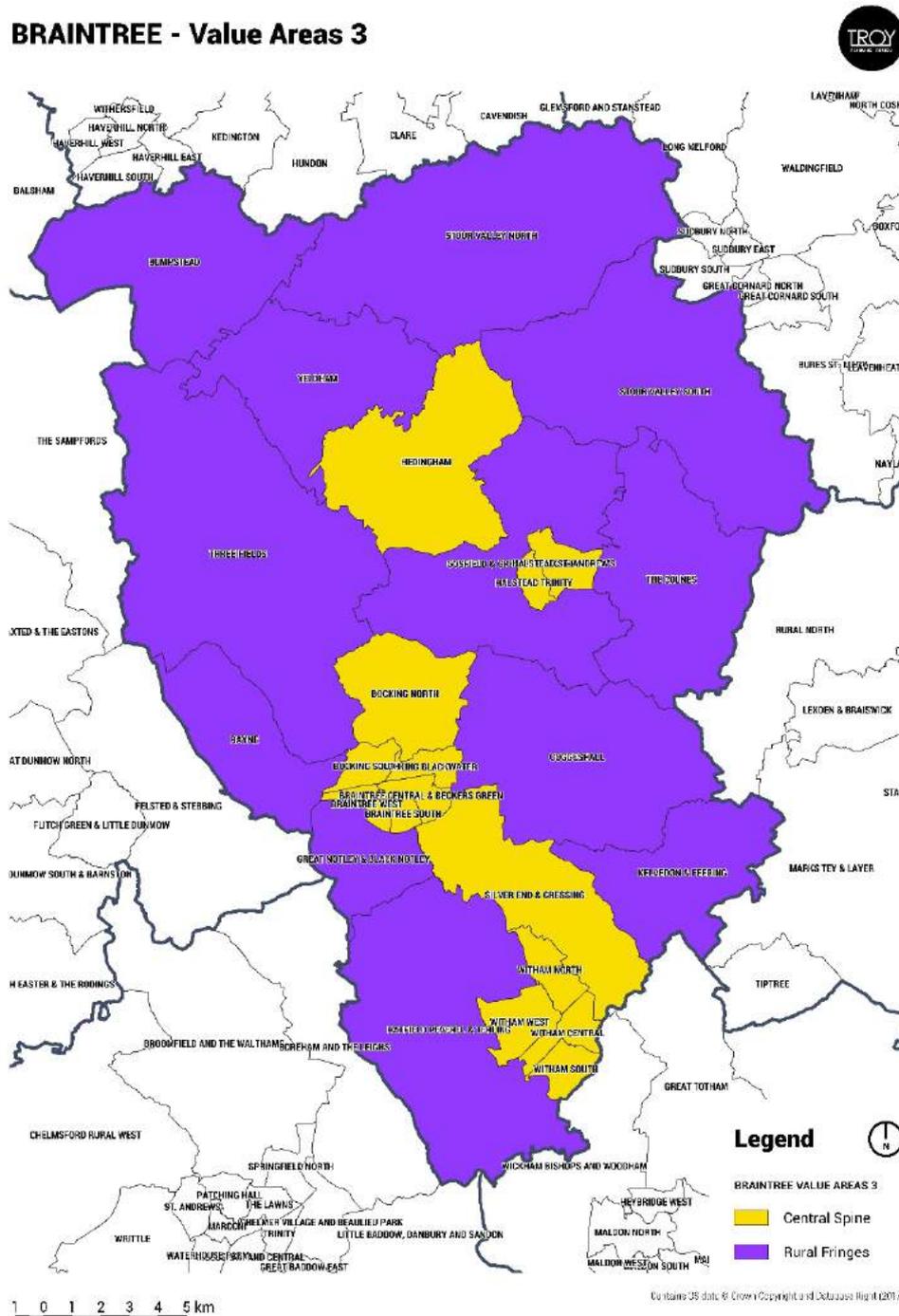
Consideration of an appropriate Threshold Land Value needs to take account of the fact that future plan policy requirements will have an impact on land values and landowner expectations. Therefore, using a market value approach as the starting point carries the risk of building-in assumptions of current policy costs rather than helping to inform the potential for future policy. Reference to market values can still provide a useful 'sense check' on the threshold values that are being used in the model (making use of cost-effective sources of local information), but it is not recommended that these are used as the basis for the input to a model.

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

- 2.6 Our mapping of prices and values has suggested two distinct market areas in Braintree District: 'Central Corridor' and 'Rural Fringes' as indicated in figure 2.2 below. The map has been generated by house price data which, logically, is reflected in the corresponding land values. 'Rural Fringes' has higher values than

areas and settlements along the ‘Central Corridor’ of the District such as Witham and Braintree.

Figure 2.2: Value Areas - Braintree District Council



2.7 We have looked at a range of methods to arrive at benchmark land values starting with generic agricultural land value for the District of around £24K per hectare which, when multiplied up by 10 – 20 times gives a greenfield land value of between

£240,000 and £480,000, giving an indication of values for large greenfield sites. In Braintree District, where the housing market is relatively buoyant, we have tended towards the upper end of this benchmark. On very large sites, such as the Garden Communities (which are not considered in this study) land will clearly transact towards the lower end²⁵.

2.8 Information on which to base a suitable benchmark for smaller sites is to some extent limited. We have looked to a variety of sources from which we have been able to draw information and make comparison thus making the 'sense check' identified in Viability Testing Local Plans. Feedback from the consultation process described in the following paragraph indicates that a benchmark of between £600,000 to £1,000,000 per hectare is a realistic range to use for this study. This range narrows slightly when looking at the market value areas separately, which primarily reflects the local differences in property prices.

2.9 The information gathering and consultation was based upon a number of sources:

- The council's previously commissioned Affordable Housing Viability Assessment (2015) which gave benchmark land values of £500,000²⁶ per hectare for the whole District (with a separate allowance for a £250,000 'buffer').
- Discussion with the council on previous known transactions.
- An online search found no information on land for sale for development in Braintree district.
- A DCLG²⁷ value of £2.8m per unencumbered gross ha suggests a lower value once obligations are taken into account. Modelling approximates the value of obligations of up to £1m per ha (at 35dph as assumed by DCLG) demonstrating that there will be land, especially in the higher value areas, that transacts at higher land values. We have included a sensitivity test on some straightforward, and therefore comparable, sites.

²⁵ See Homes and Communities Agency, 2010, Annex 1 (Transparent Viability Assumptions) p9 which references "Benchmarks and evidence from planning appeals For greenfield land ... tend to be in a range of 10 to 20 times agricultural value

²⁶ Para 6.12 of Braintree District Council Affordable Housing Viability Assessment (Final Report, July 2015), Andrew Golland Associates

²⁷ DCLG December 2015 <https://www.gov.uk/government/publications/land-value-estimates-for-policy-appraisal-2015>

- The development industry was consulted at a developer workshop where land values of £0.4m and £0.75m were presented. Comments were limited but broadly concurred with our findings and relatively limited evidence for transactions. Values were subsequently amended to reflect perceived differences in land values based on the geography of the market value areas. This meant adopting the ranges referred to in Paragraph 2.8 above. Developers in attendance felt that the upper estimates of land values should be similar between Braintree and Colchester.
- A survey of local agents²⁸ confirmed that our values were about right.

2.10 We have therefore arrived at the benchmark land values given in figure 2.3 below:

Figure 2.3: Benchmark Land Values – £ per gross ha

Braintree	Small to medium sites	Intermediate site	Large strategic Over 20 ha (gross) (Excluding garden communities)²⁹
Rural Fringe (HV)	£1.0 m	£0.75 m	£0.44 m
Central Corridor (LV)	£0.75 m	£0.6 m	£0.44 m

2.11 The benchmark land values are an estimate of the lowest values that landowners may accept and, where development is able to pay more, land will be transacted at higher prices.

Testing approach and assumptions

2.12 Two types of testing have been undertaken:

- A notional 1 hectare site/tile (at a range of densities from 25dph to 40dph);

²⁸ The consultant team engaged with the following agents, all of whom were based in Colchester and confirmed knowledge of the study area, during March 2017: Haart (Colchester); Fenn Wright Land and Property; Edward Lee Property; and Connells (Colchester)

²⁹ For garden communities, land will transact at a lower value, see Paragraph 2.7 of report for further information regarding the evidence base for this assumption

- A series of 22 case studies ranging in size from 1 to 1,900 dwellings. The case studies are representative of development in Braintree, in particular the sites identified in the Local Plan, and are informed by information provided by the Council.
- 2.13 Key assumptions in relation to costs and revenues used in the analysis of residual values for both the 1 hectare tile and case study sites can be found at Appendix I – Technical Detail.
- 2.14 Both cost and revenue assumptions were included in the consultation process described in para 1.28 above and amendments were made based on comments received, where a basis could be provided for the amendment. Details can be found at Appendix III – Stakeholder Workshops.
- 2.15 Revenue assumptions are based upon a thorough interrogation of Land Registry price paid data taking into account new build sales and price per square metre. Prices fell into one of two distinct value zones: the ‘Central Corridor’ and ‘Rural Fringe’, with prices generally lower in the Central area. Grouping data within the Central Corridor reflects similarities in property values in the settlements of Braintree, Witham and Halstead and is considered preferable. Previous studies have also identified similarities between these locations³⁰. Information for property values within the ‘Rural Fringe’ is more limited as the volume of transactions is lower and more dispersed, but with certain concentrations such as around Great Notley.
- 2.16 The presentation for the Stakeholder Workshop was based on a geography for three value areas that broadly split the settlements in the North (Braintree, Halstead) and South (Witham) of the District. This did not elicit a particularly strong response from representatives, although there were some queries regarding values being higher in Witham than Braintree. When reviewed and ‘sense checked’ with local estate agents³¹ their view was that the definition of three market areas would be likely to exaggerate differences in the rural hinterlands of the main settlements (even though transaction volumes may be lower) and mask similarities between towns such as Braintree and Witham. Grouping the settlements of Braintree and Witham, along with Halstead and

³⁰ For Example see Table A2.2 in the Braintree District Council Affordable Housing Viability Assessment (Final Report, July 2015), Andrew Golland Associates

³¹ The consultant team engaged with the following agents, all of whom confirmed knowledge of the study area and provided information on transactions in the District, during March 2017: Haart (Colchester); Fenn Wright Land and Property; Edward Lee Property; Connells (Colchester); and Beresfords (Great Dunmow)

Hedingham, as a single value area for the 'Central Corridor' was considered preferable.

- 2.17 The value zones are illustrated in figure 2.2 above. It is acknowledged that there will be some local variations across any value area, particularly for the 'Rural Fringe' and where levels of development are lower. However, the grouping of available data is considered to best reflect the average conditions and property values for new-build activity in different parts of the District.
- 2.18 The cost assumptions are based upon a mix of publicly available data, e.g. BCIS for build costs, industry standard practice, and information provided by the council, for example the value of S106 contributions.
- 2.19 The costs for renewables are based on fitting 3.3KWp photovoltaic to approximately a third of dwellings (dependent upon north/south orientations and roof space) to achieve a scheme output of 20%. Cost and coverage proportion were benchmarked against previous industry studies³².
- 2.20 Details of previously achieved S106 costs were provided by the council along with costings of future anticipated collection which were triangulated with information included in the council's Infrastructure Delivery Plan (IDP). Based on this, a representative cost of £4,000 per unit was concluded. For larger sites above 75 dwellings this was increased to £10,000 per unit to account for the likelihood of contributions towards higher education and other community infrastructure.
- 2.21 To take account of the possibility that some sites may incur particularly high infrastructure or remediation costs, the specifics of which were unknown at the time of testing, we have carried out a series of high cost scenarios on the larger sites as a sensitivity test. In these sensitivity tests an additional £5,000 – £10,000 per dwelling was added to the larger sites of 300 units or above. This is in addition to S106 costs referred to in the previous paragraph and also to site opening up costs (to allow for on-site infrastructure as detailed in Appendix I). For a three-bed semi of 100 sq m at 35 dph this is a total site infrastructure/s106 cost of just over £39,000 to £45,000 per unit for the high cost scenarios.

³² On-site Renewable Energy Policy: Placemaking Plan Evidence Base Bath & NE Somerset Council 2015; Cost analysis: meeting the zero carbon standard', Zero Carbon Hub, February 2014; web-based costings for domestic supply – Energy Saving Trust (which are assumed to be above high volume installation by 2–3 times)

- 2.22 Policy LPP37 of the Local Plan seeks to meet the need of future residents as well as those on the Housing Register for accessible & adaptable and wheelchair user housing under Part M of the Building Regulations 2015³³. The associated additional cost has been accounted for in our testing.
- 2.23 Objectively assessed housing needs identified in the SHMA indicate that around 30% of the total requirement for new residential should development should be provided as affordable housing. The Council's emerging policy (LPP33) considers that targets of either 30% or 40% should be sought in different parts of the District, depending on location, to provide for these overall requirements. Modelling has therefore been undertaken against both these policy requirements, which are expected to variously apply in both market value areas identified for the District.
- 2.24 Braintree district is covered by four different Broad Rental Market Areas (BRMAs) which set the maximum Local Housing Allowance (LHA) that can be paid for that area. As registered providers will cap their rents at LHA rates, the BRMAs will have an impact on scheme viability through the price registered providers are able to pay for affordable units. Most of Braintree falls under either the Colchester BRMA or the Chelmsford BRMA and for most of our testing we have assumed that affordable rents are capped at these levels.
- 2.25 The other two BRMAs are those for Bury St Edmunds and Cambridge. The Cambridge BRMA only covers 7% of district area and rent falls neatly between Colchester & Chelmsford and is not therefore tested. A limited amount of testing was carried out using the Bury BRMA which covers the Stour Valley (primarily rural areas in the north of the district). It was considered that using all four BRMAs throughout would produce an overly complex matrix of results, particularly as the other areas fall close to or between the main areas used for testing. Full details of each BRMA are contained in Appendix I.
- 2.26 The affordable units were split 70/30 between rented and intermediate tenure as this best meets the requirements of Registered Providers to develop affordable housing schemes that meet their financial criteria whilst addressing the high need for Affordable Rented tenure identified in the SHMA. The Housing White Paper, currently out for consultation, suggests a minimum requirement for 10% affordable

³³ <https://www.gov.uk/government/publications/access-to-and-use-of-buildings-approved-document-m>

home ownership on sites over 10 units³⁴. If this is adopted as national policy the Council has indicated it will include the same requirement. On the smaller sites of around 15 units or fewer the proportion of intermediate units may need to be increased slightly but this will not adversely affect the results of this study as this tenure strengthens viability compared to affordable rented accommodation.

- 2.27 Dwelling mix for market housing was varied between densities, with the lower densities providing a higher level of detached units and bungalows and the higher densities including flats as well as a greater number of terraced or semi-detached units.
- 2.28 The mix for affordable housing was similar in all development sizes to reflect housing need and past delivery. The focus is on affordable family units, largely two & three bed terraced properties, as identified in the SHMA.
- 2.29 Case study sites over 2.5 gross ha (around 75 dwellings) were assumed to have a net to gross ratio of around 80% to take account of any open space and any on-site infrastructure provision. This increased to 65% above 6 hectares and 50% above 75 hectares. These adjustments to site area are considered to be adequate to meet the Council's policy requirements.
- 2.30 Self & custom build housing was assumed to provide value to the developer in land value uplift (purchased as part of a large parcel but sold as small plots) and cost regarding provision of services.
- 2.31 A full set of assumptions is provided in Appendix I – Technical Appendix.

³⁴ Para 4.17 Fixing our Broken Housing Market (Housing White Paper) 7/2/17



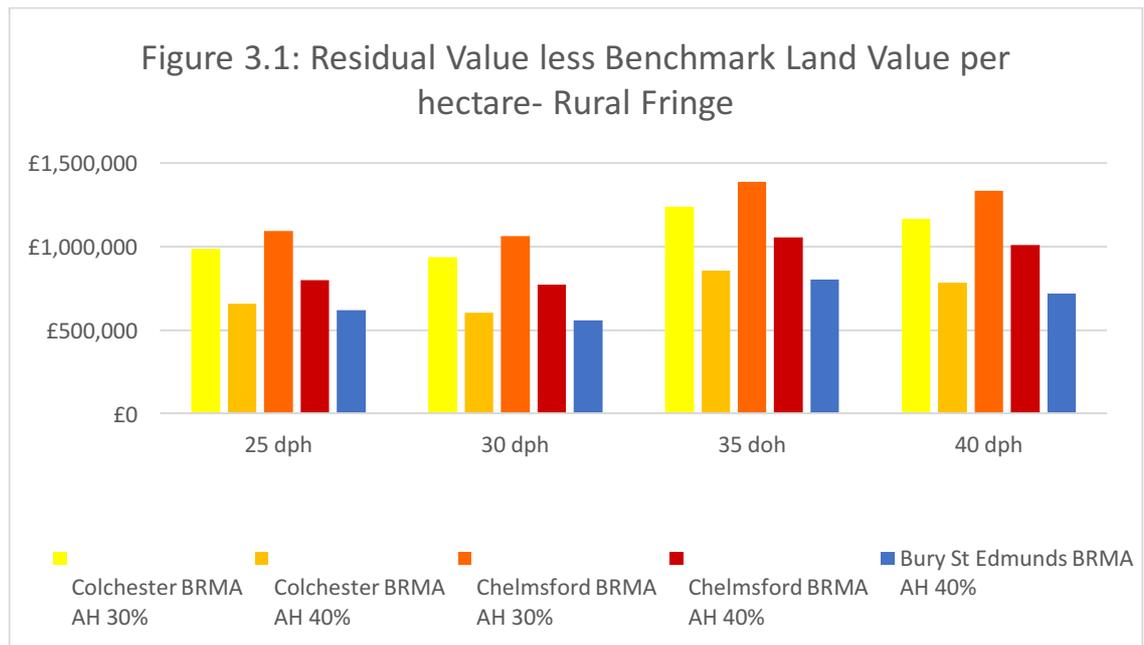
3 Residential Viability Analysis – Notional 1 Hectare Site

Testing Results

- 3.1 The results of the 1ha tiles are shown below. Each value area has been considered separately and has been tested at 25, 30, 35 & 40 dwellings per hectare (dph). The full set of results are shown in table form at appendix IV.

Notional 1 hectare scheme – Rural Fringe

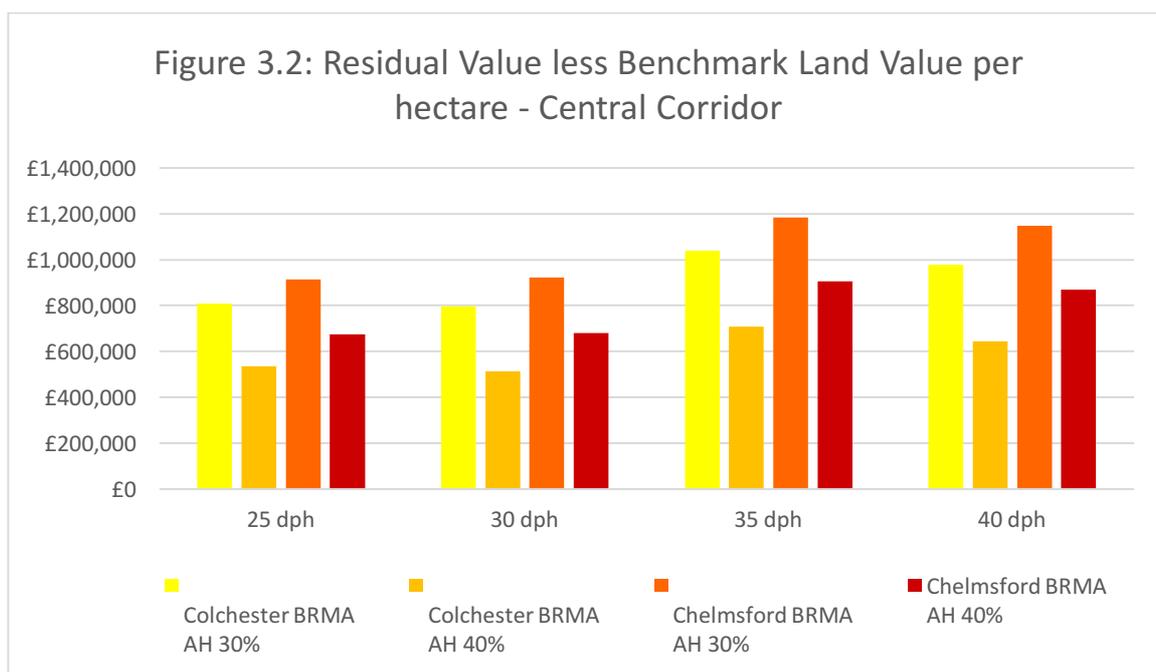
- 3.2 Testing in the Rural Fringe showed a strong market with sites financially viable at all densities. Affordable housing was modelled at 30% and 40% to account for variances in the council's policy. Modelling also accounted for the different affordable rent levels in the three main BRMAs that cover the area. All combinations produced positive results.
- 3.3 At 30% affordable housing scheme values ranged from £0.936m to £1.387m per hectare above benchmark land value and at 40% affordable housing from £0.557m to £1.053m. The most viable sites were at 35 dph. The highest values were reached in the Chelmsford BRMA where affordable rents are highest. The most viable density was 35 dph.



Benchmark Land Value = £1m per ha

Notional 1 hectare scheme – Central Corridor

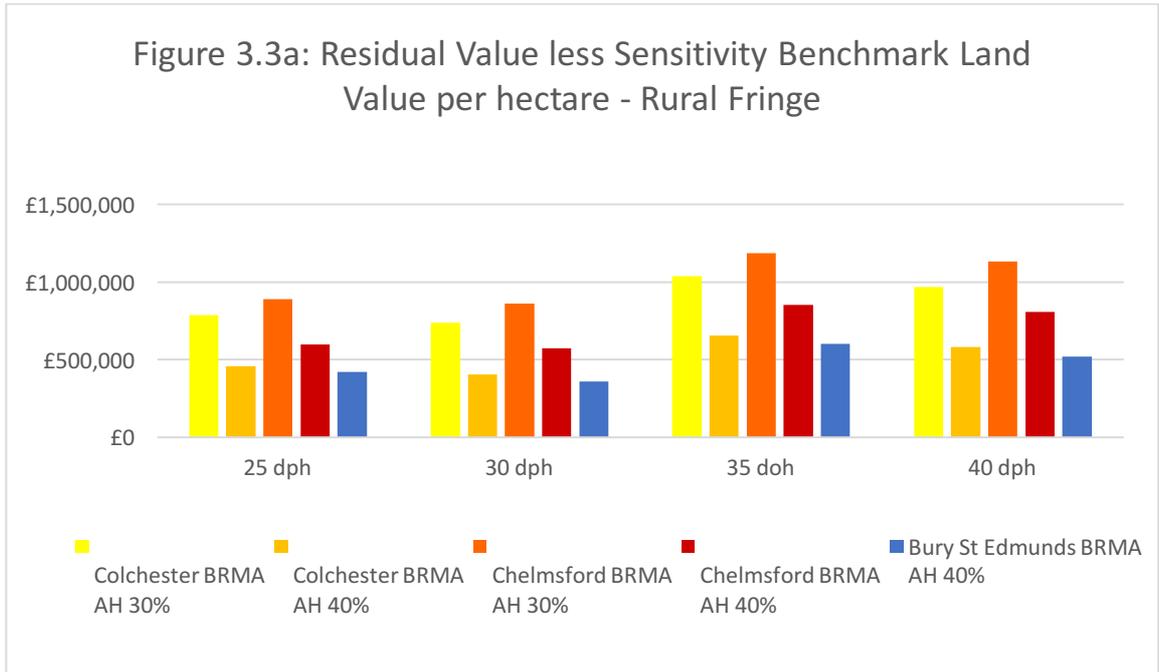
- 3.4 Results from the Central value area also demonstrate a strong market with good general viability. Testing included the different affordable rent levels two main BRMAs within this value area.
- 3.5 At 30% affordable housing scheme value remained above benchmark land value by between £0.797m and £1.185m per hectare. In the areas where 40% affordable housing is applicable the range was between £0.512m and £0.905m. Again, Chelmsford BRMA produced the highest values and the most viable density was 35 dph.



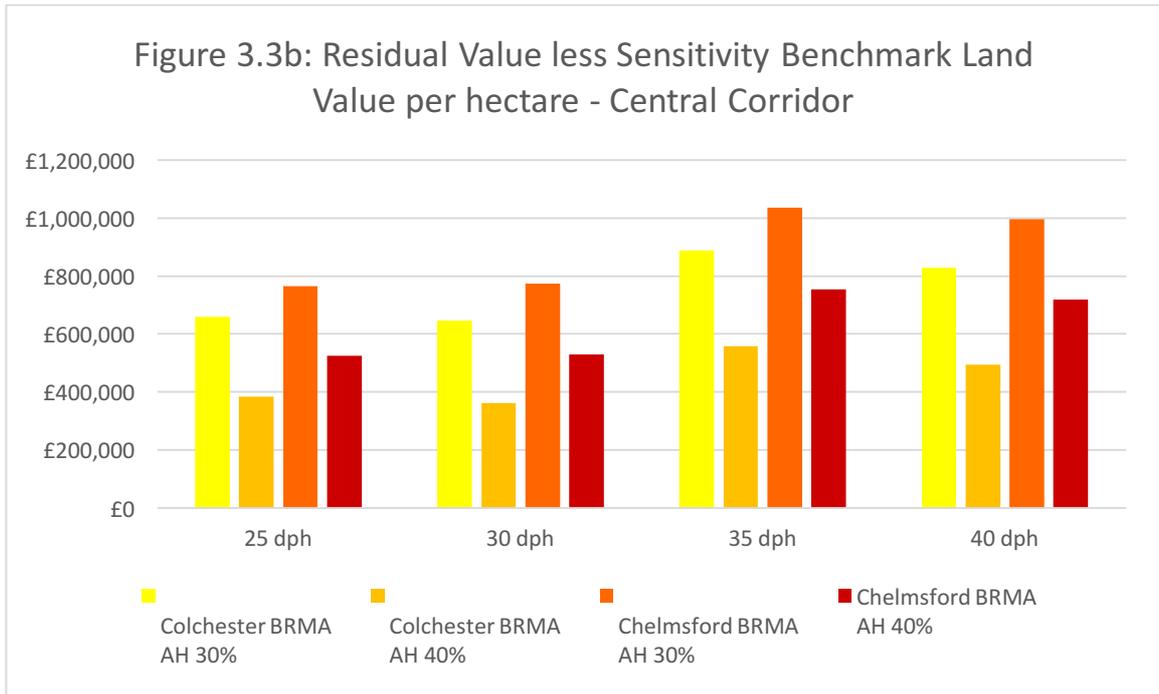
Benchmark Land Value = £0.75m per ha

Notional 1 hectare scheme – All Schemes at sensitivity benchmarks

- 3.6 All schemes were evaluated again at a higher, sensitivity, benchmark land value. This takes into account that sites of this nature and size are often the easiest to deliver as they are straightforward in terms of shape or remediation and are not encumbered by significant net to gross ratios. It also allows for any pockets of higher value/prices within each area. Apart from land value, all other factors remain the same.
- 3.7 Figures 3.3a and 3.3b below demonstrate that the 1 hectare sites remain viable when the main benchmark land value is increased by 20%.



