

Affordable Housing Viability Study



Broxbourne Borough Council

Final Report

April 2010

Fordham
RESEARCH

Executive summary

Introduction

- S1 Fordham Research was commissioned by Broxbourne Borough Council to carry out a study of affordable housing viability in the Borough. The Viability Study is intended to inform ongoing work on the preparation of Local Development Frameworks (LDF).
- S2 Government Guidance in Planning Policy Statement 3: Housing (PPS3, 2006, paragraph 29) requires Councils to set a *'plan-wide'* affordable housing target, and to test this for *'deliverability'* by means of the *'economic viability of land for housing within the area'*.

Summary findings

- S3 We have taken a strategic approach ensuring in particular that the sites were treated consistently. This is because the analysis is designed to test and demonstrate Borough-wide deliverability in line with the requirements in national guidance. This work is a strategic study designed to inform the development of Plan policy, rather than per se, as an exercise to predict as accurately as possible the actual financial outcomes of development on specific sites. The actual sites used in the study should be regarded as indicating more general patterns of development across the study area.
- S4 The results from the appraisals indicate that at current market values and costs it would be possible to sustain a target of 30% affordable housing, with the assumed grant levels, across the study area as a whole.
- S5 With our base assumptions, under present market conditions only eight of the 15 sites were viable even with no affordable housing. However six of those sites remain viable at 30% affordable, with the other two being marginal. In our view, a 30% target is reasonable in the present (September 2009) market.

The approach to valuation

- S6 The study involved preparing financial appraisals for a representative range of sites. These appraisals assessed the capacity of such sites throughout Broxbourne to support different levels of affordable housing. The approach was to *'model'* viability using a range of variables and our bespoke spreadsheet software.