Benchmark Land Value of £1.0m + 20% = Sensitivity Land value of £1.20m per ha



Benchmark Land Value of £0.75m + 20% = Sensitivity Land value of £0.9m per ha

Notional 1 hectare scheme – Overview

- 3.8 The testing undertaken for the notional 1 ha sites provides a broad overview of the viability of Braintree District Council's Local Plan.
- 3.9 At a 1 hectare site level a range of policy compliant residential densities can be delivered with a residual value in excess of both the main and sensitivity benchmark land values.
- 3.10 Sites were viable at the levels of affordable housing compliant with the Local Plan to meet the need identified in SHMA (30% in the Town Centre and 40% elsewhere). It should be noted that 30% affordable housing is proposed for the Garden Communities.
- 3.11 In all value areas the 35dph scenario is the most viable, although at 25; 30 & 40 dph the residual values are comfortably in excess of the main and the sensitivity benchmark land value.
- 3.12 The results of the 1 ha tiles give an overview of good general development viability at a range of densities in all value areas.



4 Residential Viability Analysis – Case Study Sites

Case study characteristics

- 4.1 In conjunction with the Council we have identified 22 basic case studies which reflect typical sites likely to be brought forward in the district. The case studies vary in size from 1 to 1,900 dwellings and in density from 25 to 60 dwellings per hectare. Taking into account the different levels and thresholds of affordable housing between the Town Centre and elsewhere in the district; the different BRMAs; as well as some sensitivity testing around affordable housing policy, density, infrastructure and site costs – 122 different scenarios have been tested for viability.
- 4.2 We have divided the case studies into three main size groups, which fit with the different benchmark land value site sizes i.e.: small to medium case studies of less than 2.5 ha (approximately 1 – 70 dwellings); intermediate case studies; and larger case studies of over 20 ha (600 or more dwellings). We have dealt separately with the rural exception site (10 dwellings) and the sheltered / extra care schemes. These are all reported on below. The key characteristics of the case studies are shown in Appendix IV along with the results in tabular format; all other assumptions are the same as for the 1ha tiles. Appendix I provides details of the assumptions used for the testing.

Small–Medium case studies (Case Studies 1 to 9)

- 4.3 This section of the report examines the results from the testing of the small – medium case studies; those sites under 2.5 ha which will attract the highest land

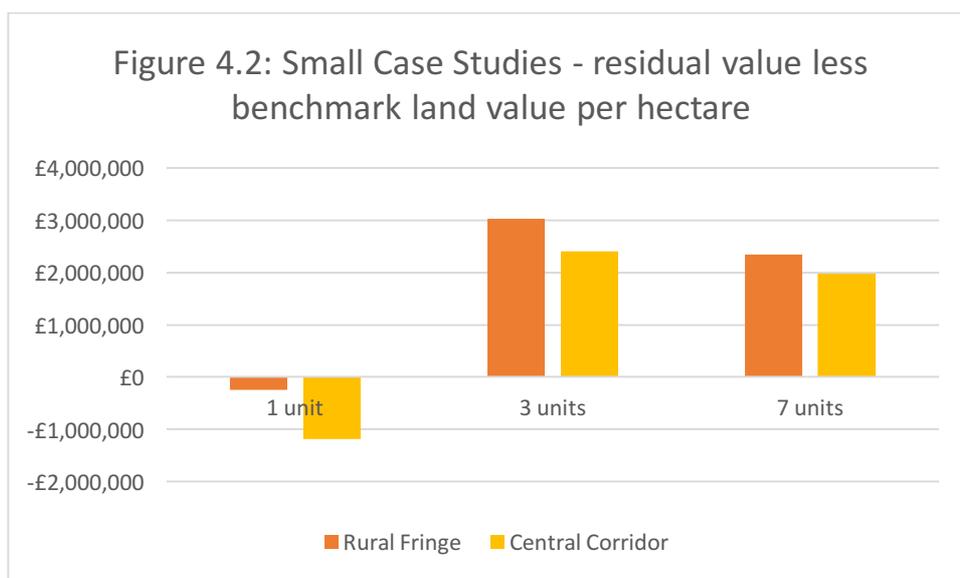
values. First we look separately at the smallest case studies, below the affordable housing threshold, and then at small to medium studies which may need to provide affordable housing. In the Town Centre area (30% affordable housing) the threshold is 15 dwellings, we have also tested this to see whether there is potential to lower this to 11, in line with the rest of the district, in order to maximise affordable housing contributions.

Small sites below 11 units

Case Study Ref	No of Dwgs	%AH	Density (dph)	Net Area (ha)	Gross area (ha)	Net to Gross %	Opening up costs for strategic Infrastructure (£ per net ha)
B1	1 dwellings	0%	40	0.025	0.025	100%	Nil
B2	3 dwellings	0%	40	0.075	0.075	100%	Nil
B3	7 dwellings	0%	35	0.200	0.200	100%	Nil

Figure 4.1 – Characteristics of Case Studies for fewer than 11 Units

- 4.4 The smallest case studies comprising schemes of 1, 3 and 7 units help consider the impact of Local Plan policies on sites below the affordable housing threshold, that will come forward during the plan period. Smaller schemes, especially those of 3 units or fewer will often incur higher build costs which may be ameliorated by higher selling prices. For these case studies we assume that development occurs within a year. We follow a similar approach to that used with the 1 hectare notional scheme, with the benchmark land value deducted from the residual value.
- 4.5 The results of the viability testing for the small case studies, in both value areas, are set out in figure 4.2 below. There is no need to take account of the different BRMAs because there will be no affordable housing on these small sites.



4.6 Both the 3-unit scheme and the 7-unit scheme show a surplus in excess of £1m per hectare above the benchmark land value in both value areas and all but the 7-unit scheme in the Central Corridor are above by over £2m. The single dwelling scheme is not viable, with a residual value below the benchmark in both value areas. This is generally a reflection of the higher costs incurred on an individual unit. These schemes may be individual one-off schemes, such as garden or infill, not necessarily brought forward for profit. (On a *per scheme* basis, the 1 unit scheme produces a negative value of -£6,000 in the Rural Fringe and -£29,750 in the Central Corridor.)

Small – Medium Sites

Case Study Ref	No of Dwgs	%AH	Density (dph)	Net Area (ha)	Gross area (ha)	Net to Gross %	S106 Contributions (£/dwelling)	Opening up costs for strategic Infrastructure (£ per net ha)
B5	11 dwellings	40%	35	0.315	0.315	100%	4,000	Nil
B5A	11 dwellings	0%	35	0.315	0.315	100%	4,000	Nil
B6	11 dwellings	30%	35	0.315	0.315	100%	4,000	Nil
B7	15 dwellings	40%	35	0.429	0.429	100%	4,000	Nil
B8	15 dwellings	30%	35	0.429	0.429	100%	4,000	Nil
B9	60 dwellings	30%	60	1.000	1.000	100%	4,000	50,000

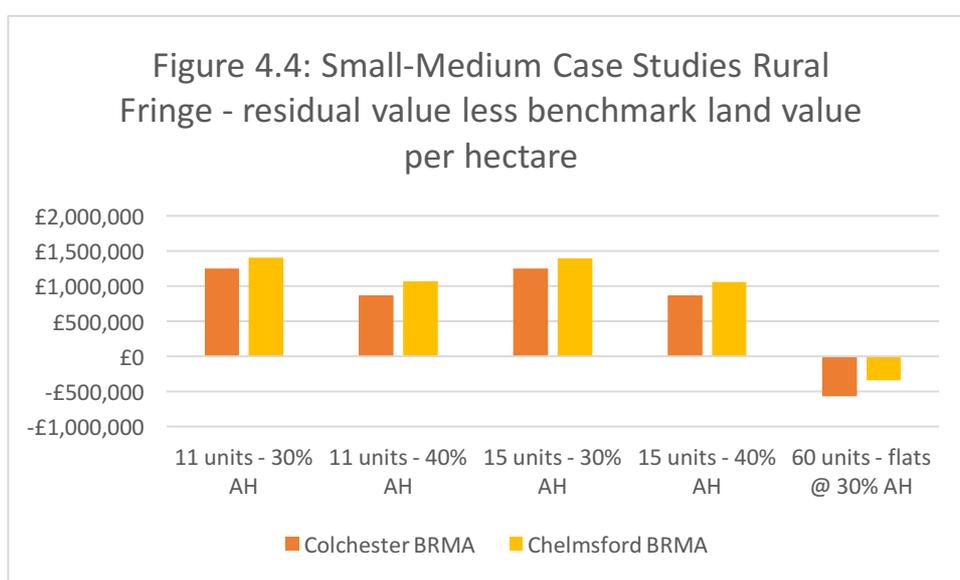
Figure 4.3 – Characteristics of Case Studies for Small and Medium Sites

4.7 These small – medium case studies are indicative of sites below 2.5 ha allocated to deliver residential growth during the plan period. They are above the national 11 dwelling threshold for affordable housing delivery. Town Centre sites (which include some areas of settlements that fall in the Rural Fringe Market Area) have an

affordable housing threshold of 15 dwellings but elsewhere in the district it is 11 dwellings. On the 11-dwelling site, affordable housing was tested at 0%, 30% and 40% to account for all affordable housing policy scenarios. To avoid an overly complex chart, the results of the testing at 0% affordable housing are not shown in the diagram (but the viability will be stronger at 0% affordable housing).

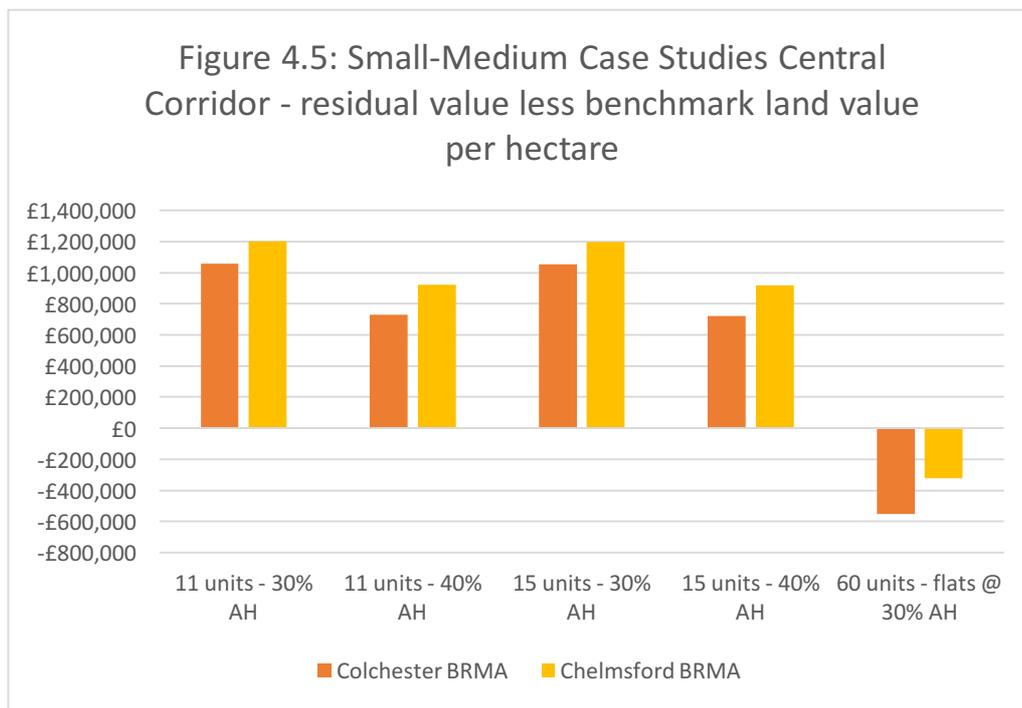
- 4.8 Testing takes account of policies in respect of accessibility & adaptability. The case studies have been modelled at 35 dph, except for the flatted schemes which is 60dph. Each value area is considered separately.

Rural Fringe



- 4.9 In the Rural Fringe value area all small-medium residential case studies are viable at residual value per hectare less benchmark land value, with the exception of the flatted schemes. The highest values are achieved for the 11-unit scheme with 30% affordable housing indicating that from a financial viability aspect, the 15-dwelling threshold could be lowered to 11 units in line with the rest of the district. The 15-unit scheme also produces a positive surplus above benchmark land value with both 30% and 40% affordable housing.

- 4.10 The flatted schemes in the Rural Fringe do not demonstrate viable sites. After deduction for land value a negative residual of -£339,000 to -£566,000 per hectare remains. This arises from the additional costs and lower selling prices associated with developing flats. When modelled with a 6% increase in selling prices in the Chelmsford BRMA and 11% increase in the Colchester BRMA (but no corresponding increase in costs), the 60-unit flatted scheme was viable at current land value.

Central Corridor

- 4.11 In the Central Corridor value area, again, all small-medium residential schemes produce viable results with the exception of the flatted schemes, with surpluses over benchmark land value ranging from £0.729m to £1.202m per hectare. The 11-unit and 15-unit schemes produce similar results. As these schemes include affordable homes, as for Rural Fringe, this suggests that the 15-dwelling threshold could be lowered in the Town Centre area.
- 4.12 The 60 unit flatted schemes are not viable with negative results, after deduction for benchmark land value, of -£550,000 and -£320,000 per hectare. This arises from the additional costs and lower selling prices associated with developing flats. When modelled with a 6% increase in selling prices in the Chelmsford BRMA and 11% increase in the Colchester BRMA (but no corresponding increase in costs), the 60-unit flatted scheme was viable at current land value.

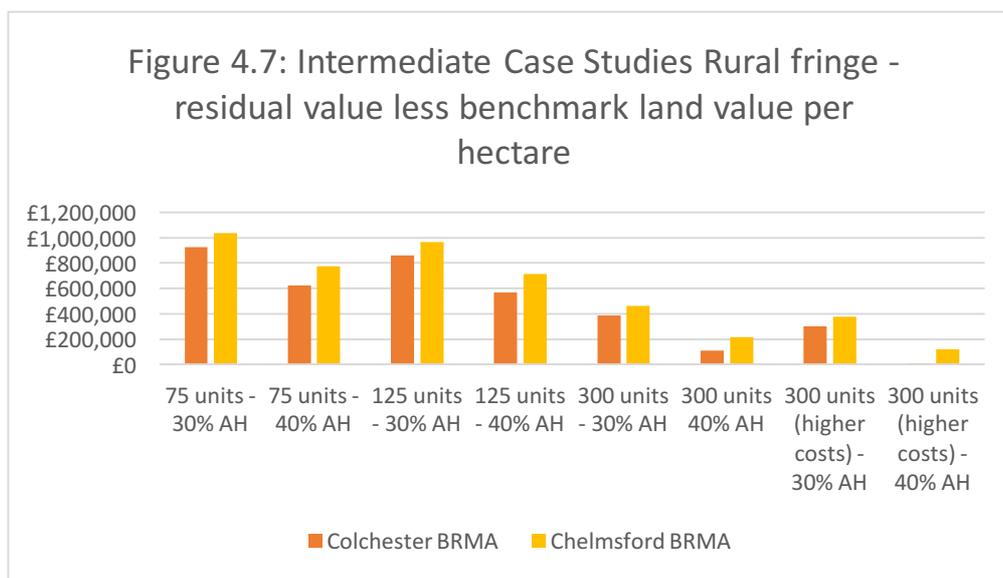
Intermediate Case Studies (Case Studies 10 – 15)

Case Study Ref	No of Dwgs	%AH	Density (dph)	Net Area (ha)	Gross area (ha)	Net to Gross %	S106 Contributions (£/dwelling)	Opening up costs for strategic Infrastructure (£ per net ha)
B10	75 dwellings	40%	35	2.143	2.678	80%	10,000	50,000
B11	75 dwellings	30%	35	2.143	2.678	80%	10,000	50,000
B12	125 dwellings	40%	35	3.571	4.464	80%	10,000	100,000
B13	125 dwellings	30%	35	3.571	4.464	80%	10,000	100,000
B14	300 dwellings	40%	35	8.571	13.187	65%	10,000	150,000
B14	300 dwellings	40%	35	8.571	13.187	65%	15,000	150,000
B15	300 dwellings	30%	35	8.571	13.187	65%	10,000	150,000
B15	300 dwellings	30%	35	8.571	13.187	65%	15,000	150,000

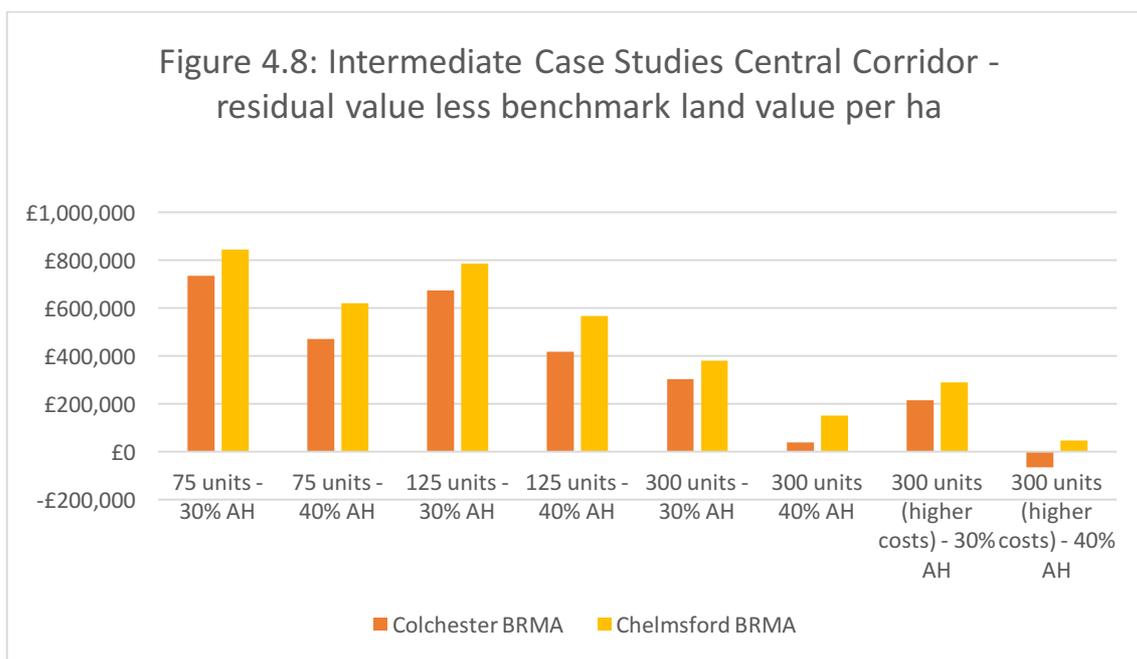
Figure 4.6 – Characteristics of Intermediate Case Studies

- 4.13 The intermediate case studies are indicative of sites sized above approximately 2.5 ha which will deliver residential growth during the plan period. Testing takes account of policies in respect of accessibility & adaptability as well as open space. Sites over 75 units are likely to be subject to higher S106 costs and this is reflected in our modelling.
- 4.14 Opening up costs are higher and net to gross ratios lower than for the small to medium sites. Case study B14 (300 dwellings) has also been modelled at a 'higher cost scenario' to allow for additional infrastructure or site remediation costs that may be incurred on larger site sizes. These are on top of the already higher costs modelled in the 'straightforward scenario', details of which can be found in Appendix I.
- 4.15 The results of the case study modelling in both value areas are shown in the charts below. The case studies have been modelled at 35 dph and each value area is considered separately.

Rural Fringe



- 4.16 All intermediate case studies are viable in the 'Rural Fringe' market area across both BRMAs used to derive values for affordable housing values.
- 4.17 Schemes between 75 and 125 units show surpluses of between £1.037m and £0.57m per hectare above benchmark land value. The greatest surplus is shown by the 75-unit scheme with 30% affordable housing contributions within the Chelmsford BRMA, followed by the 125-unit scheme with the same parameters.
- 4.18 Surpluses for the 300-unit schemes are lower than for the two smaller case studies. This is indicative of the greater costs typically associated with developing a larger scheme and the phasing of development over a longer period. Case studies B14 and B15 are nevertheless viable with a surplus over land value between £0.465m and £0.110m per hectare, dependent on the level of affordable housing contribution and location based on BRMA boundaries.
- 4.19 Within the 'Rural Fringe' the 300-unit scheme also demonstrates positive viability under a 'higher-cost' scenario. This includes the 300-unit scheme applying both a 40% requirement for affordable housing and S106 contributions increased to £15,000 per dwelling. This generates a small surplus over land value of £120,143 per hectare in the Chelmsford BRMA and £10,473 in the Colchester BRMA. With an affordable housing requirement at 30% the 'higher-cost' 300-unit scheme in both BRMAs has a surplus over land value of at least £300,000 per hectare.

Central Corridor

- 4.20 Schemes between 75 and 125 units show surpluses of between £0.843m and £0.417m per hectare above benchmark land value. The greatest surplus is shown by the 75-unit scheme with 30% affordable housing contributions within the Chelmsford BRMA, followed by the 125-unit scheme with the same parameters.
- 4.21 300-unit schemes under the 'straightforward' scenarios (see Appendix I) show surplus after benchmark land value of between £0.38m and £0.04m per hectare, dependent on location by BRMA and the level of affordable housing contribution. These surpluses are lower than for 75-unit and 125-unit examples, reflecting the greater costs and phasing implications of developing at increased scale.
- 4.22 One 300-unit case study shows a negative result of -£66,509 after deduction of benchmark land value. This represents a scheme comprising 40% affordable housing and applying a higher costs scenario (£15,000 s106 contributions per dwelling) in the Colchester BRMA. This. The equivalent scenario developed within the Chelmsford BRMA shows a surplus of £47,436 after applying the benchmark land value. A higher cost scenario at the 30% requirement for affordable housing contributions shows a surplus after benchmark land value of £0.213m per ha (Colchester BRMA) and £0.290m (Chelmsford BRMA).
- 4.23 Summarising results from the intermediate section of case studies overall highlights that a combination of factors may influence the viability of development.

Development may be sensitive to the operation of different Broad Rental Market Areas and policy requirements for affordable housing, plus site-specific circumstances where higher cost scenarios may prevail. Outcomes are therefore more sensitive to the scale and location of development within this category. However, instances where a deficit may exist after subtracting for benchmark land value appear very limited and dependent on specific circumstances. More positive results can also be achieved with only slight flexibility in other assumptions for example sales values or the policy requirement for affordable housing.

Larger case studies (Case Studies 16 – 19 & 22)

Case Study Ref	No of Dwgs	%AH	Density (dph)	Net Area (ha)	Gross area (ha)	Net to Gross %	Self Build	S106 Contributions (£/dwelling)	Opening up costs for strategic Infrastructure (£ per net ha)
B16	600 dwellings	40%	35	17.143	26.374	65%	2%	10,000	200,000
B16	600 dwellings	40%	35	17.143	26.374	65%	2%	20,000	200,000
B17	600 dwellings	30%	35	17.143	26.374	65%	2%	10,000	200,000
B17	600 dwellings	30%	35	17.143	26.374	65%	2%	20,000	200,000
B18	1100 dwellings	40%	35	31.429	48.352	65%	2%	10,000	200,000
B18	1100 dwellings	40%	35	31.429	48.352	65%	2%	20,000	200,000
B19	1100 dwellings	30%	35	31.429	48.352	65%	2%	10,000	200,000
B19	1100 dwellings	30%	35	31.429	48.352	65%	2%	20,000	200,000
B22	1900 dwellings	30%	35	54.285	108.571	50%	2%	10,000	250,000
B22	1900 dwellings	30%	35	54.285	108.571	50%	2%	20,000	250,000

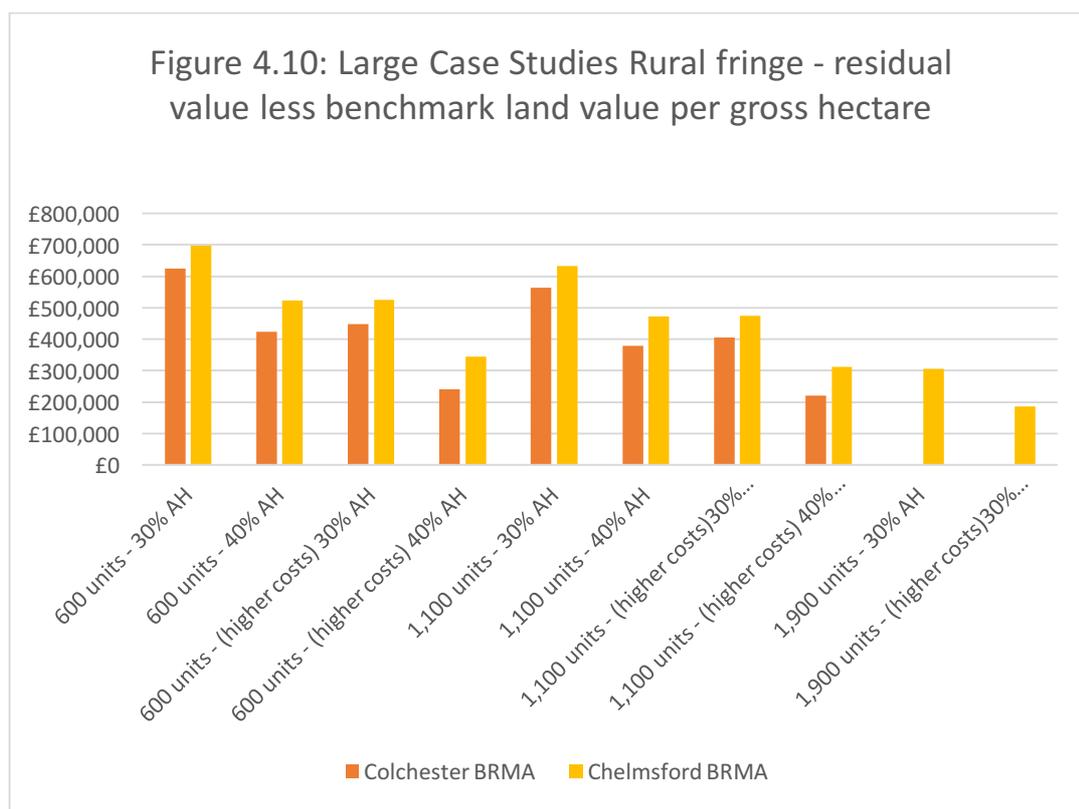
Figure 4.9 – Characteristics of Larger Case Studies

- 4.24 This section of the report deals with large case studies on sites above 20 gross ha. They include additional site and infrastructure costs as well as the lower land values likely to be achievable on schemes of this size. There is also a ‘high cost scenario’ which includes £20,000 per dwelling for additional infrastructure or site remediation instead of the £10,000 per dwelling allowed for in the ‘straightforward scenario’.
- 4.25 All of the case studies include a net to gross ratio of at least 65%, which is reduced to 50% on the largest example for a development of around 1,900 dwellings. This is indicative of the substantial areas likely to remain undeveloped in such schemes, for example to provide landscaping, open space and sustainable drainage. The build phase for each case study is assumed to span a number of years, following the assumptions set out in Appendix I.

- 4.26 There is a Local Plan requirement (LPP37) that 2% of units on these sites will be available for self & custom build.
- 4.27 The case study for a 1,900-unit scheme reflects the proposals contained within the emerging Local Plan. This only anticipates development of this scale taking place at locations falling within the Chelmsford BRMA and where the 30% policy requirement would apply, but potentially straddling the 'Central Corridor' and 'Rural Fringe' market value areas. For all other case studies, testing is undertaken on the basis that development may come forward under the 30% or 40% policy requirements for affordable housing and across the different Market Value Areas and Broad Rental Market Areas.
- 4.28 The results of the case study modelling in both value areas are shown in the charts below. The case studies have been modelled at 35 dph and each value area is considered separately.

Rural Fringe

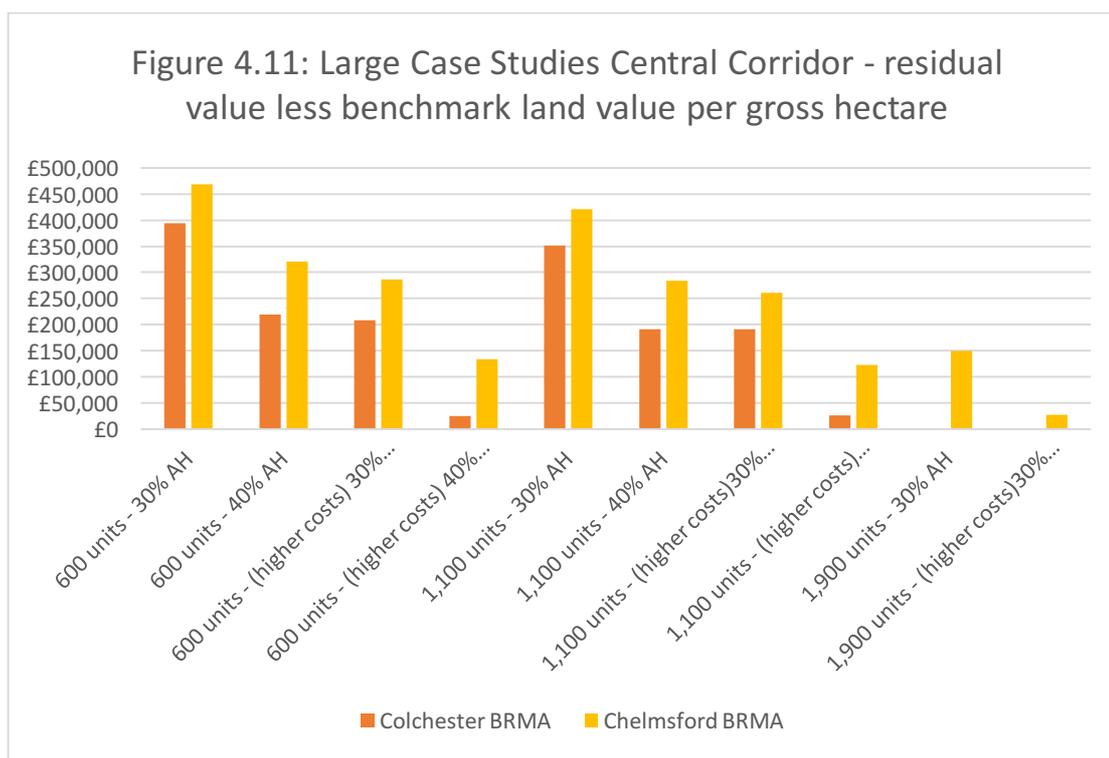
- 4.29 The results for the 'Rural Fringe' large case studies are shown in the chart below:



- 4.30 In the 'Rural Fringe' area all the large case studies show a per gross hectare surplus over benchmark land value, including schemes modelled at a high cost scenario. Case study B16 (600 dwellings at 30% Affordable Housing) produces the highest surplus (£0.698m per ha) followed by B17 (1,100 dwellings, 30% affordable housing) (0.633m per ha). Both these studies were modelled at 35 dph and fall within the Chelmsford BRMA. A 1,900-unit scheme at 30% Affordable Housing (in Chelmsford BRMA only) achieves a positive value of £0.305m per hectare post-benchmark.
- 4.31 Surpluses after benchmark land value are lower for the equivalent 600-unit and 1,100-unit scenarios at 40% Affordable Housing and within the Colchester BRMA, but nonetheless range between £0.424m and £0.379m per hectare.
- 4.32 Schemes remain viable where a 'higher costs' scenario is applied to schemes. With a 40% requirement for affordable housing the surplus ranges from £0.219m to £0.240m per hectare and with a 30% requirement increases to between £0.404m and £0.448m per hectare. With 'higher costs' applied to a scheme of 1,900-units (tested at 30% Affordable Housing) a surplus of £186,442 per gross hectare remains following allowances for benchmark land value.

Central Corridor

- 4.33 The results for the Central Corridor large case studies are shown in the chart below:



- 4.34 In the 'Central Corridor' area all the large case studies show a per gross hectare surplus over benchmark land value, including schemes modelled at a high cost scenario. Case study B16 (600 dwellings at 30% Affordable Housing) produces the highest surplus (£0.468m) followed by B17 (1,100 dwellings at 30% affordable housing) (£0.420m). Provision of 40% Affordable Housing under the same parameters equates to a surplus value of up £0.320m per gross hectare.
- 4.35 Both these studies were modelled at 35 dph and fall within the Chelmsford BRMA. A 1,900-unit scheme at 30% Affordable Housing (in Chelmsford BRMA only) achieves a residual value of £149,381 after deduction of a benchmark land value at £440,000 per gross hectare.
- 4.36 Surpluses after benchmark land value are lower for the equivalent 600-unit and 1,100-unit scenarios at 40% Affordable Housing and within the Colchester BRMA, but still range between £0.191m and £0.218m per hectare.
- 4.37 Clearly, where a 'higher costs' scenario is applied to schemes the residual value will be lower. In the Central Corridor, as in the rural Fringe, all schemes retain positive viability, although some are marginal. Results vary between just over £25,000 per gross hectare for 600 units at 40% affordable housing to £260,000 for 1100 units at 30%. In practice, schemes are likely to vary housing mix to achieve maximum viability or land value will flex to allow for margins.

4.38 The strong positive residual value for many of the case studies and the evidence for a surplus after applying benchmark land values indicates generally strong viability prospects for large scale development in the District based on the assumptions used in this testing. This is likely to apply irrespective of whether development follows the characteristics of the higher value ‘Rural Fringe’ or lower value ‘Central Corridor’ and whether policy requirements indicate provision of 30% or 40% delivery of affordable housing. The wide mix of large case study characteristics tested do, however, indicate a broad spectrum of residual values. These are lowest in the lower value area (‘Central Corridor’) and where the lower rental values for affordable housing apply in the Colchester BRMA, and mean that in some cases (where these factors combine) the net residual value after allowing for benchmark land value may appear marginal.

Rural Exception Site (Case Study 4)

4.39 A 10-dwelling rural exception site was modelled to ascertain what, if any, market housing may be required to ensure viability. Tenure mix on rural exception sites will normally be determined by locally assessed need, but as this is a notional site we have assumed a mix that is typical whilst also considering what is needed to achieve viability.

Figure 4.12: Rural exception site with market housing – residual value per scheme

	Tenure: 20% market / 50% Affordable Rent / 20% shared ownership	
	Colchester BRMA	Chelmsford BRMA
‘Central Corridor’ (Lower Value)	£101,000	£199,000
‘Rural Fringes’ (Higher Value)	£139,000	£237,000

4.40 The results indicate that around 20% of rural exception sites would need to be dwellings for market sale in order to achieve enough value to pay for land. In arriving at this figure we have assumed there is no HCA grant available.

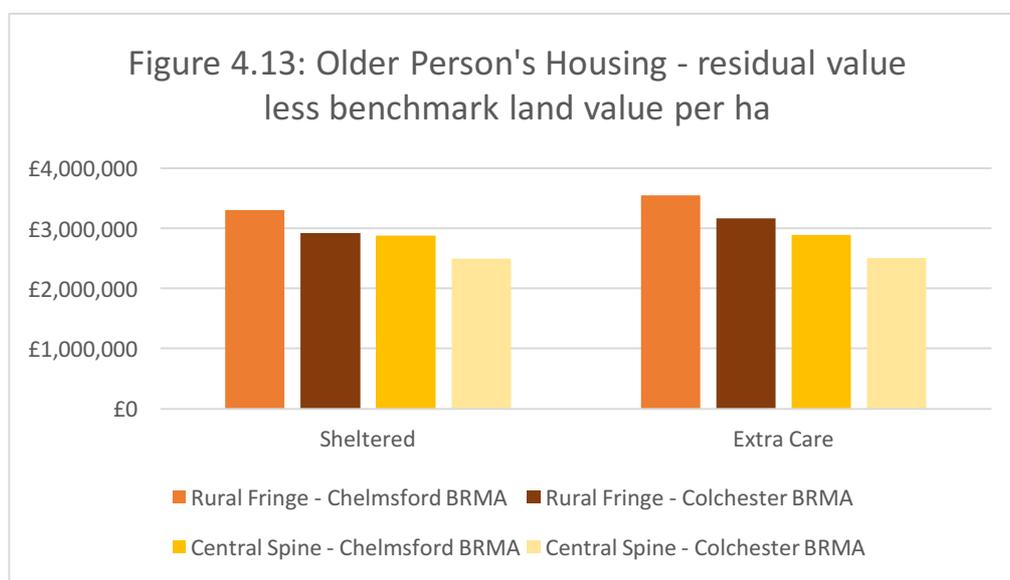
- In the Central Corridor area, residual value (i.e. available for land purchase) was between £101,000 and £199,000 when 20% of the site was for private sale – £10,100 – £19,900 per plot.

- In the Rural Fringe area, residual value for the site with 20% market homes was between £139,000 and £237,000 – £13,900 to £23,700 per plot, depending upon BRMA.

4.41 In all scenarios the residual value should be sufficient to ensure scheme viability taking into account plot values discussed with RPs. This will be closer to the margin in the Central Corridor area where rents would be covered by the Colchester BRMA. However, as discussed above, Rural Exception Site schemes will be dependent upon local mix to reflect need and schemes will have to be assessed on an individual basis.

Sheltered & Extra Care (Case Studies 20 & 21)

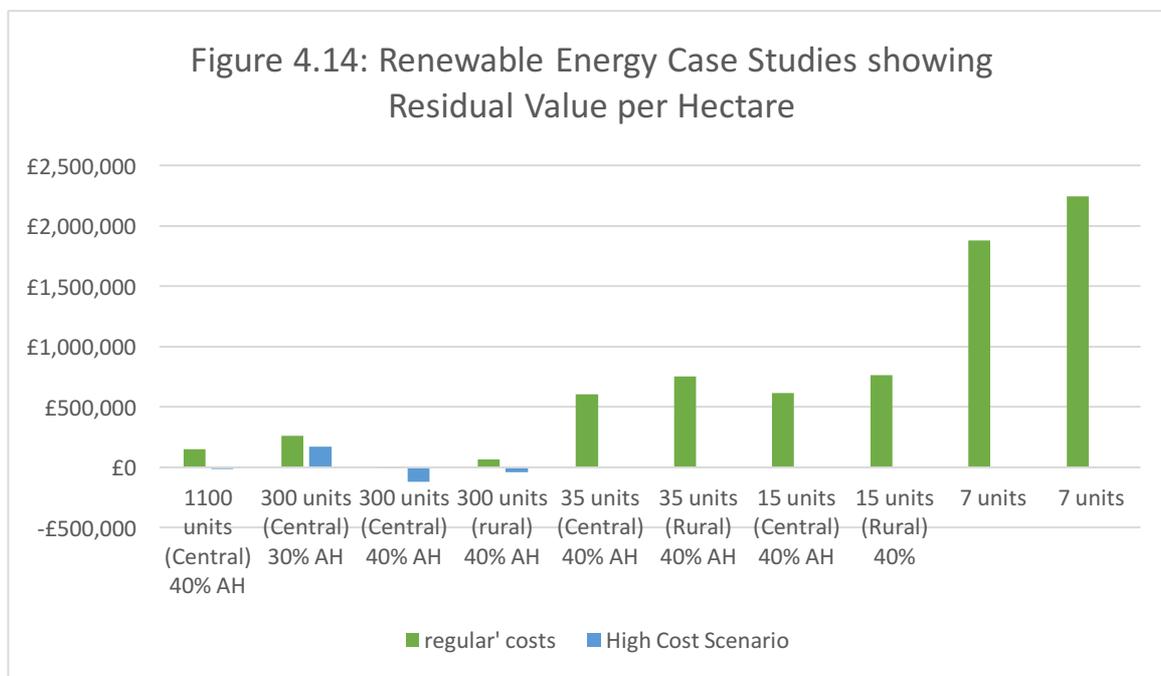
4.42 Sheltered and extra care schemes were modelled in both value areas and both Broad Rental Market Areas:



4.43 Sheltered and extra care schemes produced viable results in both market value areas and experience limited effects on viability arising from the Broad Rental Market Areas. Sheltered housing gave a surplus over benchmark land value of between £3.31m to £2.93m per hectare in the Rural Fringe area and £2.88m to £2.50m per hectare in the Central Corridor. For Extra Care this was £3.55m to £3.17 and £2.89 to £2.51m respectively. Both schemes were modelled with 30% affordable housing. However, we would assume that extra care housing would be classed as C2 and hence relieved from the affordable housing obligation.

Renewable Energy Case Studies

- 4.44 Costs to achieve the council's policy on renewable energy were applied to a sample of case studies and where applicable this was discounted over the lifetime of the development process. To properly view the effect of the policy on the ability to achieve other Local Plan policies, we mainly applied the policy to the sites in the district that were already of lower viability.



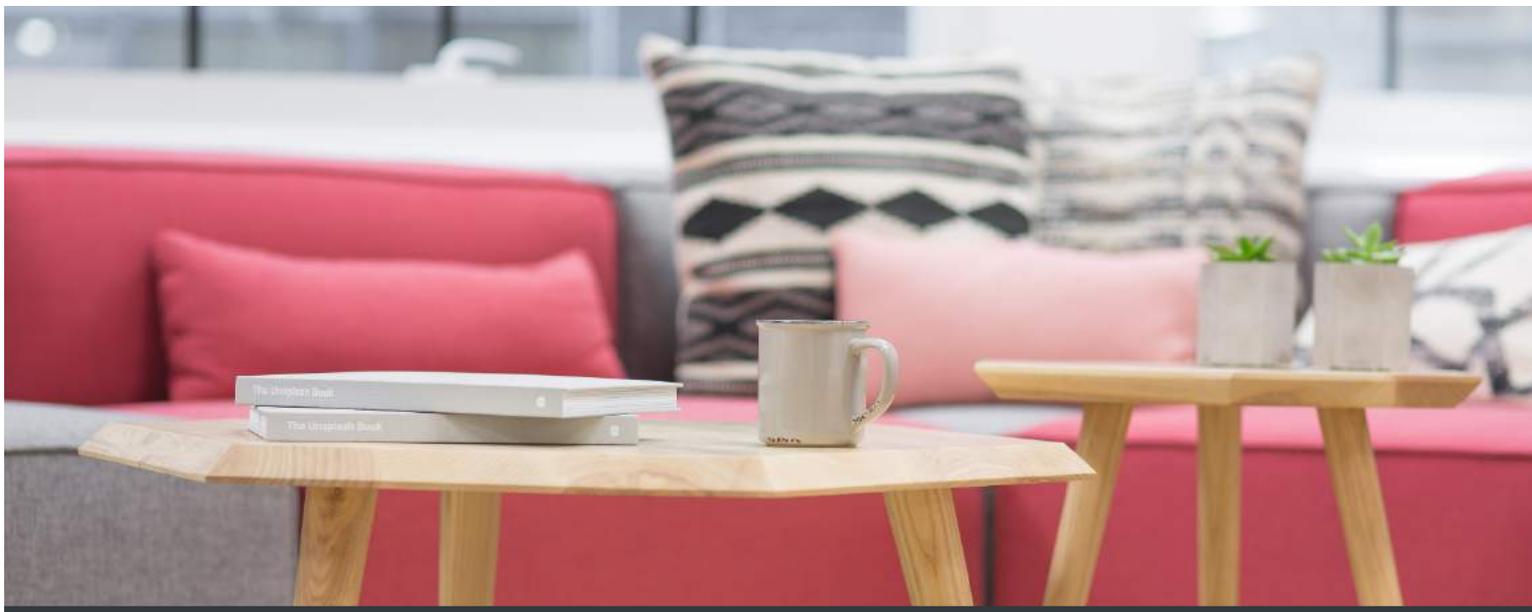
- 4.45 As the chart above demonstrates, the renewable energy policy, whilst having some impact on schemes, results in broadly positive values per hectare over benchmark land value. In some instances schemes are marginally non-viable, particularly in the high cost scenarios at 40% affordable housing. The smaller schemes continue to produce strong results even though the costs are higher. The 300 unit scheme with 40% affordable housing produces marginal results in both areas (£64,000 per hectare in the Rural Fringe and -£9,000 per hectare in the Central Corridor).

Case Studies – Overview

- 4.46 The case studies modelled in this viability study were identified with the council as the best representation of sites expected to come forward in the delivery of the Local Plan. They include full allowance of the costs of policies. The case studies suggest that policy compliant development proposed in the new Local Plan is viable.
- 4.47 Plan policies for affordable housing delivered at either 30% or 40% of total site capacity and additional costs for accessible housing, Part M of Building Regulations (2015), are supported by the testing. The council's policy on renewable energy was

tested as a case study and shows that in some cases, coupled with other policy requirements, could result in marginal schemes, especially on sites of 300 or more units. On a scheme by scheme basis, in instances where viability may prove an issue, the council would need to consider whether to allow limited flexibility with these plan policies.

- 4.48 The main exceptions to the good general viability are the flatted schemes which in both market value areas show schemes that are likely to struggle to deliver at current costs and values. Greater deficits in residual value (after allowing for benchmark land values) exist in the Colchester BRMA (predominantly in the north and east of the District) and this presents a clearer distinction than the geography of property values for flats across the District. Over time, the likelihood that both sale and rental values will rise above costs could make these schemes more deliverable, especially for settlements within the Colchester BRMA where these become a focus for additional development, but may still require some relaxation on plan policies.
- 4.49 Large site case studies for 600 and 1100 dwellings have produced viable results in both value areas taking into account the additional costs associated with larger developments and could provide affordable housing up to a 40% policy requirement, where applicable. A 1,900-unit case study also demonstrates a surplus above land value benchmark with a 30% affordable housing contribution. 'High costs scenarios' for sensitivity show that these schemes could also bear further infrastructure and/or remediation costs if necessary. Most tests within this category show positive results above the benchmark land value but there is limited additional margin under the 'high costs' scenarios, especially in the Colchester BRMA where lower affordable housing revenues are modelled based on local rents. In circumstances where a deficit could arise, there is room for land value to flex to take account of this and/or that economies of scale could mean that a large developer could achieve lower building costs or be able to maximize the development value of the housing mix.
- 4.50 All other schemes of 3 dwellings or above have produced positive results in viability modelling and indicate that the Local Plan is deliverable.



5 Non-residential Development

Introduction

- 5.1 This section of the report provides viability analysis of the non-residential development planned to come forward under the new local plan.
- 5.2 The Pre-submission Local Plan notes that economy of the District is dominated by small and medium-sized businesses. It retains a relatively large proportion of industrial-type occupations, and whilst there are a growing number of jobs in the office-based sector, this is significantly below the Essex and national averages. Most employment areas are located around the main towns of Braintree, Halstead and Witham. The 2015 Employment Land Needs Assessment recommends that between 53,400 sq m and 66,800 sq m of additional office space is required. The study also found that while there was a decline in manufacturing there would continue to be increasing demand for logistics. Other non-residential uses include hotel development. Employment Policy Areas in the draft Local Plan will include B1/B2/B8 as well as vehicle repair, business services and waste management services. Business parks will have B1 uses. Employment space development in rural areas will be based around the conversion and re-use of existing buildings.
- 5.3 Convenience and comparison retail growth will be in Braintree town centre, Freeport Designer Outlet and Braintree Retail Park, with some limited convenience retail growth in Witham and Halstead. Braintree, Halstead and Witham town centres are the primary locations for leisure and cultural provision.

Case Studies and Testing Assumptions

5.4 The viability testing responds to the planned development by using the following case studies:

- Town centre offices
- Business park offices
- Industrial/warehouse uses
- Town centre comparison retail
- Retail park comparison retail
- Small convenience retail
- Supermarket
- Hotel
- Mixed leisure
- Care home

5.5 The characteristics for each case study are set out in figure 5.1 below.

5.6 Build costs are drawn from BCIS, using median values rebased to this location. Build costs are slightly higher than the national average. Revenues have been based on transactions listed by Co-Star Suite³⁵ (lettings and investments), supplemented by market commentaries³⁶. Where possible we have based our values on local data but for some uses data had been drawn from analogous developments in other areas (some retail, care homes, leisure) in order to broaden the base for the estimates used here. Where there is a range of examples we have focussed on quality provision of a standard likely to be attractive to institutional investors.

Retail Values

5.7 Retail case studies include convenience³⁷ and comparison, in and out of town centre. The main locations with data available for high street comparison retail values are Braintree, Witham and Halstead. For out of centre comparison retailing (retail

³⁵ CoStar Suite is a national database which offers a full market inventory of properties and spaces, available as well as fully leased, searchable by market and submarket

³⁶ CBR, Savills, Knight Frank, Focus

³⁷ Convenience retailing is defined as the provision of everyday essential items, including food, drinks, newspapers/magazines and confectionery; and within this larger stores provide the range required for weekly shops and smaller stores provide more of a 'top-up' function. Comparison retail relates to other consumer goods.

warehouses) values are driven by the strength of the operator covenant and we have used data from a broader area across the east of England.

- 5.8 In relation to convenience retail we note that in the past leases to the main supermarket operators have commanded a premium with investment institutions, although there has been a structural shift with the historic pattern of developing large stores now replaced with development of smaller supermarket formats (as used by both discount and premium convenience operators) and greater provision of small format stores, often within the Sunday trading threshold³⁸ (280 sq m display floor area), also often in existing floorspace. These changes reflect the alterations in shopping habits. Although there are some small regional variations on convenience retail values, they are reasonably standard across the country with investors focusing primarily on the strength of the operator covenant and security of income. As a result, it is reasonable to use a broad geographical evidence base for convenience retail.

Office Values and Industrial and Warehouse Values

- 5.9 We have used local data for office, industrial and warehouse values.

Hotel and Leisure Values

- 5.10 Nationally, there has been significant growth in the provision of budget hotels³⁹, with relatively few full-service hotels outside the major conurbations. The most likely hotel development is a budget hotel from a limited number of national hotel operators. We have used data from across a wide area to come to a view about the values these types of hotel command.
- 5.11 For leisure we have used values for cinemas, using data drawn from a broad area.

Care Homes

- 5.12 Care home values have been estimated using data drawn from a broad area.

Land Values for Non-Residential Development

³⁸ Sunday Trading Act 1994

³⁹ The British Hospitality Association Trends and Developments Report 2012 indicates that budget hotels are defined as a property without an extensive food and beverage operation, with limited en-suite and in-room facilities (limited availability of such items as hair dryers, toiletries, etc.), low staffing and service levels and a price markedly below that of a full service hotel.

- 5.13 Benchmark land values are an estimate of the lowest value that land may be released for development as opposed to the highest values seen in market transactions. The benchmark land values have been developed based on existing use values, with a premium where the use is expected to change. We have used the DCLG/VOA industrial land value⁴⁰ as a starting point, with a 20% premium where this may be used for a non-B class use. For retail uses we have used the higher residential benchmark as this may be an alternative use). The exception is the higher value town centre comparison retail where we have assumed that the site will have an existing retail use but with lower values and less floorspace. Here we have used this as the basis for generating value estimates along with an allowance for demolition and associated costs⁴¹.

Figure 5.1 Benchmark land values

Type	£ per gross hectare
Prime town centre retail	Site EUV
Convenience and other comparison retail	£1.0m
Budget hotels, care homes, leisure	£0.81m
Office, industrial and warehouse	£0.675m

Figure 5.2 Case study characteristics

	<i>Out of Town centre offices</i>	<i>of Town centre offices</i>	<i>Industrial/ warehouse units</i>	<i>Warehouse/ industrial units</i>
Floorspace sqm	1,500	2,000	1,600	5,000
Storeys	2	4	1	1
Site coverage	40%	75%	40%	40%
Rent/sqm	£161	£177	£64	£64
Yield	8.20%	8.20%	7.54%	7.54%
Purchaser costs %GDV	5.80	5.80	5.80	5.80
Build costs/sqm	£1,337	£1,605	£836	£536

⁴⁰ DCLG, 2015, Land value estimates for policy appraisal

⁴¹ We used a 100 sq m retail unit on two floors with 50% site coverage, with rents from the lower end of the range recorded and weaker yield; along with an allowance for demolition and a 20% incentive for the landowner.

	Out centre offices	of Town centre offices	Industrial/ warehouse units	Warehouse/ industrial units
External works % of base build costs	10%	10%	10%	10%
Professional fees	10.00%	12.0%	12.00%	12.00%
Sales and letting costs % of GDV	3%	3%	3%	3%
Allowance for s106	£20,000	£0	£20,000	£50,000
Finance costs	6.0%	6.0%	6.0%	6.0%
Build and void period (months)	22	26	20	32
Developer return % GDV	20%	20%	20%	20%
SDLT & agent fees/sqm (if viable)	£0	£0	£0	£0

	Prime town centre comparison shops	Secondary town centre comparison shops	Out of centre comparison shops	Small convenience store	Mid convenience store	Supermarket
Floorspace sqm	200	200	1,000	300	900	2,500
Storeys	2	2	1	1	1	1
Site coverage	80%	80%	40%	65%	55%	40%
Rent/sqm	£178	£107	£157	£208	£177	£194
Yield	7.10%	7.10%	6.60%	6.70%	6.20%	5.40%
Purchaser costs % GDV	5.80	5.80	5.80	5.80	5.80	5.80
Build costs/sqm	£1,048	£934	£725	£1,274	£1,274	£1,637
External works % of base build costs	10%	10%	10%	10%	10%	10%
Professional fees	12.00%	12.00%	10.00%	12.00%	10.00%	10.00%
Sales and letting costs % of GDV	3%	3%	3%	3%	3%	3%
Allowance for s106	£0	£0	£100,000	£0	£100,000	£100,000
Finance costs	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%
Build and void period (months)	24	24	26	6	11	15

	<i>Prime town centre comparison shops</i>	<i>Secondary town centre comparison shops</i>	<i>Out of centre comparison shops</i>	<i>Small convenience store</i>	<i>Mid convenience store</i>	<i>Supermarket</i>
<i>Developer return % GDV</i>	20%	20%	20%	20%	20%	20%
<i>SDLT & agent fees/sqm (if viable)</i>	£6	£0	£27	£11	£6	£17

	<i>Budget Hotel</i>	<i>Care Home</i>
<i>Floorspace sqm</i>	2,450	3,000
<i>Storeys</i>	3	2
<i>Site coverage</i>	50%	40%
<i>Capital value per room</i>	£80,000	£95,000
<i>Purchaser costs % GDV</i>	5.80	5.80
<i>Build costs/sqm</i>	£1,203	£1,467
<i>External works % of base build costs</i>	10%	10%
<i>Professional fees</i>	12.00%	12.00%
<i>Sales and letting costs % of GDV</i>	3%	3%
<i>Allowance for s106</i>	£10,000	£75,000
<i>Finance costs</i>	6.0%	6.0%
<i>Build and void period (months)</i>	16	12
<i>Developer return % GDV</i>	20%	20%
<i>SDLT & agent fees/sqm (if viable)</i>	£14	£0

	<i>Leisure Development</i>
<i>Floorspace sqm</i>	3,800
<i>Storeys</i>	2
<i>Site coverage</i>	80%
<i>Rent/sqm</i>	£161
<i>Yield</i>	6.60%

<i>Leisure Development</i>	
<i>Purchaser costs % GDV</i>	5.80
<i>Build costs/sqm</i>	£1,428
<i>External works % of base build costs</i>	10%
<i>Professional fees</i>	12.00%
<i>Sales and letting costs % of GDV</i>	3%
<i>Allowance for s106</i>	£20,000
<i>Finance costs</i>	6.0%
<i>Build and void period (months)</i>	12
<i>Developer return % GDV</i>	20%
<i>SDLT & agent fees/sqm (if viable)</i>	£0

Summary Viability Assessments

5.14 The tables below summarise the results from the detailed assessments for each non-residential development type. They provide the following information

- Net value per square metre.
- Net costs per square metre – including an allowance for land cost and s106 to deal with site specific issues (e.g. On-site highways, travel plan etc. to make development acceptable).
- Residual value per sq m (i.e. Value less costs).
- The land value benchmark for that use – presented £s per sq m of development to take into account differences in site coverage and the number of storeys for the notional developments.
- The viability headroom – for uses that are viable, this is the residual value over and above the benchmark land value.

5.15 It is important to note that the analysis considers development that might be built for subsequent sale or rent to a commercial tenant. However, there will also be design and build development that is undertaken for specific commercial operators, either as owners or pre-lets. In these circumstances, the economics of the development relate to the profitability of the enterprise accommodated within the buildings rather than the market value of the buildings.

- 5.16 Public sector economic development priorities may also result in funding being used to deliver some forms of development or provide infrastructure that reduces the cost/risk of private sector development. This might include making use of local authorities' ability to borrow cheaply or use capital budgets to create income earning assets, as well as programmes such as the South East LEP's Growth Deal which plans to invest over £100m 2017–20.

B Class Uses – Offices, industrial and warehouses

- 5.17 The viability assessments indicate that all of these B class uses produce a negative residual value. The lack of viability for B class uses is common across many areas of the country.

Figure 5.3: Offices

	<i>Out of centre offices</i>	<i>Town centre offices</i>
<i>Value per sq m</i>	£1,763	£1,938
<i>Costs per sq m</i>	£2,222	£2,688
<i>Residual per sq m</i>	-£459	-£750
<i>Land benchmark per sq m</i>	£84	£23
<i>Viability 'headroom' per sq m</i>	-£543	-£772

Figure 5.4: Industrial and Warehouses

	<i>Industrial units</i>	<i>Warehouses</i>
<i>Value per sq m</i>	£762	£762
<i>Costs per sq m</i>	£1,324	£954
<i>Residual per sq m</i>	-£562	-£192
<i>Land benchmark per sq m</i>	£169	£169
<i>Viability 'headroom' per sq m</i>	-£731	-£361

Retail Uses

- 5.18 The viability of retail development will depend primarily on occupier demand and the type of retail being promoted. For this reason, we have tested different types of retail provision.
- 5.19 All of the convenience retail uses tested were viable, with the small stores having the strongest viability.

Figure 5.5: Convenience retail and supermarkets

	<i>Small convenience store</i>	<i>Mid convenience store</i>	<i>Supermarket</i>
<i>Value per sq m</i>	£2,788	£2,563	£3,226
<i>Costs per sq m</i>	£2,271	£2,343	£2,939
<i>Residual per sq m</i>	£516	£220	£287
<i>Land benchmark per sq m</i>	£154	£182	£250
<i>Viability 'headroom' per sq m</i>	£362	£39	£37

- 5.20 Neither the prime nor secondary town centre retail is viable, although in the case of the prime town centre retail this is sensitive to the site value as the case study does produce a positive residual value. We have tested against a site with less valuable retail uses but if sites with a lower existing use value were available, it may be possible for this form of development to be viable. The secondary town centre retail is not viable, even against a lower land value benchmark than the prime retail. Out of centre retail warehouses are viable.

Figure 5.6: Town centre and out of centre comparison retail

	<i>Prime town centre comparison shops</i>	<i>Secondary town centre comparison shops</i>	<i>Out of centre comparison shops</i>
<i>Value per sq m</i>	£2,251	£1,353	£2,136
<i>Costs per sq m</i>	£1,978	£1,605	£1,614
<i>Residual per sq m</i>	£274	-£252	£522
<i>Land benchmark per sq m</i>	£959	£63	£250
<i>Viability 'headroom' per sq m</i>	-£686	-£314	£272

Other Tested Uses

- 5.21 The other uses tested include hotels, mixed leisure developments and care homes. Of these uses, only budget hotels are viable (marginally).

Figure 5.7: Other retail, leisure and care uses

	<i>Budget hotel</i>	<i>Leisure</i>	<i>Care home</i>
<i>Value per sq m</i>	£2,160	£2,190	£1,796
<i>Costs per sq m</i>	£2,105	£2,375	£2,359
<i>Residual per sq m</i>	£56	-£184	-£563
<i>Land benchmark per sq m</i>	£54	£51	£101
<i>Viability 'headroom' per sq m</i>	£2	-£235	-£664

Other Uses

The viability testing has been based on the development expected to come forward. It is acknowledged that there are other uses that could arise and it is recommended that the following approach is taken:

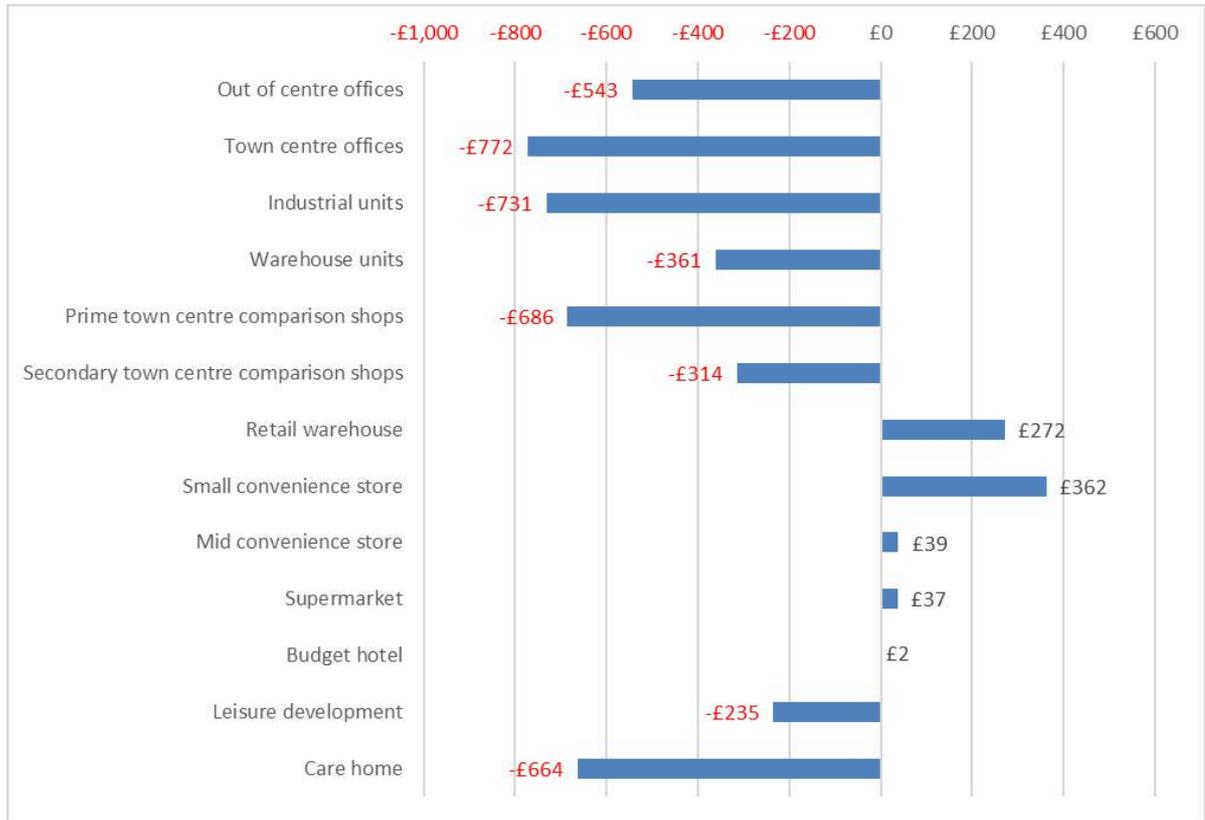
- A2 Financial and Professional Services – treat as A1 in viability terms as many of these uses are likely to occupy the same sorts of premises as some town centre retail.
- A3 Restaurants and Cafes – again treat as A1 in viability terms as many of these uses are likely to occupy the same sorts of premises as some town centre retail.
- A4 Drinking Establishments – again treat as A1 in viability terms as many of these uses are likely to occupy the same sorts of premises as some town centre retail.
- A5 Hot Food Takeaways – again treat as A1 in viability terms as many of these uses are likely to occupy the same sorts of premises as some town centre retail.
- Selling and/or displaying motor vehicles – sales of vehicles are likely to occupy the same sorts of premises and locations as many B2 uses and therefore the viability will be covered by the assessment of the viability of B2 uses.
- Retail warehouse clubs – these retail uses are likely to be in the same type of premises as the out of town A1 retail uses and covering the same purchase or rental costs.
- Nightclubs – these uses are likely to be in the same type of premises as A1 town centre retail uses and covering the same purchase or rental costs.
- Scrapyards – there may be new scrapyard/recycling uses in the future, particularly if the prices of metals and other materials rise. These are likely to occupy the same sorts of premises as many B2 uses and therefore the viability will be covered by the assessment of the viability of B2 uses.
- Taxi businesses – these uses are likely to be in the same type of premises as A1 town centre retail uses and covering the same purchase or rental costs. Therefore, they are covered by this viability assessment.
- Amusement centres – these uses are likely to be in the same type of premises as A1 town centre retail uses and covering the same purchase or rental costs. Therefore, they are covered by this viability assessment.

Summary

- 5.22 Of the uses tested, only retail warehouses, convenience retail and budget hotels are viable. These types of development are able to come forward subject to the availability of sites.
- 5.23 Based on the costs and values in this testing, speculative office, industrial and warehouse developments are unlikely to be brought forward by the market. However, this does not preclude local authorities developing new employment spaces, in order to deliver economic development benefits⁴². In addition, public sector funding from sources such as the South East LEP can be used to reduce the costs of providing new employment space. It is also likely that businesses will continue to commission design and build workspace development.
- 5.24 High street comparison retail is not viable as modelled here. However, this is in part due to the relatively high existing use value assumed for the prime retail site. If a lower value site is available, then this type of retail may come forward.
- 5.25 Based on the costs and values in this testing, care homes are not viable.
- 5.26 Figure 5.8 below summarises the viability of the different non-residential uses.

⁴² This combines a long-term view on returns as well as an ability to borrow cheaply.

Figure 5.8: Non-residential Development Viability Summary – £/sq m viability ‘headroom’



Appendix I – Technical Detail for Residential Testing

House Prices

House Type	Detached			Semi-detached		Terrace				Flats		Bungalows	
	5 Bed	4 Bed	3 Bed	4 Bed	3 Bed	4 Bed	3 Bed	2 Bed	1 bed	2 Bed	1 Bed	2 bed	1 bed
<i>Market GIA (sq m)</i>	160	130	100	120	100	106	84	70	58	61	50	70	55
Rural Fringe (HV)	£539,334	£438,209	£337,084	£399,627	£333,022	£356,686	£282,657	£235,548	£195,168	£182,633	£149,699	£312,839	£245,802
Central Corridor (LV)	£493,910	£401,302	£308,694	£381,657	£318,048	£343,541	£272,240	£226,867	£187,975	£175,257	£143,654	£278,403	£218,745

Notes

- Flats ground rent £250/dwelling capitalised at 5%.
- 5% selling price premium applied to sites of 3 dwellings or less

Market Housing dwelling mix

Type	25dph	30dph	35dph	40dph – urban area
1 bed flat		5%	5%	10%
2 bed flat		5%	5%	10%
2 bed bungalow	5%			
2 bed terrace		10%	10%	15%
3 bed terrace		10%	15%	10%
4 bed terrace				
3 bed semi	20%	15%	10%	10%
4 bed semi				
3 bed detached	15%	15%	15%	15%
4 bed detached	40%	30%	30%	30%
5 bed detached	20%	10%	10%	

Affordable Housing

30% affordable housing in town centre (including Gt Notley; Bocking; High Garrett; Witham; Halstead; Sible Hedingham) and 40% elsewhere. Each value area contains town centre locations.

- All affordable housing comprises 70% rented and 30% shared ownership
- Rented is tested as 100% Affordable Rent
- Threshold of 15 dwellings or more (or 0.5ha) applies to town centre area
- Threshold of 10 dwellings (1,000 sqm floorspace) elsewhere

Affordable Housing Dwelling mix – based on SHMA and conversation with Housing

Affordable Housing Development Mix House Type	Affordable Rent (70% of AH)	Intermediate (shared Ownership) (30% of AH)
1 bed flat	10%	
2 bed flat	10%	25%
2 bed bungalow (25dph only - otherwise apply to 2 bed flats)	5%	-
2 bed terrace	45%	50%
3 bed terrace	25%	25%
4 bed terrace	5%	-

Affordable housing values

There are 4 x BRMAs for Braintree - Cambridge, Bury, Colchester and Chelmsford - Cambridge only covers 7% of district area and rent falls neatly between Colchester & Chelmsford and is not therefore tested.

Rents are shown below - Net of service charge of £10 for flats and £5 for houses & based on 100% of LHA rates (rounded)

Affordable Rents – net of service charge	Chelmsford BRMA – covers rural fringe area (HV) and lower value central Corridor, except the 2 separate areas	Colchester BRMA – covers Hedingham & Halsted Trinity in LV area and part of rural fringe HV	Bury BRMA – covers Stour Valley Ward HV area
1 bedroom flat	116	93	92
2 bedroom flat	141	122	116
1 bedroom house/bun	121	98	97
2 bedroom house/bun	146	127	121
3 bedroom house/bun	180	156	145
4 bedroom house/bun	226	199	211

For rental properties

Management and maintenance	£1,000
Voids/bad debts	2.00%
Repairs reserve	£600
Capitalisation	5%

For shared ownership

Share size	40%
Rental charge	2.75%
Capitalisation	5%

General costs and assumptions – all dwellings

Dwelling sizes

House type description	Affordable sq m	Market sq m
1 bedroom flat	50 (2p)	50
2 bedroom flat	70 (4p)	61
1 bedroom bungalow	55 (2p)	55
2 bedroom bungalow	70 (4p)	70
1 bedroom terrace	58 (2p)	58
2 bedroom terrace	79 (4p)	70
3 bedroom terrace	93 (5p)	84
4 bedroom terrace	106 (6p)	106
3 bed semi detached	93 (5p)	100
4 bed semi detached	106 (6p)	120
3 bed detached		100
4 bed detached		130
5 bed detached		160

Dwelling size compliant with Nationally Described Space Standards

An allowance of 10% of floor area will be added to the 1–2 storey flats used in the 1ha tile testing for circulation and common areas.

An allowance of 15% of floor area will be added to the 3 storey flats used in case study B9.

For the sheltered scheme, case study B20, one bed flats are 50sqm and two bed flats are 75sqm. An allowance of 20% of floor area for communal and service areas will be added.

For the extracare scheme, case study B21, one bed flats are 65sqm and two bed flats are 80sqm. An allowance of 35% of floor area for communal and service areas will be added.

Other costs

Type	Cost	Comment
Flats (1-2 storeys)	£1,487	sq m includes 15% for external works
Flats (3-5 storeys)	1,540	sq m includes 15% for external works
Houses	£1,312	sq m includes 15% for external works
2 to 3 houses	£1,378	sq m includes 15% for external works (+5% house build cost - small site)
Single house	£2,148	sq m includes 15% for external works
Bungalows	£1,565	sq m includes 15% for external works
Sheltered Flats	£1,521	sq m includes 15% for external works (3 storey)
Professional fees	8%-12%	10 units or less - 12% 11 - 50 units - 10% 51 - 100 units - 9% 101+ units - 8%
Finance	6%	of development costs (net of inflation)
Marketing fees	3%	of GDV
	6%	of GDV for sheltered and extracare schemes
Developer return	20%	of GDV
Contractor return	6%	of affordable build costs
s106/278	£4,000 £10,000	Per dwelling for sites under 50 units Per dwelling for larger sites over 75 dwellings to take into account extra infrastructure including education provision

Type	Cost	Comment
Accessibility	Allow for 10% market housing to be to Part M(4) 3 adaptable standard. Allow for 5% affordable homes to be to Part M(4) 2 and 5% affordable homes to be to Part M(4) 3 accessible standards.	Costs based on DCLG Housing Standards Review, Cost Impacts, September 2014.
Renewables	Photovoltaic @ £3,000 per unit up to 50 dwellings and £2,000 per unit for 50+ dwellings	Costs based on 3.3 KWp on C33% of dwellings Costs and proportion of units to be fitted from benchmarks ⁴³
Strategic infrastructure costs/ opening up	>50 units 50k/net ha >100 units £100k/net ha >200 units £150k/net ha >400 units £200k/net ha	net ha for larger sites
High cost scenario	5k per unit on sites 300 or more 10k per unit on sites 600 or more	Added costs for sensitivity test to allow potential for higher site remediation or infrastructure
Void Costs	£100,000	Applies to sheltered and extracare schemes
Agents and legal	1.75%	

Densities

⁴³ On-site Renewable Energy Policy: Placemaking Plan Evidence Base Bath & NE Somerset Council 2015; Cost analysis: meeting the zero carbon standard', Zero Carbon Hub, February 2014; web-based costings for domestic supply - Energy Saving Trust (which are assumed to be above high volume installation by 2-3 times)

1ha tiles will be tested at 25/30/35/40 dph and higher densities will be included in case studies.

Case studies will primarily be tested using 35 dph for case studies

Net to gross ratios:

- Up to 2ha - 100%
- 2-4ha - 80%
- 4-6ha - 70%
- 6+ha - 65%
- 75+ ha - 50%

Build out rate approximately 50 per annum per outlet

Benchmark Land Values – £ per gross ha

Braintree	Small to medium sites	Intermediate site	Large strategic Over 20 ha (gross)
Rural Fringe (HV)	£1.0 m	£0.75 m	£0.44 m
Central Corridor (LV)	£0.75 m	£0.6 m	£0.44 m

Appendix II – Local Plan Policies

No	Title	Policy Requirements	Viability Implication
		The Spatial Strategy	
Policy LPP 1	Development Boundaries	District wide policy designating development boundaries of existing settlements, to guide the location of new development in the interest of protecting the amenities of the countryside and existing settlements.	No specific viability implications – policy primarily concerned with managing the location and pattern of development.
		Employment, Tourism and Retail	
Policy LLP 2	Location of Employment Land	Promotes the delivery of growth within the local economy by providing 23.3ha of industrial land and 20ha of office land in the District and retaining existing employment sites where they continue to offer a viable and sustainable location for such uses.	Non-residential viability testing for retail, office and hotel uses takes account of location type. No other viability implications identified. Specific policy requirements and potential cost implications are deferred to subsequent site allocations policies.
Policy LPP 3	Employment Policy Areas	This policy promotes the protection and retention of commercial premises within existing centres and where appropriate supports the provision of additional development within appropriate B-Use Classes or where they would support economic development	No specific viability implications – policy primarily concerned with managing existing land uses
Policy LPP 4	Kelvedon Park (Emergency Services Headquarters)	Essex Fire & Rescue Service Headquarters – Kelvedon Park. Land at Kelvedon Park is allocated as a Special Employment Area specifically to meet the requirements of the emergency services.	No specific viability implications
Policy LPP 5	Allshot's Farm	The Former Polish Campsite at Allshot's Farm (South of Rivenhall Airfield) is allocated for employment use and structural landscaping. Due to this site's rural nature redevelopment will be considered appropriate subject to an appropriate external lighting and landscaping scheme.	No specific viability assumptions that are not addressed by typical case study allowances for development costs and other land uses and requirements.
Policy LPP 6	Business Parks	As identified on the Proposal Map locations for use class B1 business uses shall be the only development permitted on these sites, unless they are both essential and ancillary to the main use of any unit and would not occupy more than 5% of the total floor space.	No specific viability implications. The policy is primarily concerned with the management of existing

No	Title	Policy Requirements	Viability Implication
			land uses and only provides for limited levels of additional development
Policy LPP 7	Design and Layout of Employment Policy Areas and Business Parks	New employment and business parks are to be of a high quality and inclusive design. Changes to existing sites will respect the existing character of the locality and would promote sustainable travel whilst still providing adequate parking.	No specific viability implications not covered by typical costs, requirements and standards for development.
Policy LPP 8	Rural Enterprise	Small scale commercial development outside of settlement boundaries are considered acceptable which involve the reuse or conversion of an existing building subject to design, access, amenity and environmental considerations. The building must be of a permanent and substantial construction capable of conversion or reuse without complete re-building. Where a building is not capable of conversion or where there is not existing building on site and a need has been demonstrated, new buildings shall be well designed, and appropriately sited and be considered against the criteria above.	No specific viability implications – primarily concerns management of existing land uses and limited scales of additional development not central to the plan's requirements.
Policy LPP 9	Tourist Development within the Countryside	Proposals for new tourist accommodation and facilities, within the countryside, will be permitted provided that there is a clear demand for the development, where it would be well connected to existing facilities or local community and not adversely impact upon the amenities of the surrounding area or be sited on grade 1,2 or 3a agricultural land. Any development would have to demonstrate adequate vehicular access, water and waste services and provide a high-quality landscaping scheme. Tourist accommodation will be required to include evidence of long term viability and will be condition to control the sole use of the property as tourist accommodation only.	No specific viability implications.
Policy LPP 10	Retailing and Regeneration	To ensure the long-term vitality and viability of the District's Town and Local Centres. The Town Centres of Braintree, Halstead and Witham will be the primary location for main town centre uses. Proposals that positively contribute towards creating attractive, vibrant and safe centres which also support the diversification of the evening economy, will be supported subject to amenity impact on residents and the surrounding area. The Local	Non-residential viability testing for retail, office and hotel uses takes account of location type. No other viability implications identified.

No	Title	Policy Requirements	Viability Implication
		<p>Plan should provide for approximately 7,885 sqm of convenience floorspace and 12,501sqm of comparison goods floorspace over the plan period.</p> <p>Use Class A1–A5 development will be subject to typical development management controls under the sequential test and impact test.</p>	<p>Specific policy requirements and potential cost implications are deferred to subsequent site allocations policies.</p>
Policy LPP 11	Primary Shopping Areas	<p>Within the primary shopping areas, as defined on the Proposals Maps, primary and secondary frontages have been identified. A balance between A1 retail shops and non-retail town centre uses has to be maintained in order to secure the vitality and viability of the primary shopping area.</p> <p>For proposals within Primary Shopping Areas creating more than 2 residential flats above ground floor level, the development should not result in the ground floor unit becoming unviable or unserviceable.</p>	<p>No specific viability implications – policy primarily provides details to control the locations of development and changes in land use.</p>
Policy LPP 12	District Centre	<p>Within the District centre as defined on the Proposals Map, the following uses will be permitted: Class A1, classes A2 – A5 and D1 – D2 provided that it does not result in the loss of an existing A1 retail use which has not been considered unviable, residential development (C3) provided that it is not located on the ground floor; for proposals creating more than 2 residential flats above ground floor level, the development would not adversely affect the viability of the ground floor unit.</p>	<p>No specific viability implications – policy primarily provides details to control the locations of development and changes in land use. Testing provides for a broad range on non-residential typologies.</p>
Policy LPP 13	Freeport Outlet Centre	<p>The area defined on the Proposals Map as a Factory Outlet Centre shall be maintained for the purpose of a discount shopping outlet centre.</p>	<p>No specific viability implications. The policy primarily relates to safeguarding and control of development within existing land uses.</p>
Policy LPP 14	Leisure and Entertainment	<p>The area identified on the Proposals Map for Leisure and Entertainment shall be retained for leisure and entertainment-related uses. Proposals within use class D2 will be permitted.</p>	<p>The policy is primarily related to managing specific land uses. This policy is not relevant to the development types covered by the viability study.</p>

No	Title	Policy Requirements	Viability Implication
Policy LPP 15	Retail Warehouse Development	Retail warehouse development will be permitted within or immediately adjoining town centres. If no such sites are available, then the sequential approach will be applied, together with an impact assessment, if applicable.	There are no specific viability implications in relation to this policy. The development types listed are amongst the scenarios tested
Policy LPP 16	Retail Site Allocations	<p>The following sites are identified in the town centres for retailing and other main town centre uses as shown on the Proposals Map:</p> <p>Braintree</p> <ul style="list-style-type: none"> • Land at George Yard Land at Manor Street • Tesco Store, Car Park and Pound End Mill, New Street Sainsbury's Store and Car Park, Tofts Walk. • Sainsbury's <p>Halstead</p> <ul style="list-style-type: none"> • Former EMD Site Kings Road • Witham • Newlands Precinct • Out of centre retail allocations <p>Witham</p> <ul style="list-style-type: none"> • Newlands Precinct <p>New retail provision will also be provided at strategic growth locations, new garden communities, and site allocations at land north of Freeport and land off Millennium Way, Braintree.</p>	<p>There are no specific viability implications in relation to the policy.</p> <p>The Viability Study considers a range of non-residential development typologies in different locations across the District. Testing takes account of current development costs and values and the requirements of the policy can typical assumptions and allowance for layout, plot ratio and open space.</p>
Policy LPP 14	Newlands Precinct	<p>Land at Newlands Precinct, Newlands Drive Car Park, Lockram Lane and Coachhouse Way is allocated as a Comprehensive Development Area for mixed-use development, where a combination of retail, employment, leisure, community facilities, car parking and residential uses will be allowed.</p> <p>A development brief will be required for the whole site prior to any redevelopment.</p>	There are no specific viability implications. The policy specifically relates to development management issues in identifying where more limited levels of development will be considered

No	Title	Policy Requirements	Viability Implication																						
			appropriate or existing uses safeguarded.																						
Policy LPP 15	Rickstones Neighbourhood Centre	Land at Rickstones Neighbourhood Centre, Dorothy Sayers Drive, Witham is allocated as a Comprehensive Development Area for a mixed use development where a combination of retail, community uses, public house, pavilion, and residential development and car parking will be supported. Development of the Comprehensive Development Area should be in accordance with the principles of the adopted Supplementary Planning Document.	This policy relates to specific land use allocations within the District. Testing assumptions take account of a range of non-residential development typologies with typical allowance for open space, planning obligations and other requirements for development.																						
Housing Provision and Allocations																									
Policy LPP 17	Housing Provision and Delivery	The Council will plan, monitor and manage the delivery of a minimum of 14,365 new homes between 2016 and 2033. These homes will be located primarily in the Towns and Service Villages and on the following strategic growth locations. <table border="1" data-bbox="488 869 1659 1358"> <thead> <tr> <th>Strategic Growth Locations</th> <th>Minimum Number of Homes (Within the Plan period)</th> </tr> </thead> <tbody> <tr> <td>West of Braintree New Garden Community</td> <td>2,500</td> </tr> <tr> <td>Marks Tey New Garden Community</td> <td>1,150</td> </tr> <tr> <td>East of Great Notley (in Black Notley Parish)</td> <td>2,000</td> </tr> <tr> <td>Land East of Broad Road, Braintree</td> <td>1,000</td> </tr> <tr> <td>Former Towerlands Park site, Braintree</td> <td>600</td> </tr> <tr> <td>Land at Feering</td> <td>1,000</td> </tr> <tr> <td>Wood End Farm, Witham (Hatfield Perverel Parish)</td> <td>450</td> </tr> <tr> <td>North West of Braintree - Panfield Lane</td> <td>600</td> </tr> <tr> <td>South West Witham - Lodge Farm (partly in Hatfield Perverel Parish)</td> <td>750</td> </tr> <tr> <td>North East Witham - Forest Road (Rivernhall Parish)</td> <td>370</td> </tr> </tbody> </table>	Strategic Growth Locations	Minimum Number of Homes (Within the Plan period)	West of Braintree New Garden Community	2,500	Marks Tey New Garden Community	1,150	East of Great Notley (in Black Notley Parish)	2,000	Land East of Broad Road, Braintree	1,000	Former Towerlands Park site, Braintree	600	Land at Feering	1,000	Wood End Farm, Witham (Hatfield Perverel Parish)	450	North West of Braintree - Panfield Lane	600	South West Witham - Lodge Farm (partly in Hatfield Perverel Parish)	750	North East Witham - Forest Road (Rivernhall Parish)	370	There are no specific viability implications. Range of schemes tested in viability study to cover development scenarios to take account of variations in terms of scale, mix and development values associated with different locations across the District.
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No	Title	Policy Requirements	Viability Implication								
		<p>Sites suitable for more than 10 homes are allocated on the Proposals Map and are located in the following areas;</p> <table border="1" data-bbox="488 320 1659 472"> <thead> <tr> <th data-bbox="488 320 1263 357"></th> <th data-bbox="1267 320 1659 357">Number of homes</th> </tr> </thead> <tbody> <tr> <td data-bbox="488 360 1263 397">Main towns</td> <td data-bbox="1267 360 1659 397">1,700</td> </tr> <tr> <td data-bbox="488 400 1263 437">Service Villages</td> <td data-bbox="1267 400 1659 437">800</td> </tr> <tr> <td data-bbox="488 440 1263 472">Villages</td> <td data-bbox="1267 440 1659 472">500</td> </tr> </tbody> </table>		Number of homes	Main towns	1,700	Service Villages	800	Villages	500	
	Number of homes										
Main towns	1,700										
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Villages	500										
Policy LPP 18	Strategic Growth Location – Land East of Great Notley, south of Braintree	<p>A Strategic Growth Location has been identified at land east of Great Notley, south of Braintree and is shown on the Proposals Map. This development will provide a range of up to 2,000 residential units including affordable housing, employment and community facilities, public open space, and informal and formal recreation along with Provision of a Gypsy and Traveller site. Infrastructure contributions to include provision of primary school facilities and provision of or monies towards secondary education, healthcare and early years' facilities. The allocation has scope for appropriate provision of retail facilities and local employment opportunities.</p> <p>The development will be expected to integrate with existing developments and the wider area through provision of public footpath, cycle ways and, where opportunities exist, to Bridleways. The development is expected to be planned and delivered in a holistic way, and not as smaller portions of separate development.</p>	<p>Case study assumptions have taken into account the scale and requirements associated with the range of allocations proposed.</p> <p>Typical testing assumptions are able to capture the requirements of the development, including open space, affordable housing and planning contributions.</p> <p>Testing assumptions and take account of typical development costs associated with access, highway works, pedestrian accessibility and contributions to sustainable transport measures.</p> <p>Opening up costs for larger sites include allowances for additional on-site infrastructure provision and increased provision of S106 obligations associated with the potential delivery of strategic highways infrastructure projects.</p>								

No	Title	Policy Requirements	Viability Implication
Policy LPP 19	Strategic Growth Location – Land East of Broad Road, Braintree	A Strategic Growth Location has been identified at Land East of Broad Road and is shown on the Proposals Map. This development will provide a range of up to 1,000 residential units including affordable housing, employment and community facilities, public open space, and Provision of a Gypsy and Traveller site. Infrastructure contributions to include provision of primary school facilities, and provision of or monies towards early years' facilities and healthcare. The allocation has scope for appropriate provision of retail facilities and local employment opportunities.	No specific viability implications (see summary provided for Policy LPP 18 above) Other land uses provided for by the policy are reflected in non-residential viability testing assumptions.
Policy LPP 20	Strategic Growth Location – Former Towerlands Park Site	A Strategic Growth Location has been identified at Towerlands Park and is shown on the Proposals Map. This development will provide a range of up to 600 residential units including affordable housing, employment, community facilities and public open space including landscaping to the rural edge. Infrastructure contributions to include provision of or monies towards primary education, early years' facilities and healthcare.	No specific viability implications (see summary provided for Policy LPP 18 above) Other land uses provided for by the policy are reflected in non-residential viability testing assumptions.
Policy LPP 21	Strategic Growth Location – North West Braintree	A Strategic Growth Location has been identified at North West Braintree, east of Panfield Lane, north of Springwood Drive, Braintree and is shown on the Proposals Map. This development will provide a range of up to 600 residential units including affordable housing, 10ha of employment development, community facilities and connecting existing public rights of way to existing developments. There will also be a new road to connect Springwood Drive to Panfield Lane. Infrastructure contributions to include provision of primary school facilities and provision of or monies towards secondary education, healthcare and early years' facilities.	No specific viability implications (see summary provided for Policy LPP 18 above) Other land uses provided for by the policy are reflected in non-residential viability testing assumptions.
Policy LPP 22	Strategic Growth Location – Land at Feering	A Strategic Growth Location has been identified at land south east of Feering and is shown on the Proposals Map. This development will provide a range of up to 1,000 residential units including affordable housing, specific employment development, community facilities, public open space including anew country park, safe cycle and pedestrian access, provision of a gypsy and traveller site and a new link road. Infrastructure contributions to include provision of primary school facilities and provision of or monies	No specific viability implications (see summary provided for Policy LPP 18 above) Other land uses provided for by the policy are reflected in non-

No	Title	Policy Requirements	Viability Implication
		towards secondary education, healthcare and early years' facilities. The allocation has scope for appropriate provision of retail facilities and local employment opportunities.	residential viability testing assumptions.
Policy LPP 23	Strategic Growth Location – Wood End Farm, Witham	A Strategic Growth Location has been identified at Wood End Farm, Witham, and is shown on the Proposals Map. This development will provide a range of up to 450 residential units including affordable housing, contributions to the local primary school, public open space including allotments and play space, safe vehicular, cycle and pedestrian access. Infrastructure contributions to include provision of primary school facilities and provision of or monies towards secondary education, healthcare and early years' facilities.	No specific viability implications (see summary provided for Policy LPP 18 above) Other land uses provided for by the policy are reflected in non-residential viability testing assumptions.
Policy LPP 24	Comprehensive Redevelopment Area – Land East of Halstead High Street	Land east of Halstead High Street between The Centre and Factory Terrace is allocated as a Comprehensive Redevelopment Area which could include new homes, retail and commercial space, open space and community uses. Redevelopment of this site will need to address a number of possible constraints within the site including heritage assets, protected trees and protected species. Any application will need to be accompanied by a flood risk assessment.	The Viability Study includes testing for a variety on non-residential and commercial uses reflecting the requirements for employment and retail development provided for by this policy Other land uses provided for by the policy are reflected in non-residential viability testing assumptions.
Policy LPP 25	Specialist Housing – Mount Hill, Halstead	Land north of Mount Hill A131 is allocated for 16 units of specialist housing for people with physical impairments and learning disabilities together with the minimum number of ancillary open market housing necessary to ensure their viability. Development to demonstrate involvement with Essex County Council. Development to take account of requirements for landscaping and setting of nearby heritage assets.	Viability testing assumptions and case study scenarios include developments providing for specialist housing
Policy LPP 26	Comprehensive Redevelopment	Land at Halstead Business Centre, Factory Lane West, and Harrison Works, Kings Road is allocated as a mixed use re-development including B1 and B8 employment uses and	This is an extensive policy covering a range of potential uses

No	Title	Policy Requirements	Viability Implication
	Area – Factory Lane West/Kings Road	small-scale retail compatible with nearby town centres. Residential development will be acceptable above ground floor level. Any application for development would have to be accompanied by a flood risk assessment.	(sometimes a combination of mixed-uses) as part of redevelopment. The Viability Study includes testing for a variety on non-residential and commercial uses reflecting the requirements for employment and retail development provided for by this policy.
Policy LPP 27	Comprehensive Redevelopment Area – Former Dutch Nursery, West Street Coggeshall	The Dutch Nursery site has been identified on the proposals map as a comprehensive development area with additional open space and river access. Re-development proposals will be supported which could provide a mixed use development. Development will not be undertaken in areas of Flood Risk.	The Viability Study includes testing for a variety on non-residential and commercial uses reflecting the requirements for employment and retail development provided for by this policy. There are no specific viability implications
Policy LPP 28	Comprehensive Redevelopment Area – Kings Chase	Buildings adjacent to Kings Chase, Newland Street in Witham are allocated as mixed-use redevelopment where a combination of retail and residential uses will be supported. Buildings adjacent to Kings Chase, Newland Street in Witham are allocated as mixed-use redevelopment where a combination of retail and residential uses will be supported subject to certain requirements being met. Development to be appropriate for the Conservation Area and deliver public realm improvements.	This is an extensive policy covering a range of potential uses (sometimes a combination of mixed-uses) as part of redevelopment. The Viability Study includes testing for a variety on non-residential and commercial uses reflecting the requirements for employment and retail development provided for by this policy
Policy LPP 29	Comprehensive Redevelopment	Land at Newlands Precinct, Newlands Drive Car Park, Lockram Land and Coachhouse Way is allocated as a Comprehensive Development Area for mixed-use development, where a	This is an extensive policy covering a range of potential uses

No	Title	Policy Requirements	Viability Implication
	Area – Newlands Precinct	combination of retail, employment, leisure, medical provision, community facilities, car parking and residential uses will be allowed. Development may provide convenience and comparison floorspace towards the plan’s requirements. Development to be appropriate for the setting of the Conservation Area and should look to address drainage infrastructure deficit.	(sometimes a combination of mixed-uses) as part of redevelopment. The Viability Study includes testing for a variety on non-residential and commercial uses reflecting the requirements for employment and retail development provided for by this policy.
Policy LPP 30	Comprehensive Redevelopment Area – Rickstones Neighbourhood Centre	Land at Rickstones Neighbourhood Centre, Dorothy Sayers Drive, Witham is allocated as a Comprehensive Development Area for a mixed use development where a combination of retail, community uses, public house, pavilion, and residential development and car parking will be supported. Development of the Comprehensive Development Area should be in accordance with the principles of the adopted Supplementary Planning Document.	This is an extensive policy covering a range of potential uses (sometimes a combination of mixed-uses) as part of redevelopment. The Viability Study includes testing for a variety on non-residential and commercial uses reflecting the requirements for employment and retail development provided for by this policy.
Policy LPP 31	Comprehensive Redvelopment Area – Land between A12 and GEML, Hatfield Peverel	Development is supported within the comprehensive redevelopment area at land between A12 and GEML. This should be mixed use of up to 200 dwellings on former Arla Dairy site (3.8ha) Up to 45 dwellings on Sorrells Field (2ha), up tp 20 dwellings on Bury Farm (2.8ha), and up to 20 dwellings to the rear of Station Road. Development of residential dwellings on these sites will be expected to provide: As part of the development a road link between Bury Land and Station Road is to be agreed with the Highways Authority, provision of structural landscaping sufficient to mitigate adverse noise and air pollution from the A12, affordable housing as per the Councils policy and contributions towards education and other community facilities.	The types and locations of residential development identified within the policy are covered by the assumptions contained within the viability testing. This includes allowances for open space and planning contributions (see Policy LPP 18 above) and allows

No	Title	Policy Requirements	Viability Implication
			consideration for where these may exceed recent historical rates.
Policy LPP 32	Residential Allocation Area – Gimsons	Development land has been identified at Gimsons, and will be supported subject to the development providing up to 40 residential units including affordable housing, contributions towards vehicular and public realm improvements, protection of the intrinsic historic and environmental of the site and protection of ecological assets.	The types and locations of residential development and development requirements identified within the policy are covered by the assumptions contained within the viability testing.
		Affordable Housing Rural Exception Sites	
Policy LPP 33	Affordable Housing	<p>Affordable housing will be directly provided by the developer within housing schemes at the targets set out below.</p> <ul style="list-style-type: none"> • A target of 30% of the total number of residential units on sites located in the main towns of Braintree (including Great Notley, Bocking and High Garrett), Witham, Halstead, Sible Hedingham and development sites directly adjacent to these areas. • A target of 40% of the total number of residential units sites in all other areas. • A threshold of 15 dwellings or 0.50ha will apply in the main towns of Braintree (including Great Notley, Bocking and High Garrett), Witham and Halstead. • A threshold of 10 dwellings or more with a maximum combined gross floor space of 1,000sqm will apply in all other areas of the District. • Standalone new settlements by virtue of their size will be subject to separate viability appraisals, including on affordable housing; however the starting point should be 30% for affordable housing provision. <p>Off-site provision or a financial contribution may be accepted where on-site deliver is impractical. A viability appraisal will be required and will be independently verified if</p>	Viability testing is informed by the requirements for affordable housing set out in this policy. This is reflected in the number of scenarios identified from the testing assumptions to take account of the type, scale and location of affordable housing requirements.

No	Title	Policy Requirements	Viability Implication
		applicants seek to demonstrate that requirements cannot be achieved. The mix of units should reflect local need.	
Policy LPP 34	Affordable Housing in Rural Areas	<p>In rural areas, schemes to provide affordable housing will be permitted, providing that all the following criteria are met:</p> <ul style="list-style-type: none"> a) The development is adjacent to a development boundary with reasonable access to services and facilities b) The settlement within which the development is to take place should have a population of less than 3,000 c) A proven local need for affordable housing must exist to the satisfaction of the local planning authority, which cannot be met within the development boundary. d) Market housing should be provided at the minimum level to support viability and at no more than 30%. <p>The development should be for less than 15 dwellings.</p>	As a result of this policy testing assumptions and case study scenarios assess the viability of Rural Exception Sites for affordable housing.
Policy LPP 35	Specialist Housing	<p>Proposals for specialist housing provision are allocated on the Proposals Map and will be permitted within development boundaries providing that day to day amenities including health services are easily accessible on or close to the site. Parking is in line with the councils adopted standards, and adequate outside amenity space is associated with dwellings.</p> <p>On sites allocated for specialist housing, general needs housing will not be permitted. Extensions to existing specialist housing will be permitted subject to an adequate travel plan of employees and the extension would be acceptable in regards to design and rural character considerations.</p>	Viability testing assumptions and case study scenarios include developments providing for specialist housing based on typical schemes and using current costs and requirements. The other requirements of the policy do not have specific viability assumptions beyond typical assumptions for development costs and requirements e.g. open space, landscaping and parking.
Policy LPP 36	Gypsy and Traveller and Travelling Showpersons' Accommodation	The Council will allocate 40 pitches for Gypsy and Traveller accommodation, at strategic growth locations and the garden communities. An additional travelling showpersons pitch will be sought through the planning process. If insufficient sites have been proposed or sites are no longer likely to come forward then any additional sites must meet certain criteria relating to accessibility, services and landscape.	This policy is not relevant to the types of development covered by viability testing.

No	Title	Policy Requirements	Viability Implication
Policy LPP 37	Housing Type and Density	<p>Development should seek to create sustainable, inclusive and mixed communities through providing a mix of house types and size at an appropriate density for the area, which reflects local need. Housing mix should be in line with the identified local need as set out in the 2015 SHMA update (or its successor), unless material considerations indicate otherwise.</p> <p>New dwellings should meet the nationally described internal space standards.</p> <p>10% of new market homes on sites of 10 or more dwellings must meet category 2 or 3 of part M of Building Regulations 2015 as appropriate.</p> <p>10% of new affordable homes on all sites must meet category 2 or 3 of part M of Building Regulations 2015 as appropriate.</p> <p>Within the main towns 5% of all affordable units will be required to meet category 3 of part M of Building Regulations 2015 as appropriate.</p> <p>The policy requires that 2% of plots will be available for self-build or custom builders on sites of over 500 dwellings in order to meet the demand for this accommodation.</p>	<p>The scenarios tested adopt typical assumptions for density and developable area for a variety of different scales and development typologies.</p> <p>All individual dwelling unit typologies comprise floorspace in accordance with the nationally described space standards</p> <p>Testing scenarios include the specific provision for accessible and adaptable homes based on the requirements set out in the policy and apply robust assumptions of costs for providing these standards.</p>
Policy LPP 38	Residential Alterations, Extensions and Outbuildings	Residential alterations, extensions and outbuildings will be permitted subject to satisfying development management criteria for design, amenity and avoiding adverse impact on the built, natural and historic environment.	There are no specific viability implications. Policy relates to development management of existing buildings
Policy LPP 39	Replacement Dwellings in the Countryside	Proposals to replace an existing habitable, permanent dwelling of conventional construction in the countryside, with a single new dwelling, will be acceptable if the existing building is of no heritage value. The proposed building would not cause harm to the character and setting of the locality, nor would it be materially larger than the existing	No specific viability implications – viability testing includes scenarios for very small schemes

No	Title	Policy Requirements	Viability Implication
		building and set on the same footprint subject to material considerations. Increases in plot size to form additional garden, parking or amenity land will not be permitted.	
Policy LPP 40	Rural Workers Dwellings in the Countryside	Applications for rural worker's dwellings in the countryside will only be permitted if a functional need for a full-time worker is required to live on site which can not be fulfilled by an existing dwelling or building capable of conversion on or in the vicinity the site and clear and appropriate evidence is demonstrated.	No specific viability implications
Policy LPP 41	Infill Development in Hamlets	Limited infill development of single dwellings will be permitted in suitably dense areas of residential development (approx. 10+ dwellings) subject to design, amenity and character considerations.	No specific viability implications – testing assumptions include case studies likely to reflect development under this policy
Policy LPP 42	Residential Conversion of Buildings in the Countryside	Rural buildings capable of conversion without complete re-building to residential use will be permitted subject to considerations relating to access, location, residential and visual amenities.	There are no specific viability implications. Policy relates to development management for existing buildings.

No	Title	Policy Requirements	Viability Implication
Policy LPP 43	Garden Extensions	The extension of a garden within a defined settlement boundary or the countryside will only be permitted if it is proportionate to the dwelling, respects the visual and residential amenities of the locality, there would be no loss of open or recreational space and it would not enclose a public right of way or affect agricultural land.	No specific viability implications.
		Transport and Infrastructure	
Policy LPP 44	Sustainable Transport	Sustainable modes of transport should be facilitated through new developments to promote accessibility and integration into the wider community and existing networks. Development will be required to be consistent with and contribute to the implementation of the 'Essex Transport Strategy' Local Transport Plan for Essex. Developers may be required to produce Travel Plans as considered appropriate by the Local Planning Authority.	No specific viability implications. The requirements of the policy are reflected in typical assumptions for development costs e.g. site layout, planning contributions and professional fees.
Policy LPP 45	Parking Provision	Development will be required to provide vehicular and cycle parking in accordance with the Essex County Council's Vehicle Parking Standards.	No specific viability implications. The requirements of the policy are reflected in typical assumptions for development costs e.g. site layout.

No	Title	Policy Requirements	Viability Implication
Policy LPP 46	Protected Lanes	The District Council will conserve the traditional landscape and nature conservation character of roads designated on the Proposals Map as Protected Lanes.	No specific viability implications. The requirements of the policy are reflected in typical assumptions for development costs e.g. site layout, open space provision and landscaping.
Policy LPP 47	Transport-Related Policy Areas	The areas at Galleys Corner between Braintree and Cressing and east of Panners roundabout between Braintree and Great Notley are allocated as Transport-Related Policy Areas on the Proposals Map. Buildings will not be permitted to cover more than 20% of the site area, be restricted to certain categories of use and be accompanied by a substantial landscaping scheme.	There are no specific viability implications.
Policy LPP 48	New Road Infrastructure	<p>The following schemes are proposed in the District and will be safeguarded from development.</p> <ul style="list-style-type: none"> • A131 Halstead Bypass (The bypass route has not been subject to recent survey or design and is therefore shown as a diagrammatic corridor only, which would be subject to change) • A131 Sudbury Western Bypass as it passes through the District A new road connecting Springwood Drive with Panfield Lane • Second road access into Witham Station Car Park from Station Road A new road link to Cut Throat Lane/Albert Road, Witham • A new link road between Inworth Road and the A12 Kelvedon North/Feering junction and improvements to the A12 junctions as agreed by the Highways Authority and Highways England 	There are no specific viability implications in relation to this policy. Policy requirements likely to be satisfied by planning contributions from new development, which are included in testing scenarios.

No	Title	Policy Requirements	Viability Implication
Policy LPP 49	Broadband	The Council will work with the telecommunications and broadband industry to maximise access to broadband, wireless hotspots and improved mobile signals. All new residential and commercial developments must be served by a fast and reliable broadband connection to the premises. If broadband instillation is not practically or economically viable then developer contributions will be sought.	There are no specific viability implications in relation to this policy. Policy requirements likely to be satisfied by planning contributions from new development, which are included in testing scenarios.
		Creating Better Places	
Policy LPP 50	Built and Historic Environment	The Council will promote and secure the highest possible standards of design and layout in all new development and the protection and enhancement of the historic environment.	No specific viability implications. The requirements of the policy are reflected in typical assumptions for development costs e.g. site layout and allowance for gross:net developable area.
Policy LPP 51	An Inclusive Environment	Developments shall achieve the highest standards of safe, accessible and inclusive design which are convenient and flexible to ensure they remain inclusive.	No specific viability implications. The requirements of the policy are reflected in typical assumptions for development costs e.g. site layout.
Policy LPP 52	Health and Wellbeing Impact Assessment	Development proposals will be required to assess their impact upon health and well-being, upon the capacity of existing health services and facilities, the environmental impact and the promotion of health improvement activities.	No specific viability implications. The requirements of the policy are reflected in typical assumptions for development costs e.g. planning contributions and professional fees.
Policy LPP 53	Provision for Open Space, Sport and Recreation	Open space, sports and recreational facilities that are of high quality, or of particular value to a local community, will be recognised and given protection by the Council. Development which is to be sited on or adjacent or close to Open Space, Sport and Recreation facilities likely to adversely affect its operation will be strongly resisted. The	No specific viability implications. The requirements of the policy are reflected in typical assumptions for development costs e.g. allowances

No	Title	Policy Requirements	Viability Implication
		Council will look to remedy areas of existing deficiencies. New development will be expected to provide for the requirements of open space, built sports, recreation and playing pitch facilities to be secured as part of meeting the requirements for growth to 2033.	for difference in gross:net developable area and typical contributions towards open space.
Policy LPP 54	Equestrian Facilities	New riding schools, stable buildings or other equestrian facilities, or extensions to such facilities, will be permitted if they respect the landscape character, visual and residential amenities of the locality. Any development should not adversely impact a heritage asset, public right or vehicular rights of way.	No specific viability implications.
Policy LPP 55	Layout and Design of Development	The Council will seek a high standard of layout and design in all developments in the District and encourage innovative design where appropriate. Any development should be inline with the councils design and layout principals.	No specific viability implications.
Policy LPP 56	Conservation Areas	The Council will encourage the preservation and enhancement of the character and appearance of designated Conservation Areas and their settings.	No specific viability implications. The requirements of the policy can typically be accommodated in adjustments for layout or gross:net developable area.
Policy LPP 57	Demolition In Conservation Areas	Demolition of an unlisted building or structure within a conservation area will only be granted in the most exceptional circumstances.	There are no specific viability implications.
Policy LPP 58	Shop Fronts, Fascias and Signs in Conservation Areas	The Council will apply a strict set of policies for the control of non-illuminated fascias and signs in Conservation Areas.	There are no specific viability implications.
Policy LPP 59	Illuminated Signs in Conservation Areas	The Council will apply strict criteria for the control of illuminated fascia and projecting signs in Conservation Areas.	There are no specific viability implications.

No	Title	Policy Requirements	Viability Implication
Policy LPP 60	Heritage Assets and their Settings	Development involving internal, or external alterations, or extensions, to a listed building or listed structure including curtilage listed building will be required to preserve and enhance the building or structure and the immediate settings of heritage assets by appropriate control over the development, design and use of the specific building(s) and adjoining land.	There are no specific viability assumptions. Requirements can typically be accommodated within assumptions for layout or density.
Policy LPP 61	Demolition of Listed Buildings or Structures	Consent for the partial or total demolition of a listed building or structure will only be granted in the most exceptional circumstances.	There are no specific viability implications.
Policy LP 62	Enabling Development	Development proposals to secure the future of a heritage asset will be considered on their own merits and assessed on the basis of the need to preserve the heritage asset.	There are no specific viability implications.
Policy LPP 63	Archaeological Evaluation, Excavation and Recording	Where important archaeological remains are thought to be at risk from development, or if the development could impact on a scheduled monument or historic park and garden, the developer will be required to arrange for an archaeological evaluation of the site to be undertaken and submitted as part of the planning application.	There are no specific viability implications. The policy requirements are satisfied within allowances for development costs and fees
Policy LPP 64	Educational Establishments	Sites proposed or in current educational use are protected on the Proposals Map for that use. The change of use or re-development of educational establishments and their grounds will not be permitted unless the use of the site is genuinely redundant, or an alternative site is being provided. The council will support well designed and appropriate schools in sustainable locations.	There are no specific viability implications.
Policy LPP 65	Local Community Services and Facilities	The Council will seek the retention of all existing community facilities and services where they meet an identified local need as specified in the NPPF. Proposals for the change of use of community facilities to other uses will only be permitted where they meet the council's criteria. The provision of new or enhanced community facilities will be supported wherever possible.	There are no specific viability implications.

No	Title	Policy Requirements	Viability Implication
Policy LPP 66	Cemeteries and Churchyards	The Local Planning Authority will seek retention of all existing cemeteries and churchyards unless all other reasonable options for retaining the facility have been considered, or a replacement facility or equal or better quality will be provided.	There are no specific viability implications.
		The Natural Environment	
Policy LPP 67	Natural Environment and Green Infrastructure	Development proposals must take all available measures to ensure the protection, and where possible, the enhancement of the natural environment, habitats, biodiversity and geodiversity of the District. All development proposals, where appropriate, will also contribute towards the delivery of new green infrastructure.	There are no specific viability implications. The requirements of the policy are addressed by typical development assumptions covering costs and adjustments for gross:net developable area.
Policy LPP 68	Protected Species, Priority Spaces and Priority Habitat	Where development is proposed that may have an adverse impact on protected species or protected habitats a full ecological assessment will be required and a specific mitigation strategy and/or management plan implemented where a risk is identified and to ensure that adverse impacts are avoided. Proposals should demonstrate sufficient evidence for avoidance, management or mitigation in accordance with the requirements for the hierarchy of biodiversity assets provided for within national policy.	There are no specific viability implications. Implementation of the policy may require future consultation with prescribed bodies, including Natural England, who may determine that significant effects from development cannot be ruled out. Appropriate Assessment of the Plan indicates that this may involve preparation of a Recreational Avoidance and Mitigation Strategy although costs are unknown. These requirements may only apply to sites within a prescribed distance of protected sites. Such a strategy may be in place prior to adoption of the Plan. The Council indicates that typical contributions per dwelling (where applicable) are likely to be in the order of £150/dwelling, which could be accommodated within typical allowances for planning obligations

No	Title	Policy Requirements	Viability Implication
Policy LPP 69	Tree Protection	The Council will consider the protection of established healthy trees which offer significant amenity value to the locality. If a tree(s) is considered to be of significant value will be retained unless sound arboricultural reasons are given in support of their removal.	There are no specific viability implications.
Policy LPP 70	Enhancement, Management and Monitoring of Biodiversity	Development proposals shall provide for the protection and enhancement of biodiversity and mitigate any adverse impacts.	There are no specific viability implications. The requirements of the policy are addressed by typical development assumptions covering costs, fees and adjustments for gross:net developable area.
Policy LPP 71	Landscape Character and Features	In its decision-making on applications, the Local Planning Authority will take into account the different roles and character of the various landscape areas in the District, and recognise the intrinsic character and beauty of the countryside, in order to ensure that any development permitted is suitable for the local context.	The requirements of the policy are addressed by typical development assumptions covering costs and adjustments for gross:net developable area and density.
Policy LPP 72	Green Buffers	Development within the areas identified on the proposals map as Green Buffers will be strictly controlled to what is considered by the council as appropriate uses and shall be of a suitable design, density and layout that respects the local landscape character.	The requirements of the policy are addressed by typical development assumptions covering costs and adjustments for gross:net developable area.
Policy LPP 73	Protecting and Enhancing Natural Resources, Minimising Pollution and Safeguarding from Hazards	Proposals for all new developments should prevent unacceptable risks from all emissions and other forms of pollution (including light and noise pollution) and ensure no deterioration to either air or water quality.	There are no specific viability implications
Policy LPP 74	Climate Change	The Council will adopt strategies to mitigate and adapt to climate change. In addressing the move to a low carbon future for Braintree District, the Council will plan for new development in locations and ways that reduce greenhouse gas emissions.	There are no specific viability implications

No	Title	Policy Requirements	Viability Implication
Policy LPP 75	Energy Efficiency	The Local Planning Authority will encourage energy conservation and efficiency measures. Opportunities for decentralised energy networks will be encouraged where possible and in accordance with other development plan policies.	There are no specific viability implications.
Policy LPP 76	Renewable Energy Schemes	Proposals for renewable energy schemes will be encouraged where the benefit in terms of low carbon energy generating potential does not result, individually or cumulatively, in serious harm to or loss of landscape, nature, heritage assets, water sources, air, traffic or defense operations.	There are no specific viability implications
Policy LPP 77	Renewable energy within new developments	All major planning applications shall include renewable energy technology to provide at least 20% of the projected energy requirements of major developments, and 10% of minor developments, unless viability evidence demonstrates otherwise. Developments may consider a contribution in lieu of renewable installation to be used as renewable seedcorn funding for other community renewable energy projects.	There are viability implications of this policy. Costs to achieve the council's policy on renewable energy were applied to a sample of case studies and where applicable this was discounted over the lifetime of the development process.
Policy LPP 78	Flood Risk & Surface Water Drainage	The Council will ensure that all proposals will be located to avoid the risk of flooding and where development must be located in an area of higher flood risk, development must be designed to be flood resilient and resistant and safe for its users for the lifetime of the development taking climate change and the vulnerability of the residents into account. Development will take climate change into account in accordance with the most up to date analysis of flood risk and will not increase flood risk elsewhere. Development should retain suitable access strips to watercourses or drainage features.	There are no specific viability implications. Complying with the policy requirements is likely to be covered by typical development costs.
Policy LPP 79	Surface Water Management Plan	The Council will require development to be in compliance with and contribute positively towards delivering the aims and objectives of the Braintree and Witham Surface Water Management Plan as this may be updated or superseded. Developments located in Critical Drainage Areas (CDAs), Local Flood Risk Zones (LFRZs) and for redevelopments of more than one property or area greater than 0.1 hectare should seek betterment to a greenfield runoff rate.	There are no specific viability implications. Complying with the policy requirements is likely to be covered by typical development costs.

No	Title	Policy Requirements	Viability Implication
		All developments in Critical Drainage Areas (excluding minor housing extensions less than 50m ²) which relate to a net increase in impermeable area are to include at least one 'at source' SUDs measure (e.g. water butt, permeable surface). This is to assist in reducing the peak volume of discharge from the site.	
Policy LPP 80	Sustainable Urban Drainage Systems	The Council will require development to be in compliance with and contribute positively towards delivering the aims and objectives of the Braintree and Witham Surface Water Management Plan and any other relevant regulations, SPDs or guidance. SUDs should be appropriately designed, integrated into the development and provide optimum water run-off rates and volumes taking into account relevant local or national standards and the impact of the Water Framework Directive. SUDs may form part of open space where appropriate.	There are no specific viability implications. The costs of complying with the policy should not exceed those of providing development in accordance with Building Regulations, accepting that costs and values should take account of the requirements to re-use previously developed land.
Policy LPP 81	External Lighting	External light proposal will be permitted where they are considered an integral element of a development and is of a suitable design, efficacy and intensity in regards to the development. The proposed lighting should not adversely affect the natural, residential and visual amenities of the locality.	There are no specific viability implications.
Policy LPP 82	Delivery and implementation of the Local Plan	The policy seeks to ensure the effective and implementation of the Local Plan's proposals through supporting collaborative working and co-operation between development stakeholders and infrastructure providers and ensuring the appropriate prioritisation of collecting and spending planning contributions.	There are no specific viability implications
Policy LPP 83	Infrastructure delivery and impact mitigation policy	The policy seeks to ensure that planning contributions are secured to make development acceptable in planning terms, ensure the timely delivery of necessary infrastructure, ensure the most appropriate format of provision for the site and comply with the legislative requirements for planning obligations in all other respects. Contributions may include financial payments, on-site or off-site provision of infrastructure or provision of land.	There are no specific viability implications. Testing assumptions take account of typical allowances for planning obligations and also include sensitivity testing for such which make require contributions in excess of recent historic averages. Testing assumptions also

No	Title	Policy Requirements	Viability Implication
			allow for opening-up an enabling costs on larger schemes and include adjustments between gross and net developable area that may include the provision of land for infrastructure.

Appendix III – Stakeholder Workshop Presentation & Notes

North Essex Viability Workshop Notes – 13 March 2017, 10am – 12pm

Weston Homes Community Stadium, Colchester

(List of delegates available on request)

Consultant and Officer Team

Emma Goodings, Braintree District Council (introductory presentation)

Rob Smith – HYAS

Laura Easton – Three Dragons

Troy Hayes – Troy Planning + Design

Jon Goodall – Troy Planning + Design

Introduction:

The opening part of the session was an introduction by Council Officers to report on the approach and progress towards preparing the new Local Plans for Braintree District, Colchester Borough and Tendring District Councils.

‘Part 1’ Presentation:

A presentation on viability assumptions and modelling being developed for the three new Garden Communities and allocated through the ‘Part 1’ Local Plan covering strategies matters for the three authorities was given separately. The assumptions and outputs from this work are not directly related to the ‘whole plan’ viability study being undertaken for each of the separate ‘Part 2’ Local Plans.

Whole Plan Viability Study Presentations: (see slides on following pages)

The following questions were received, noted and where possible responses given as set out below:

Part 1

Question / Response: To confirm, Benchmark land value – £100k per gross acre

Question: What are assumptions for affordable housing? Big need for older people – how is this being tested? Inputs are expected at a detailed level in terms of values, rental levels etc.

Answer: Wider Evidence Base will tell us. More information is provided by the Whole Plan Viability Study such as Local Authority Housing Allowance rates.

Question: Cost of Obligations and opening up at £40k – £50k per unit is that across tenures?

Answer: Yes

Part 2

Questions: Where 2 bed accommodation is included in any mix, this needs to be 4 persons

Answer: Comments appreciated and a valuable point to pick-up in further discussions with Registered Providers

Question: Market Dwelling Mix different for Part 1 and Part 2?

Answer: Yes that may be the case. However, for the Part 2 studies across the three authorities the broad mix across the notional 1ha tiles is likely to be similar in terms of house type and size based on the SHMA recommendations. Some specific variations are allowed for e.g. lower density in Tendring and also picking up other scenarios through the case studies.

Question: inference in HWP for increasing densities, how is this being addressed?

Answer: We will be testing different densities, including higher densities in more urban areas and lower densities in Tendring. The notional 1ha scenarios equate to around 3,400sqm of floorspace per hectare, which seems in-line with typical developments.

Question: 50 units per outlet seems reasonable for private. May be reasonable to see this as the top-end.

Answer: 3 or 4 outlets at peak. Can't get to 4 outlets straight away. This appeared to be generally agreed by delegates.

Question: Square footage from EPC, that wasn't presented. Important as a 3 bed unit can vary considerably. You would typically always see a premium for detached properties.

Answer: The consultant team agree to circulate a summary table of what had been done to assemble raw data. Will circulate with the slides.

Question: How do you judge the geographies for different market areas?

Answer: Important to look at other data sets and speaking to agents. Rightmove data is also a good proxy. Samples of new build are large and increasing given recent rates of development - in some other local authority areas they can be much smaller. EPCs - we try to ensure at least 100 - 200 examples. Remove skewed transactions. Strike a reasonable balance.

Question: Benchmark Land Values. How has the consultant team arrived at these? They look like the wrong way around with Braintree seeming to be the highest.

Answer: Looked at previous studies and DCLG estimates. Not clear why the Braintree figures are coming out so much lower. We are still researching this and this is just the beginning. The values are subject to change based on any increase in sample size, review of EPC data, removing anomalies and liaison with local agents. Any sales particulars of plots and asking prices for recent developments would be much appreciated.

Braintree, Colchester and Tendring

WHOLE PLAN VIABILITY STUDY - WORKSHOP



VIBRANT
PROSPEROUS
THRIVING
WELCOMING



Three Dragons



Whole Plan and Affordable Housing Viability Study

PROCESS

1. Inception Meeting held with Commissioning Authorities
2. Establish testing parameters
 - Reference local & national policies
 - Past delivery & planned delivery
 - Land values
 - Published sources e.g. BCIS
 - Individual consultations
 - Workshop
 - Options outcome
3. Viability Testing
 - 1ha tiles
 - Case studies
4. Draft report
5. Report



Three Dragons

Approach to viability testing

- Residual value approach
- Generic testing and case studies based around the planned development

$$\begin{array}{r}
 \text{Total development value} \\
 \textit{Minus} \\
 \text{Development costs} \\
 \text{(incl. build costs and return to developer)} \\
 = \\
 \text{Gross residual value} \\
 \textit{Minus} \\
 \text{Planning Obligations (including AH)} \\
 + \text{CIL (if applicable)} \\
 = \\
 \text{Net residual value} \\
 \text{(available to pay for land)}
 \end{array}$$

Benchmark* land values

gross value per hectare

Braintree	Colchester	Tendring
High – £0.75m	High – £1m	High - £0.95m
Mid –£0.5m	Mid –£0.5m	Mid - £0.7m
Low - £0.4m		Low - £0.4m

DCLG estimates that land for small – medium sized sites is £2.8m (Braintree); £1.6m (Colchester); £1.19m (Tendring) - £0 CIL/s106 and no affordable housing (*serviced clean site with lower than average build costs and reduced developer profit*).

Agricultural land value 24K/ha (Dec 2015)

***Benchmark** – lowest value for land – not best price

Residential Testing – dwelling sizes

Compliant with national space standards

An allowance of 10% of floor area will be added to the flats for circulation and common areas.

House type description	Affordable sqm	Market sq m
1 bedroom flat	50 (2p)	50
2 bedroom flat	61 (3p)	61
1 bedroom bungalow	55 (2p)	55
2 bedroom bungalow	70 (4p)	70
1 bedroom terrace	58 (2p)	58
2 bedroom terrace	79 (4p)	70
3 bedroom terrace	93 (5p)	84
4 bedroom terrace	106 (6p)	106
3 bed semi detached	93 (5p)	100
4 bed semi detached	106 (6p)	120
3 bed detached		100
4 bed detached		130
5 bed detached		150

Residential Testing – market dwelling mix

Type	20dph (Tend only)	25dph	30dph	35dph	40dph Urban area
1 bed flat			5%	5%	10%
2 bed flat			5%	5%	10%
2 bed bungalow	10%	5%			
2 bed terrace			10%	10%	15%
3 bed terrace			10%	15%	10%
4 bed terrace					
3 bed semi	15%	20%	15%	10%	10%
4 bed semi					
3 bed detached	15%	15%	15%	15%	15%
4 bed detached	40%	40%	30%	30%	30%
5 bed detached	20%	20%	10%	10%	

- Mix is compatible with SHMA Update 2015
- Tempered by known information about delivery
- More information to come from councils so there may be further amendments

Case Studies

- Case study modelling will follow 1ha tiles and to some extent will be informed by those results
- Similar case studies appear appropriate for each district
- Some density variation – e.g potentially lower density in Tendring
- Some case studies will take account of additional items such as self-build & accessibility
- 1 unit
- 3 units
- 7 units
- 11 units
- 15 units
- 75 units
- 90 units – flatted
- 125 units
- 300 units
- 600 units
- 1,100 units

Affordable Housing Dwelling Mix

Affordable Housing Development Mix House Type	Affordable	Intermediate
1 bed flat	20%	20%
2 bed flat	10%	20%
2 bed bungalow (for lower dph – otherwise provided as additional terrace)	5%	-
2 bed terrace	45%	45%
3 bed terrace	15%	15%
4 bed terrace	5%	-

- Based on need identified in SHMA
- Still to speak to RPs so mix may change
- May be some LA specific adjustments
- Will be tested at emerging policy position with further sensitivity testing
- Tenure split varies between authorities

Build Cost (BCIS median 5 yr) and new Building Regs

Type	Braintree	Colchester	Tendring	
Flats (1-2storey)	£1,487	£1,417	£1,459	sq m includes 15% for external works
Flats (3-storey)	1,540	£1,467	£1,510	sq m includes 15% for external works
Houses	£1,312	£1,250	£1,288	sq m includes 15% for external works
2-3 houses	£1,378	£1,312	£1,352	sq m includes 15% for external works
One-off houses	£2,148	£2,047	£2,108	includes 15% for external works
Bungalows	£1,565	£1,492	£1,535	Sq m includes 15% for external works
Sheltered flats	£1,521	£1,449	£1,493	includes 15% for external works 3 storey
S106/278 (per dwelling)	£2,000 £6,000	£2,000 £6,000	tbc	For sites less than 100 dwellings Sites around c.100 dwellings (excluding Garden Communities and strategic sites)
Part M (4) 3	£16,857 £29,341	£16,857 £29,341	£16,857 £29,341	Per dwelling for wheelchair adaptable Per dwelling wheelchair accessible
Delivery Rates – around 50 units per developer per year – any comments?				
On larger developments we need to collate information on thresholds for number of developers				

Other costs		
Professional fees	8-12%	Of build costs
Finance	6%	Of development costs
Marketing fees	3%	Of GDV
Developer return	20%	Of GDV
Contractor return (for affordable)	6%	Of affordable build costs
Agents & Legal	1.75%	
Opening up	>50 units £50k/net ha >100 units £100k/net ha >200 units £150/net ha >400 units £200/net ha	



MARKET AREAS - BRAINTREE

- Market areas as mapped by house price
- Shows 3 market areas
- Are they meaningful to developers?
- Potentially complex geography in terms of differences between house types, locations of development and affordable housing
- There are also similarities north-south through the centre of the District
- Is there a premium on smaller properties?
- Looking to refine seven areas identified in an earlier study

Market Values - Braintree

	Detached			Semi-detached	
	5 Bed	4 Bed	3 Bed	4 Bed	3 Bed
Braintree, Halstead and Central	£465,562	£403,487	£310,375	£394,105	£328,420
Rural North	£436,739	£378,507	£291,159	£342,105	£285,087
Witham and Rural South	£495,265	£429,230	£330,177	£396,037	£330,031

Flats - Ground rent @ £250 per dwelling, capitalised at 5%
 On developments of 1-3 units 5% added to selling prices for 'exclusivity'

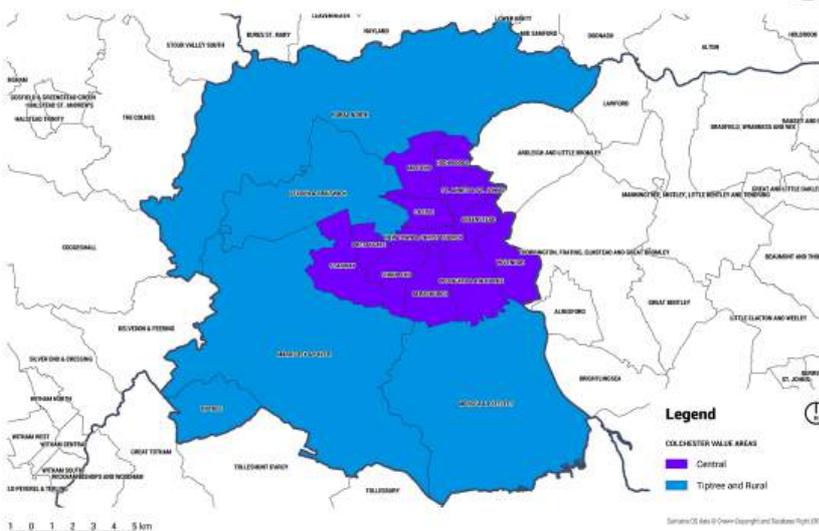
Market Values – Braintree

	Terrace				Flats	
	4 Bed	3 Bed	2 Bed	1 Bed	2 Bed	1 Bed
Braintree, Halstead and Central	£333,100	£263,966	£219,971	£182,262	£170,117	£139,440
Rural North	£330,291	£261,740	£218,116	£180,725	£162,077	£132,850
Witham and Rural South	£361,371	£286,369	£238,641	£197,731	£184,352	£151,108

Flats - Ground rent @ £250 per dwelling, capitalised at 5%
 On development of 1-3 units + 5% added to selling price

MARKET AREAS - COLCHESTER

COLCHESTER - Value Area



- Market areas as mapped by house price
- Shows 2 distinct market areas
- Are they meaningful to developers?
- Similar to a previous study, but not exactly the same (BPS, 2015)

Market Values - Colchester

	Detached			Semi-detached	
	5 Bed	4 Bed	3 Bed	4 Bed	3 Bed
Central	£425,694	£368,935	£283,796	£344,431	£287,025
Tiptree and Rural	£465,270	£403,234	£310,180	£358,382	£298,651

Flats - Ground rent @ £250 per dwelling, capitalised at 5%
On developments of 1-3 units 5% added to selling prices for 'exclusivity'

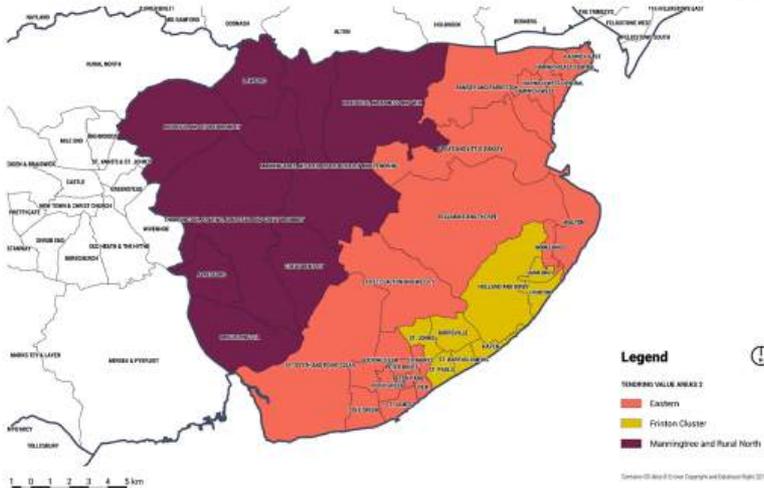
Market Values - Colchester

	Terrace				Flats	
	4 Bed	3 Bed	2 Bed	1 Bed	2 Bed	1 Bed
Central	£285,569	£226,300	£188,583	£156,255	£161,536	£132,407
Tiptree and Rural	£339,925	£269,374	£224,479	£185,997	£165,708	£135,827

Flats - Ground rent @ £250 per dwelling, capitalised at 5%
On development of 1-3 units + 5% added to selling price

MARKET AREAS - TENDRING

TENDRING - Value Areas 2



- Market areas as mapped by house price
- Shows 3 market areas
- Are they meaningful to developers?
- Similar to previous studies (PBA, 2015) identifying higher values around Frinton
- Stronger market gains over recent years?

Market Values - Tendring

	Detached			Semi-detached	
	5 Bed	4 Bed	3 Bed	4 Bed	3 Bed
Eastern	£396,258	£343,424	£264,172	£293,370	£244,475
Frinton Cluster	£494,783	£428,812	£329,855	£408,276	£340,230
Manningtree and Rural North	£443,766	£384,597	£295,844	£331,947	£276,623

Flats - Ground rent @ £250 per dwelling, capitalised at 5%
 On developments of 1-3 units 5% added to selling prices for 'exclusivity'

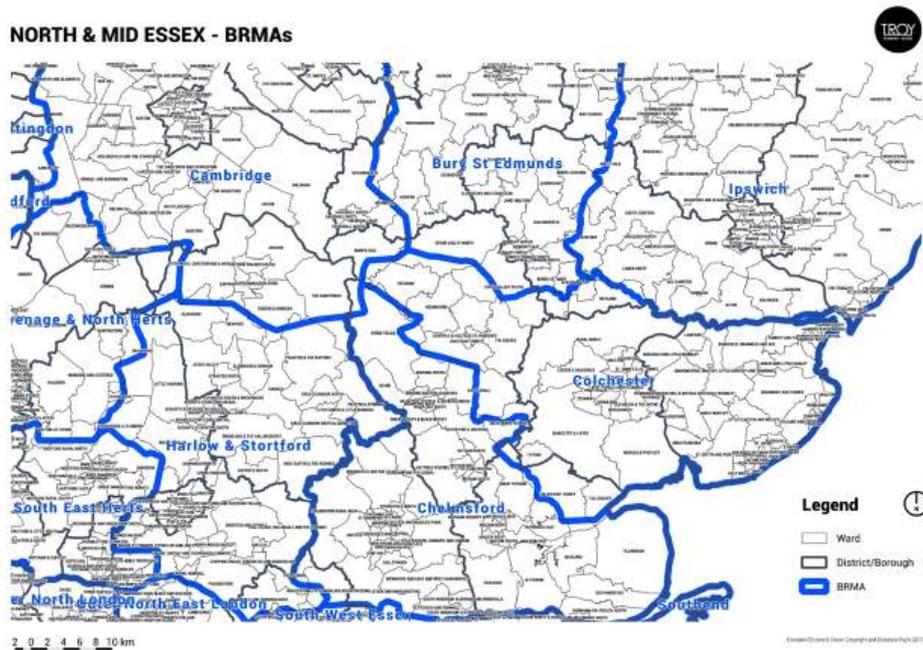
Market Values - Tendring

	Terrace				Flats	
	4 Bed	3 Bed	2 Bed	1 Bed	2 Bed	1 Bed
Eastern	£262,045	£207,658	£173,049	£143,383	£142,355	£116,685
Frinton Cluster	£353,427	£280,074	£233,395	£193,384	£212,296	£174,013
Manningtree and Rural North	£306,387	£242,797	£202,331	£167,646	£0	£0

Flats - Ground rent @ £250 per dwelling, capitalised at 5%
On development of 1-3 units + 5% added to selling price

Factors affecting Affordable Housing

- Types of affordable home ownership e.g. Starter Homes; Rent to Buy
- LHA rates capping rents
- Measures such as 'Bedroom tax' and alignment of benefit to LHA rates impact on who is housed and sorts of properties required
- Affordable housing will be modelled at emerging policy position
- Sensitivity testing at alternative levels and thresholds
- Braintree district falls within 4 different BRMAs
- Colchester and Tendring both within the same single BRMA (Colchester)



Gross to Net Rental Factors - Affordable

For rental properties

• Rents	100% LHA
• Service Charges	£10 flats / £5 houses
• Management and maintenance	£1,000
• Voids/bad debts	3.00%
• Repairs reserve	£600
• Capitalisation	5%

For shared ownership

• Share size	40%
• Rental charge	2.75%
• Capitalisation	5%

Next steps

- Workshop notes/slides to be circulated – another opportunity for input to the study
- Follow up interviews with RPs
- Follow up interviews with other stakeholders if appropriate, or if need for confidential discussion
- Testing undertaken
- Produce report based on findings of testing

Full Sample of Housing Transactions Data Circulated with Slides from 13 March 2017 Developer Workshop**Braintree Market Area Assumptions**

	Detached			Semi-detached		Terrace				Flats		EPC Sample Size	Total New Build Transactions Sample
	5 Bed	4 Bed	3 Bed	4 Bed	3 Bed	4 Bed	3 Bed	2 Bed	1 Bed	2 Bed	1 Bed	Total EPC Reviewed	Total Sample from Land Registry 2013-2016
<i>EPC - average sqm from sample</i>	121sqm			94sqm		91sqm				65sqm		115	318
<i>Value/sqm from Sample</i>	£3,104			£3,284		£3,142				£2,789			
Braintree, Halstead and Central	£465,562	£403,487	£310,375	£394,105	£328,420	£333,100	£263,966	£219,971	£182,262	£170,117	£139,440		
<i>EPC - average sqm from sample</i>	117sqm			104sqm		95sqm				62sqm		63	108
<i>Value/sqm from Sample</i>	£2,912			£2,851		£3,116				£2,657			
Rural North	£436,739	£378,507	£291,159	£342,105	£285,087	£330,291	£261,740	£218,116	£180,725	£162,077	£132,850		
<i>EPC - average sqm from sample</i>	118sqm			95sqm		84sqm				55sqm		120	258
<i>Value/sqm from Sample</i>	£3,302			£3,300		£3,409				£3,022			
Witham and Rural South	£495,265	£429,230	£330,177	£396,037	£330,031	£361,371	£286,369	£238,641	£197,731	£184,352	£151,108		

Appendix IV – Results tables

1 hectare tiles - Full Results (Central Corridor Market Area)

Area / DPH / AR-SO Split / %AH / Other Costs								RESULTS				
Broad Rental Market Area	Density	District	% Affordable Housing			Part M Costs allowed	Total Market Sqm	Residual Value (£)	Benchmark Values		RV less Main Benchmark	RV less Sensitivity Benchmark
			Rented / Intermediate	%AH	% Market Housing				Benchmark / hectare (£)	Sensitivity Benchmark (£)		
Chelmsford	25dph	Braintree	70% / 30%	30%	70%	43,798	2143.80	£1,664,000	£750,000	£900,000	£914,000	£764,000
Chelmsford	30dph	Braintree	70% / 30%	30%	70%	50,680	2236.60	£1,673,000	£750,000	£900,000	£923,000	£773,000
Chelmsford	35dph	Braintree	70% / 30%	30%	70%	59,127	2589.80	£1,935,000	£750,000	£900,000	£1,185,000	£1,035,000
Chelmsford	40dph	Braintree	70% / 30%	30%	70%	65,521	2663.10	£1,897,000	£750,000	£900,000	£1,147,000	£997,000
Chelmsford	25dph	Braintree	70% / 30%	40%	60%	43,935	1837.50	£1,425,000	£750,000	£900,000	£675,000	£525,000
Chelmsford	30dph	Braintree	70% / 30%	40%	60%	50,968	1917.10	£1,430,000	£750,000	£900,000	£680,000	£530,000
Chelmsford	35dph	Braintree	70% / 30%	40%	60%	59,463	2219.80	£1,655,000	£750,000	£900,000	£905,000	£755,000
Chelmsford	40dph	Braintree	70% / 30%	40%	60%	66,199	2282.60	£1,619,000	£750,000	£900,000	£869,000	£719,000
Colchester	25dph	Braintree	70% / 30%	30%	70%	43,798	2143.80	£1,559,000	£750,000	£900,000	£809,000	£659,000
Colchester	30dph	Braintree	70% / 30%	30%	70%	50,680	2236.60	£1,547,000	£750,000	£900,000	£797,000	£647,000
Colchester	35dph	Braintree	70% / 30%	30%	70%	59,127	2589.80	£1,788,000	£750,000	£900,000	£1,038,000	£888,000
Colchester	40dph	Braintree	70% / 30%	30%	70%	65,521	2663.10	£1,729,000	£750,000	£900,000	£979,000	£829,000
Colchester	25dph	Braintree	70% / 30%	40%	60%	43,935	1837.50	£1,285,000	£750,000	£900,000	£535,000	£385,000
Colchester	30dph	Braintree	70% / 30%	40%	60%	50,968	1917.10	£1,262,000	£750,000	£900,000	£512,000	£362,000
Colchester	35dph	Braintree	70% / 30%	40%	60%	59,463	2219.80	£1,459,000	£750,000	£900,000	£709,000	£559,000
Colchester	40dph	Braintree	70% / 30%	40%	60%	66,199	2282.60	£1,395,000	£750,000	£900,000	£645,000	£495,000

1 hectare tiles – Full Results (Rural Fringe Market Area)

Area / DPH / AR-SO Split / %AH / Other Costs								RESULTS				
Broad Rental Market Area	Density	District	% Affordable Housing			Part M Costs allowed	Total Market Sqm	Residual Value (£)	Benchmark Values		RV less Main Benchmark	RV less Sensitivity Benchmark
			Rented / Intermediate	%AH	% Market Housing				Benchmark / hectare (£)	Sensitivity Benchmark (£)		
Bury St Edmunds	25dph	Braintree	70% / 30%	40%	60%	43,935	1837.50	£1,619,000	£1,000,000	£1,200,000	£619,000	£419,000
Bury St Edmunds	30dph	Braintree	70% / 30%	40%	60%	50,968	1917.10	£1,557,000	£1,000,000	£1,200,000	£557,000	£357,000
Bury St Edmunds	35dph	Braintree	70% / 30%	40%	60%	59,463	2219.80	£1,801,000	£1,000,000	£1,200,000	£801,000	£601,000
Bury St Edmunds	40dph	Braintree	70% / 30%	40%	60%	66,199	2282.60	£1,720,000	£1,000,000	£1,200,000	£720,000	£520,000
Chelmsford	25dph	Braintree	70% / 30%	30%	70%	43,798	2143.80	£2,091,000	£1,000,000	£1,200,000	£1,091,000	£891,000
Chelmsford	30dph	Braintree	70% / 30%	30%	70%	50,680	2236.60	£2,062,000	£1,000,000	£1,200,000	£1,062,000	£862,000
Chelmsford	35dph	Braintree	70% / 30%	30%	70%	59,127	2589.80	£2,387,000	£1,000,000	£1,200,000	£1,387,000	£1,187,000
Chelmsford	40dph	Braintree	70% / 30%	30%	70%	65,521	2663.10	£2,334,000	£1,000,000	£1,200,000	£1,334,000	£1,134,000
Chelmsford	25dph	Braintree	70% / 30%	40%	60%	43,935	1837.50	£1,798,000	£1,000,000	£1,200,000	£798,000	£598,000
Chelmsford	30dph	Braintree	70% / 30%	40%	60%	50,968	1917.10	£1,772,000	£1,000,000	£1,200,000	£772,000	£572,000
Chelmsford	35dph	Braintree	70% / 30%	40%	60%	59,463	2219.80	£2,053,000	£1,000,000	£1,200,000	£1,053,000	£853,000
Chelmsford	40dph	Braintree	70% / 30%	40%	60%	66,199	2282.60	£2,007,000	£1,000,000	£1,200,000	£1,007,000	£807,000
Colchester	25dph	Braintree	70% / 30%	30%	70%	43,798	2143.80	£1,986,000	£1,000,000	£1,200,000	£986,000	£786,000
Colchester	30dph	Braintree	70% / 30%	30%	70%	50,680	2236.60	£1,936,000	£1,000,000	£1,200,000	£936,000	£736,000
Colchester	35dph	Braintree	70% / 30%	30%	70%	59,127	2589.80	£2,239,000	£1,000,000	£1,200,000	£1,239,000	£1,039,000
Colchester	40dph	Braintree	70% / 30%	30%	70%	65,521	2663.10	£2,166,000	£1,000,000	£1,200,000	£1,166,000	£966,000
Colchester	25dph	Braintree	70% / 30%	40%	60%	43,935	1837.50	£1,658,000	£1,000,000	£1,200,000	£658,000	£458,000
Colchester	30dph	Braintree	70% / 30%	40%	60%	50,968	1917.10	£1,604,000	£1,000,000	£1,200,000	£604,000	£404,000
Colchester	35dph	Braintree	70% / 30%	40%	60%	59,463	2219.80	£1,857,000	£1,000,000	£1,200,000	£857,000	£657,000

Colchester	40dph	Braintree	70% / 30%	40%	60%	66,199	2282.60		£1,783,000	£1,000,000	£1,200,000		£783,000	£583,000
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Case Study – Full Results ('Central Corridor' Market Value Area)

Case Study Ref	No of Dwgs	Broad Rental Market Area (BRMA)	%AH	Density (dph)	Net Area (ha)	Gross area (ha)	Net to Gross %	S106/dwelling	Part M Costs allowed	Opening up costs for strategic Infrastructure (£ per net ha)	DCF Applied	Residual Value / gross ha	Benchmark / hectare (£)	Residual value post benchmark (£)
Small Site Case Studies														
B1	1 dwellings	Chelmsford	0%	40	0.025	0.025	100%	4,000	1,750	Nil	No	-440,000	750,000	-1,190,000
B1	1 dwellings	Colchester	0%	40	0.025	0.025	100%	4,000	1,750	Nil	No	-440,000	750,000	-1,190,000
B2	3 dwellings	Chelmsford	0%	40	0.075	0.075	100%	4,000	5,198	Nil	No	3,160,000	750,000	2,410,000
B2	3 dwellings	Colchester	0%	40	0.075	0.075	100%	4,000	5,198	Nil	No	3,160,000	750,000	2,410,000
B3	7 dwellings	Chelmsford	0%	35	0.200	0.200	100%	4,000	11,624	Nil	No	2,730,000	750,000	1,980,000
B3	7 dwellings	Colchester	0%	35	0.200	0.200	100%	4,000	11,624	Nil	No	2,730,000	750,000	1,980,000
Medium Site Case Studies														
B5	11 dwellings	Chelmsford	40%	35	0.315	0.315	100%	4,000	18,688	Nil	No	1,673,016	750,000	923,016
B5	11 dwellings	Colchester	40%	35	0.315	0.315	100%	4,000	18,688	Nil	No	1,479,365	750,000	729,365
B5A	11 dwellings	Chelmsford	0%	35	0.315	0.315	100%	4,000	18,266	Nil	No	2,793,651	750,000	2,043,651
B5A	11 dwellings	Colchester	0%	35	0.315	0.315	100%	4,000	18,266	Nil	No	2,793,651	750,000	2,043,651
B6	11 dwellings	Chelmsford	30%	35	0.315	0.315	100%	4,000	18,583	Nil	No	1,952,381	750,000	1,202,381
B6	11 dwellings	Colchester	30%	35	0.315	0.315	100%	4,000	18,583	Nil	No	1,806,349	750,000	1,056,349
B7	15 dwellings	Chelmsford	40%	35	0.429	0.429	100%	4,000	25,484	Nil	No	1,666,667	750,000	916,667
B7	15 dwellings	Colchester	40%	35	0.429	0.429	100%	4,000	25,484	Nil	No	1,470,862	750,000	720,862
B8	15 dwellings	Chelmsford	30%	35	0.429	0.429	100%	4,000	25,340	Nil	No	1,948,718	750,000	1,198,718
B8	15 dwellings	Colchester	30%	35	0.429	0.429	100%	4,000	25,340	Nil	No	1,801,865	750,000	1,051,865
B9	60 dwellings	Chelmsford	30%	60	1.000	1.000	100%	4,000	63,775	50,000	Yes	429,915	750,000	-320,085

Case Study Ref	No of Dwgs	Broad Rental Market Area (BRMA)	%AH	Density (dph)	Net Area (ha)	Gross area (ha)	Net to Gross %	£106/dwelling	Part M Costs allowed	Opening up costs for strategic Infrastructure (£ per net ha)	DCF Applied	Residual Value / gross ha	Benchmark / hectare (£)	Residual value post benchmark (£)
B9	60 dwellings	Colchester	30%	60	1.000	1.000	100%	4,000	63,775	50,000	Yes	199,625	750,000	-550,375
Intermediate Case Studies														
B10	75 dwellings	Chelmsford	40%	35	2.143	2.678	80%	10,000	127,421	50,000	Yes	1,220,040	600,000	620,040
B10	75 dwellings	Colchester	40%	35	2.143	2.678	80%	10,000	127,421	50,000	Yes	1,070,334	600,000	470,334
B11	75 dwellings	Chelmsford	30%	35	2.143	2.678	80%	10,000	126,700	50,000	Yes	1,443,328	600,000	843,328
B11	75 dwellings	Colchester	30%	35	2.143	2.678	80%	10,000	126,700	50,000	Yes	1,332,729	600,000	732,729
B12	125 dwellings	Chelmsford	40%	35	3.571	4.464	80%	10,000	212,368	100,000	Yes	1,165,446	600,000	565,446
B12	125 dwellings	Colchester	40%	35	3.571	4.464	80%	10,000	212,368	100,000	Yes	1,016,938	600,000	416,938
B13	125 dwellings	Chelmsford	30%	35	3.571	4.464	80%	10,000	211,167	100,000	Yes	1,383,305	600,000	783,305
B13	125 dwellings	Colchester	30%	35	3.571	4.464	80%	10,000	211,167	100,000	Yes	1,271,923	600,000	671,923
B14	300 dwellings	Chelmsford	40%	35	8.571	13.187	65%	10,000	509,682	150,000	Yes	750,154	600,000	150,154
B14	300 dwellings	Colchester	40%	35	8.571	13.187	65%	10,000	509,682	150,000	Yes	639,251	600,000	39,251
B14	300 dwellings	Chelmsford	40%	35	8.571	13.187	65%	15,000	509,682	150,000	Yes	647,436	600,000	47,436
B14	300 dwellings	Colchester	40%	35	8.571	13.187	65%	15,000	509,682	150,000	Yes	533,491	600,000	-66,509
B15	300 dwellings	Chelmsford	30%	35	8.571	13.187	65%	10,000	506,801	150,000	Yes	978,761	600,000	378,761
B15	300 dwellings	Colchester	30%	35	8.571	13.187	65%	10,000	506,801	150,000	Yes	902,042	600,000	302,042
B15	300 dwellings	Chelmsford	30%	35	8.571	13.187	65%	15,000	506,801	150,000	Yes	890,156	600,000	290,156
B15	300 dwellings	Colchester	30%	35	8.571	13.187	65%	15,000	506,801	150,000	Yes	813,436	600,000	213,436
Large Case Studies														
B16	600 dwellings	Chelmsford	40%	35	17.143	26.374	65%	10,000	1,019,365	200,000	Yes	778,813	440,000	320,667
B16	600 dwellings	Colchester	40%	35	17.143	26.374	65%	10,000	1,019,365	200,000	Yes	674,819	440,000	218,879
B16	600 dwellings	Chelmsford	40%	35	17.143	26.374	65%	20,000	1,019,365	200,000	Yes	587,529	440,000	133,122
B16	600 dwellings	Colchester	40%	35	17.143	26.374	65%	20,000	1,019,365	200,000	Yes	477,447	440,000	25,469

Case Study Ref	No of Dwgs	Broad Rental Market Area (BRMA)	%AH	Density (dph)	Net Area (ha)	Gross area (ha)	Net to Gross %	S106/dwelling	Part M Costs allowed	Opening up costs for strategic Infrastructure (£ per net ha)	DCF Applied	Residual Value / gross ha	Benchmark / hectare (£)	Residual value post benchmark (£)
B17	600 dwellings	Chelmsford	30%	35	17.143	26.374	65%	10,000	1,013,602	200,000	Yes	929,942	440,000	468,828
B17	600 dwellings	Colchester	30%	35	17.143	26.374	65%	10,000	1,013,602	200,000	Yes	853,369	440,000	393,760
B17	600 dwellings	Chelmsford	30%	35	17.143	26.374	65%	20,000	1,013,602	200,000	Yes	743,998	440,000	286,623
B17	600 dwellings	Colchester	30%	35	17.143	26.374	65%	20,000	1,013,602	200,000	Yes	664,110	440,000	208,239
B18	1100 dwellings	Chelmsford	40%	35	31.429	48.352	65%	10,000	1,868,835	200,000	Yes	741,458	440,000	284,046
B18	1100 dwellings	Colchester	40%	35	31.429	48.352	65%	10,000	1,868,835	200,000	Yes	647,099	440,000	191,559
B18	1100 dwellings	Chelmsford	40%	35	31.429	48.352	65%	20,000	1,868,835	200,000	Yes	577,284	440,000	122,930
B18	1100 dwellings	Colchester	40%	35	31.429	48.352	65%	20,000	1,868,835	200,000	Yes	478,910	440,000	26,428
B19	1100 dwellings	Chelmsford	30%	35	31.429	48.352	65%	10,000	1,858,271	200,000	Yes	880,827	440,000	420,645
B19	1100 dwellings	Colchester	30%	35	31.429	48.352	65%	10,000	1,858,271	200,000	Yes	810,058	440,000	351,280
B19	1100 dwellings	Chelmsford	30%	35	31.429	48.352	65%	20,000	1,858,271	200,000	Yes	718,023	440,000	260,957
B19	1100 dwellings	Colchester	30%	35	31.429	48.352	65%	20,000	1,858,271	200,000	Yes	646,962	440,000	191,271
B22	1900 dwellings	Chelmsford	30%	35	54.285	108.571	50%	10,000	3,209,740	250,000	Yes	600,614	440,000	149,381
B22	1900 dwellings	Chelmsford	30%	35	54.285	108.571	50%	20,000	3,209,740	250,000	Yes	480,355	440,000	27,629
Sheltered and Extracare Housing														
B20	50 dwellings	Chelmsford	30%	100	0.500	0.500	100%	4,000	n/a	-	Yes	3,634,324	750,000	2,884,324
B20	50 dwellings	Colchester	30%	100	0.500	0.500	100%	4,000	n/a	-	Yes	3,251,512	750,000	2,501,512
B21	50 dwellings	Chelmsford	30%	100	0.500	0.500	100%	4,000	n/a	-	Yes	3,644,900	750,000	2,894,900
B21	50 dwellings	Colchester	30%	100	0.500	0.500	100%	4,000	n/a	-	Yes	3,262,088	750,000	2,512,088
Rural Exception Sites												Residual Value (£)		
B4	10 dwellings	Chelmsford		20	0.500	0.500	100%	4,000	19,556	Nil	No	199,000		

Case Study Ref	No of Dwgs	Broad Rental Market Area (BRMA)	%AH	Density (dph)	Net Area (ha)	Gross area (ha)	Net to Gross %	S106/dwelling	Part M Costs allowed	Opening up costs for strategic Infrastructure (£ per net ha)	DCF Applied	Residual Value / gross ha	Benchmark / hectare (£)	Residual value post benchmark (£)
B4	10 dwellings	Colchester		20	0.500	0.500	100%	4,000	19,556	Nil	No	101,000		

Case Study - Full Results ('Rural Fringe' Market Value Area)

Case Study Ref	No of Dwgs	Broad Rental Market Area (BRMA)	%AH	Density (dph)	Net Area (ha)	Gross area (ha)	Net to Gross %	S106/dwelling	Part M Costs allowed	Opening up costs for strategic Infrastructure (£ per net ha)	DCF Applied	Residual Value / gross ha	Benchmark / hectare (£)	Residual value post benchmark (£)
Small Site Case Studies														
B1	1 dwellings	Chelmsford	0%	40	0.025	0.025	100%	4,000	1,750	Nil	No	760,000	1,000,000	-240,000
B1	1 dwellings	Colchester	0%	40	0.025	0.025	100%	4,000	1,750	Nil	No	760,000	1,000,000	-240,000
B2	3 dwellings	Chelmsford	0%	40	0.075	0.075	100%	4,000	5,198	Nil	No	4,026,667	1,000,000	3,026,667
B2	3 dwellings	Colchester	0%	40	0.075	0.075	100%	4,000	5,198	Nil	No	4,026,667	1,000,000	3,026,667
B3	7 dwellings	Chelmsford	0%	35	0.200	0.200	100%	4,000	11,624	Nil	No	3,350,000	1,000,000	2,350,000
B3	7 dwellings	Colchester	0%	35	0.200	0.200	100%	4,000	11,624	Nil	No	3,350,000	1,000,000	2,350,000
Medium Site Case Studies														
B5	11 dwellings	Chelmsford	40%	35	0.315	0.315	100%	4,000	18,688	Nil	No	2,069,841	1,000,000	1,069,841
B5	11 dwellings	Colchester	40%	35	0.315	0.315	100%	4,000	18,688	Nil	No	1,873,016	1,000,000	873,016
B5A	11 dwellings	Chelmsford	0%	35	0.315	0.315	100%	4,000	18,266	Nil	No	3,409,524	1,000,000	2,409,524
B5A	11 dwellings	Colchester	0%	35	0.315	0.315	100%	4,000	18,266	Nil	No	3,409,524	1,000,000	2,409,524
B6	11 dwellings	Chelmsford	30%	35	0.315	0.315	100%	4,000	18,583	Nil	No	2,403,175	1,000,000	1,403,175
B6	11 dwellings	Colchester	30%	35	0.315	0.315	100%	4,000	18,583	Nil	No	2,257,143	1,000,000	1,257,143
B7	15 dwellings	Chelmsford	40%	35	0.429	0.429	100%	4,000	25,484	Nil	No	2,065,268	1,000,000	1,065,268
B7	15 dwellings	Colchester	40%	35	0.429	0.429	100%	4,000	25,484	Nil	No	1,869,464	1,000,000	869,464

Case Study Ref	No of Dwgs	Broad Rental Market Area (BRMA)	%AH	Density (dph)	Net Area (ha)	Gross area (ha)	Net to Gross %	S106/dwelling	Part M Costs allowed	Opening up costs for strategic Infrastructure (£ per net ha)	DCF Applied	Residual Value / gross ha	Benchmark / hectare (£)	Residual value post benchmark (£)
B8	15 dwellings	Chelmsford	30%	35	0.429	0.429	100%	4,000	25,340	Nil	No	2,400,932	1,000,000	1,400,932
B8	15 dwellings	Colchester	30%	35	0.429	0.429	100%	4,000	25,340	Nil	No	2,251,748	1,000,000	1,251,748
B9	60 dwellings	Chelmsford	30%	60	1.000	1.000	100%	4,000	63,775	50,000	Yes	660,889	1,000,000	-339,111
B9	60 dwellings	Colchester	30%	60	1.000	1.000	100%	4,000	63,775	50,000	Yes	433,521	1,000,000	-566,479
Intermediate Case Studies														
B10	75 dwellings	Chelmsford	40%	35	2.143	2.678	80%	10,000	127,421	50,000	Yes	1,522,370	750,000	772,370
B10	75 dwellings	Colchester	40%	35	2.143	2.678	80%	10,000	127,421	50,000	Yes	1,372,851	750,000	622,851
B11	75 dwellings	Chelmsford	30%	35	2.143	2.678	80%	10,000	126,700	50,000	Yes	1,787,496	750,000	1,037,496
B11	75 dwellings	Colchester	30%	35	2.143	2.678	80%	10,000	126,700	50,000	Yes	1,676,897	750,000	926,897
B12	125 dwellings	Chelmsford	40%	35	3.571	4.464	80%	10,000	212,368	100,000	Yes	1,464,009	750,000	714,009
B12	125 dwellings	Colchester	40%	35	3.571	4.464	80%	10,000	212,368	100,000	Yes	1,317,110	750,000	567,110
B13	125 dwellings	Chelmsford	30%	35	3.571	4.464	80%	10,000	211,167	100,000	Yes	1,715,405	750,000	965,405
B13	125 dwellings	Colchester	30%	35	3.571	4.464	80%	10,000	211,167	100,000	Yes	1,607,924	750,000	857,924
B14	300 dwellings	Chelmsford	40%	35	8.571	13.187	65%	10,000	509,682	150,000	Yes	967,047	750,000	217,047
B14	300 dwellings	Colchester	40%	35	8.571	13.187	65%	10,000	509,682	150,000	Yes	860,529	750,000	110,529
B14	300 dwellings	Chelmsford	40%	35	8.571	13.187	65%	15,000	509,682	150,000	Yes	870,143	750,000	120,143
B14	300 dwellings	Colchester	40%	35	8.571	13.187	65%	15,000	509,682	150,000	Yes	760,473	750,000	10,473
B15	300 dwellings	Chelmsford	30%	35	8.571	13.187	65%	10,000	506,801	150,000	Yes	1,214,910	750,000	464,910
B15	300 dwellings	Colchester	30%	35	8.571	13.187	65%	10,000	506,801	150,000	Yes	1,138,190	750,000	388,190
B15	300 dwellings	Chelmsford	30%	35	8.571	13.187	65%	15,000	506,801	150,000	Yes	1,126,304	750,000	376,304
B15	300 dwellings	Colchester	30%	35	8.571	13.187	65%	15,000	506,801	150,000	Yes	1,049,584	750,000	299,584
Large Case Studies														
B16	600 dwellings	Chelmsford	40%	35	17.143	26.374	65%	10,000	1,019,365	200,000	Yes	985,419	440,000	523,457

Case Study Ref	No of Dwgs	Broad Rental Market Area (BRMA)	%AH	Density (dph)	Net Area (ha)	Gross area (ha)	Net to Gross %	S106/dwelling	Part M Costs allowed	Opening up costs for strategic Infrastructure (£ per net ha)	DCF Applied	Residual Value / gross ha	Benchmark / hectare (£)	Residual value post benchmark (£)
B16	600 dwellings	Colchester	40%	35	17.143	26.374	65%	10,000	1,019,365	200,000	Yes	884,159	440,000	424,202
B16	600 dwellings	Chelmsford	40%	35	17.143	26.374	65%	20,000	1,019,365	200,000	Yes	802,851	440,000	344,711
B16	600 dwellings	Colchester	40%	35	17.143	26.374	65%	20,000	1,019,365	200,000	Yes	696,334	440,000	240,199
B17	600 dwellings	Chelmsford	30%	35	17.143	26.374	65%	10,000	1,013,602	200,000	Yes	1,163,152	440,000	698,421
B17	600 dwellings	Colchester	30%	35	17.143	26.374	65%	10,000	1,013,602	200,000	Yes	1,087,206	440,000	623,980
B17	600 dwellings	Chelmsford	30%	35	17.143	26.374	65%	20,000	1,013,602	200,000	Yes	985,940	440,000	524,548
B17	600 dwellings	Colchester	30%	35	17.143	26.374	65%	20,000	1,013,602	200,000	Yes	908,452	440,000	448,623
B18	1100 dwellings	Chelmsford	40%	35	31.429	48.352	65%	10,000	1,868,835	200,000	Yes	932,304	440,000	472,051
B18	1100 dwellings	Colchester	40%	35	31.429	48.352	65%	10,000	1,868,835	200,000	Yes	837,946	440,000	379,565
B18	1100 dwellings	Chelmsford	40%	35	31.429	48.352	65%	20,000	1,868,835	200,000	Yes	769,500	440,000	312,363
B18	1100 dwellings	Colchester	40%	35	31.429	48.352	65%	20,000	1,868,835	200,000	Yes	675,142	440,000	219,877
B19	1100 dwellings	Chelmsford	30%	35	31.429	48.352	65%	10,000	1,858,271	200,000	Yes	1,098,178	440,000	633,384
B19	1100 dwellings	Colchester	30%	35	31.429	48.352	65%	10,000	1,858,271	200,000	Yes	1,027,409	440,000	564,019
B19	1100 dwellings	Chelmsford	30%	35	31.429	48.352	65%	20,000	1,858,271	200,000	Yes	935,374	440,000	473,696
B19	1100 dwellings	Colchester	30%	35	31.429	48.352	65%	20,000	1,858,271	200,000	Yes	864,605	440,000	404,332
B22	1900 dwellings	Chelmsford	30%	35	54.285	108.571	50%	10,000	3,209,740	250,000	Yes	763,454	440,000	305,483
B22	1900 dwellings	Chelmsford	30%	35	54.285	108.571	50%	20,000	3,209,740	250,000	Yes	642,219	440,000	186,442
Sheltered and Extracare Housing														
B20	50 dwellings	Chelmsford	30%	100	0.500	0.500	100%	4,000	n/a	-	Yes	4,309,308	1,000,000	3,309,308
B20	50 dwellings	Colchester	30%	100	0.500	0.500	100%	4,000	n/a	-	Yes	3,926,496	1,000,000	2,926,496
B21	50 dwellings	Chelmsford	30%	100	0.500	0.500	100%	4,000	n/a	-	Yes	4,551,596	1,000,000	3,551,596
B21	50 dwellings	Colchester	30%	100	0.500	0.500	100%	4,000	n/a	-	Yes	4,168,784	1,000,000	3,168,784

Case Study Ref	No of Dwgs	Broad Rental Market Area (BRMA)	%AH	Density (dph)	Net Area (ha)	Gross area (ha)	Net to Gross %	S106/dwelling	Part M Costs allowed	Opening up costs for strategic Infrastructure (£ per net ha)	DCF Applied	Residual Value / gross ha	Benchmark / hectare (£)	Residual value post benchmark (£)
Rural Exception Sites												Residual Value (£)		
B4	10 dwellings	Chelmsford		20	0.500	0.500	100%	4,000	19,556	Nil	No	237,000		
B4	10 dwellings	Colchester		20	0.500	0.500	100%	4,000	19,556	Nil	No	139,000		

Braintree - Renewable Energy provision testing (both market areas)

Case Study	Dwellings	%AH	Market Area	BRMA	Net area	Gross area	Renewables per dwelling	Residual S106 per dwg	RV net	RV Net/gross ha	Benchmark	Headroom over benchmark
B18	1,100	40%	Central	Colchester	31.429	48.352	2,500	10,000	28,665,510	592,851	440,000	152,851
B18	1,100	40%	Central	Colchester	31.429	48.352	2,500	20,000	20,588,385	425,802	440,000	-14,198
B15	300	30%	Central	Colchester	8.571	13.187	2,500	10,000	11,328,167	859,040	600,000	259,040
B15	300	30%	Central	Colchester	8.571	13.187	2,500	15,000	10,159,724	770,435	600,000	170,435
B14	300	40%	Central	Colchester	8.571	13.187	2,500	10,000	7,790,142	590,744	600,000	-9,256
B14	300	40%	Central	Colchester	8.571	13.187	2,500	15,000	6,357,107	482,074	600,000	-117,926
B14	300	40%	Rural	Colchester	8.571	13.187	2,500	10,000	10,739,154	814,374	750,000	64,374
B14	300	40%	Rural	Colchester	8.571	13.187	2,500	15,000	9,388,701	711,966	750,000	-38,034
B7	15	40%	Central	Colchester	0.429	0.429	3,000	4,000	587,000	1,368,298	750,000	618,298

B7	15	40%	Rural	Colchester	0.429	0.429	3,000	4,000	757,000	1,764,569	1,000,000	764,569
B3	7	0%	Central	Colchester	0.200	0.200	3,000	4,000	526,000	2,630,000	750,000	1,880,000
B3	7	0%	Central	Colchester	0.200	0.200	3,000	4,000	649,000	3,245,000	1,000,000	2,245,000
35 dph tile	35	0%	Central	Colchester	1.000	1.000	3,000	4,000	1,355,000	1,355,000	750,000	605,000
35 dph tile	35	0%	Rural	Colchester	1.000	1.000	3,000	4,000	1,752,000	1,752,000	1,000,000	752,000

Appendix V – Non-residential Viability Testing

Non-residential Viability Assessment Model				
Office development of two storeys out of town (a/c multiple units)				
	Size of unit (GIA)	1500 sq m		
	Ratio of GEA to GIA	100.0%		User input cells
	GEA	1500 sq m		Produced by model
	NIA as % of GIA	95%		Key results
	NIA	1425 sq m	GEA	Gross external area
	Floors	2	GIA	Gross internal area
	Site coverage	40%	NIA	Net internal area
	Site area	0.19 Hectares		
SCHEME REVENUE				
	Headline annual rent (in £s per sq m)			£161
	Rent premium			0%
	Headline annual rent (in £s per sq m) with BREEAM premium		£	161
	Annual rent for assesment (total) - NIA		£	229,425
	Yield			8.20%
	(Yield times rent)		£	2,797,866
	Less purchaser costs	5.80 % of yield x rent		
	Gross Development Value		£	2,644,486
SCHEME COSTS				
	Build costs	£ 1,337 per sq m	£	2,005,500
	Additional build costs	£ - per sq m	£	-
	Water efficiency	0.00% of base build costs	£	-
	External costs	10% of base build costs	£	200,550
	Total construction costs		£	2,206,050
	Professional fees	10.00% of construction costs	£	220,605
	Sales and lettings costs	3% of GDV	£	79,335
	S106 costs (not covered by CIL)		£	20,000
	Total 'other costs'		£	319,940
	Finance costs	6.0% Interest rate		
	Build period	10 Months		
	Finance costs for 100% of construction and other costs		£	126,299
	Void finance/rent free period (in months)	12 Months	£	151,559
	Total finance costs		£	277,859
	Developer return	20% Scheme value	£	528,897
	Total scheme costs		£	3,332,746
RESIDUAL VALUE				
	Gross residual value			-£ 688,260
	Less purchaser costs	0.00 % Stamp duty land tax	£	-
		2.00 % Agent/legal purchase fees	£	-
	Residual value	For the scheme		-£ 688,260
		Equivalent per hectare		-£ 3,670,719
		Not viable		
Viability				
	Benchmark land value (per hectare)		£	675,000
	Equivalent benchmark land value for site		£	126,563
	Scheme viability headroom		-£	814,822
	Viability headroom per sq m			NONE

Non-residential Viability Assessment Model

Braintree/Witham Town centre comparison retail 200 sqm

Size of unit (GIA)	200 sq m		
Ratio of GEA to GIA	100.0%		User input cells
GEA	200 sq m		Produced by model
NIA as % of GIA	95%		Key results
NIA	190 sq m	GEA	Gross external area
Floors	2	GIA	Gross internal area
Site coverage	80%	NIA	Net internal area
Site area	0.01 Hectares		

SCHEME REVENUE

Headline annual rent (in £s per sq m)		£178
Rent premium		0%
Headline annual rent (in £s per sq m) with BREEAM premium		£ 178
Annual rent for assesment (total) - NIA		£ 33,820
Yield		7.10%
(Yield times rent)		£ 476,338
Less purchaser costs	5.80 % of yield x rent	
Gross Development Value		£ 450,225

SCHEME COSTS

Build costs	£ 1,048 per sq m	£ 209,600
Additional build costs	£ - per sq m	£ -
Water efficiency	0.00% of base build costs	£ -
External costs	10% of base build costs	£ 20,960
Total construction costs		£ 230,560
Professional fees	12.00% of construction costs	£ 27,667
Sales and lettings costs	3% of GDV	£ 13,507
S106 costs (not covered by CIL)		£ -
Total 'other costs'		£ 41,174
Finance costs	6.0% Interest rate	
Build period	12 Months	
Finance costs for 100% of construction and other costs		£ 16,304
Void finance/rent free period (in months)	12 Months	£ 16,304
Total finance costs		£ 32,608
Developer return	20% Scheme value	£ 90,045
Total scheme costs		£ 394,387

RESIDUAL VALUE

Gross residual value		£ 55,838
Less purchaser costs	% Stamp duty land tax	£ -
	2.00 % Agent/legal purchase fees	£ 1,117
Residual value	For the scheme	£ 54,721
	Equivalent per hectare	£ 4,377,696

Go to next stage

Viability

EUV benchmark land value for site		£ 191,863
Scheme viability headroom		-£ 137,141
Viability headroom per sq m		NONE

Non-residential Viability Assessment Model

Halstead Town centre comparison retail 200 sqm

Size of unit (GIA)	200 sq m
Ratio of GEA to GIA	100.0%
GEA	200 sq m
NIA as % of GIA	95%
NIA	190 sq m
Floors	2
Site coverage	80%
Site area	0.01 Hectares

	User input cells
	Produced by model
	Key results
GEA	Gross external area
GIA	Gross internal area
NIA	Net internal area

SCHEME REVENUE

Headline annual rent (in £s per sq m)		£107
Rent premium		0%
Headline annual rent (in £s per sq m) with BREEAM premium		£ 107
Annual rent for assesment (total) - NIA		£ 20,330
Yield		7.10%
(Yield times rent)		£ 286,338
Less purchaser costs	5.80 % of yield x rent	
Gross Development Value		£ 270,641

SCHEME COSTS

Build costs	£ 934 per sq m	£ 186,800
Additional build costs	£ - per sq m	£ -
Water efficiency	0.00% of base build costs	£ -
External costs	10% of base build costs	£ 18,680
Total construction costs		£ 205,480
Professional fees	12.00% of construction costs	£ 24,658
Sales and lettings costs	3% of GDV	£ 8,119
S106 costs (not covered by CIL)		£ -
Total 'other costs'		£ 32,777
Finance costs	6.0% Interest rate	
Build period	12 Months	
Finance costs for 100% of construction and other costs		£ 14,295
Void finance/rent free period (in months)	12 Months	£ 14,295
Total finance costs		£ 28,591
Developer return	20% Scheme value	£ 54,128
Total scheme costs		£ 320,976

RESIDUAL VALUE

Gross residual value		-£ 50,335
Less purchaser costs	% Stamp duty land tax	£ -
	2.00 % Agent/legal purchase fees	£ -
Residual value	For the scheme	-£ 50,335
	Equivalent per hectare	-£ 4,026,797
		Not viable

Viability

Benchmark land value (per hectare)		£ 1,000,000
Equivalent benchmark land value for site		£ 12,500
Scheme viability headroom		-£ 62,835
Viability headroom per sq m		NONE

Non-residential Viability Assessment Model

Out of centre comparison retail multiple units totalling 1,000 sqm

Size of unit (GIA)	1000 sq m
Ratio of GEA to GIA	100.0%
GEA	1000 sq m
NIA as % of GIA	95%
NIA	950 sq m
Floors	1
Site coverage	40%
Site area	0.25 Hectares

	User input cells
	Produced by model
	Key results
GEA	Gross external area
GIA	Gross internal area
NIA	Net internal area

SCHEME REVENUE

Headline annual rent (in £s per sq m)		£157
Rent premium		0%
Headline annual rent (in £s per sq m) with BREEAM premium		£ 157
Annual rent for assesment (total) - NIA		£ 149,150
Yield		6.60%
(Yield times rent)		£ 2,259,848
Less purchaser costs	5.80 % of yield x rent	
Gross Development Value		£ 2,135,963

SCHEME COSTS

Build costs	£725 per sq m	£ 725,000
Additional build costs	£ - per sq m	£ -
Water efficiency	0.00% of base build costs	£ -
External costs	10% of base build costs	£ 72,500
Total construction costs		£ 797,500
Professional fees	10.00% of construction costs	£ 79,750
Sales and lettings costs	3% of GDV	£ 64,079
S106 costs (not covered by CIL)		£ 100,000
Total 'other costs'		£ 243,829
Finance costs	6.0% Interest rate	
Build period	14 Months	
Finance costs for 100% of construction and other costs		£ 72,893
Void finance/rent free period (in months)	12 Months	£ 62,480
Total finance costs		£ 135,373
Developer return	20% Scheme value	£ 427,193
Total scheme costs		£ 1,603,894

RESIDUAL VALUE

Gross residual value		£ 532,068
Less purchaser costs	% Stamp duty land tax	£ 16,103
	2.00 % Agent/legal purchase fees	£ 10,641
Residual value	For the scheme	£ 521,636
	Equivalent per hectare	£ 2,086,543

Go to next stage

Viability

Benchmark land value (per hectare)		£ 1,000,000
Equivalent benchmark land value for site		£ 250,000
Scheme viability headroom		£ 271,636
Viability headroom per sq m		£ 272

Non-residential Viability Assessment Model					
Mid Size Convenience of 900 sqm					
	Size of unit (GIA)	900	sq m		
	Ratio of GEA to GIA	100.0%			User input cells
	GEA	900	sq m		Produced by model
	NIA as % of GIA	95%			Key results
	NIA	855	sq m	GEA	Gross external area
	Floors	1		GIA	Gross internal area
	Site coverage	55%		NIA	Net internal area
	Site area	0.16	Hectares		
SCHEME REVENUE					
	Headline annual rent (in £s per sq m)			£177	
	Rent premium			0%	
	Headline annual rent (in £s per sq m) with BREEAM premium			£ 177	
	Annual rent for assesment (total) - NIA			£ 151,335	
	Yield			6.20%	
	(Yield times rent)			£ 2,440,887	
	Less purchaser costs	5.80	% of yield x rent		
	Gross Development Value				£ 2,307,077
SCHEME COSTS					
	Build costs	£ 1,274	per sq m	£ 1,146,600	
	Additional build costs	£ -	per sq m	£ -	
	Water efficiency	0.00%	of base build costs	£ -	
	External costs	10%	of base build costs	£ 114,660	
	Total construction costs				£ 1,261,260
	Professional fees	10.00%	of construction costs	£ 126,126	
	Sales and lettings costs	3%	of GDV	£ 69,212	
	S106 costs (not covered by CIL)			£ 100,000	
	Total 'other costs'				£ 295,338
	Finance costs	6.0%	Interest rate		
	Build period	8	Months		
	Finance costs for 100% of construction and other costs			£ 62,264	
	Void finance/rent free period (in months)	3	Months	£ 23,349	
	Total finance costs				£ 85,613
	Developer return	20%	Scheme value		£ 461,415
	Total scheme costs				£ 2,103,627
RESIDUAL VALUE					
	Gross residual value				£ 203,450
	Less purchaser costs		% Stamp duty land tax		£ 1,069
		2.00	% Agent/legal purchase fees		£ 4,069
	Residual value				£ 198,312
					£ 1,211,907
					Go to next stage
Viability					
	Benchmark land value (per hectare)			£ 1,000,000	
	Equivalent benchmark land value for site			£ 163,636	
	Scheme viability headroom			£ 34,676	
	Viability headroom per sq m			£ 39	

Non-residential Viability Assessment Model						
Edge of centre mixed leisure development						
	Size of unit (GIA)	3800	sq m			
	Ratio of GEA to GIA	100.0%				User input cells
	GEA	3800	sq m			Produced by model
	NIA as % of GIA	95%				Key results
	NIA	3610	sq m		GEA	Gross external area
	Floors	2			GIA	Gross internal area
	Site coverage	80%			NIA	Net internal area
	Site area	0.24	Hectares			
SCHEME REVENUE						
	Headline annual rent (in £s per sq m)				£161	
	Rent premium				0%	
	Headline annual rent (in £s per sq m) with BREEAM premium				£ 161	
	Annual rent for assesment (total) - NIA				£ 581,210	
	Yield				6.60%	
	(Yield times rent)				£ 8,806,212	
	Less purchaser costs	5.80	% of yield x rent			
	Gross Development Value					£ 8,323,452
SCHEME COSTS						
	Build costs	£ 1,400	per sq m		£ 5,320,000	
	Additional build costs	£ -	per sq m		£ -	
	Water efficiency	2.00%	of base build costs		£ 106,400	
	External costs	10%	of base build costs		£ 532,000	
	Total construction costs					£ 5,958,400
	Professional fees	12.00%	of construction costs		£ 715,008	
	Sales and lettings costs	3%	of GDV		£ 249,704	
	S106 costs (not covered by CIL)				£ 20,000	
	Total 'other costs'					£ 984,712
	Finance costs	6.0%	Interest rate			
	Build period	12	Months			
	Finance costs for 100% of construction and other costs				£ 416,587	
	Void finance/rent free period (in months)	0	Months		£ -	
	Total finance costs					£ 416,587
	Developer return	20%	Scheme value			£ 1,664,690
	Total scheme costs					£ 9,024,389
RESIDUAL VALUE						
	Gross residual value					-£ 700,937
	Less purchaser costs		% Stamp duty land tax			£ -
		2.00	% Agent/legal purchase fees			£ -
	Residual value					-£ 700,937
		For the scheme				-£ 2,951,313
		Equivalent per hectare				
						Not viable
Viability						
	Benchmark land value (per hectare)				£ 810,000	
	Equivalent benchmark land value for site				£ 192,375	
	Scheme viability headroom					-£ 893,312
	Viability headroom per sq m					NONE

Non-residential Viability Assessment Model						
Care home 60 bedrooms						
	Size of unit (GIA)	3000	sq m			
	Ratio of GEA to GIA	100.0%				User input cells
	GEA	3000	sq m			Produced by model
	NIA as % of GIA	95%				Key results
	NIA	2850	sq m		GEA	Gross external area
	Floors	2			GIA	Gross internal area
	Site coverage	40%			NIA	Net internal area
	Site area	0.38	Hectares			
SCHEME REVENUE						
	Capital value per room				£	95,000
	Rooms					60
	Gross capital value				£	5,700,000
	Less purchaser costs	5.80	% of gross capital value			
	Gross Development Value				£	5,387,524
SCHEME COSTS						
	Build costs	£	1,467	per sq m	£	4,401,000
	Additional build costs	£	-	per sq m	£	-
	Water efficiency	0.00%		of base build costs	£	-
	External costs	10%		of base build costs	£	440,100
	Total construction costs				£	4,841,100
	Professional fees	12.00%		of construction costs	£	580,932
	Sales and lettings costs	3%		of GDV	£	161,626
	S106 costs (not covered by CIL)				£	75,000
	Total 'other costs'				£	817,558
	Finance costs	6.0%		Interest rate		
	Build period	12		Months		
	Finance costs for 100% of construction and other costs				£	339,519
	Void finance/rent free period (in months)	0		Months	£	-
	Total finance costs				£	339,519
	Developer return	20%		Scheme value	£	1,077,505
	Total scheme costs				£	7,075,682
RESIDUAL VALUE						
	Gross residual value				-£	1,688,158
	Less purchaser costs	0.00		% Stamp duty land tax	£	-
		2.00		% Agent/legal purchase fees	£	-
	Residual value				-£	1,688,158
				For the scheme	-£	1,688,158
				Equivalent per hectare	-£	4,501,755
				Not viable		
Potential for CIL						
	Benchmark land value (per hectare)				£	810,000
	Viability				£	303,750
	Potential for CIL for the scheme				-£	1,991,908
	Potential per sq m					NONE



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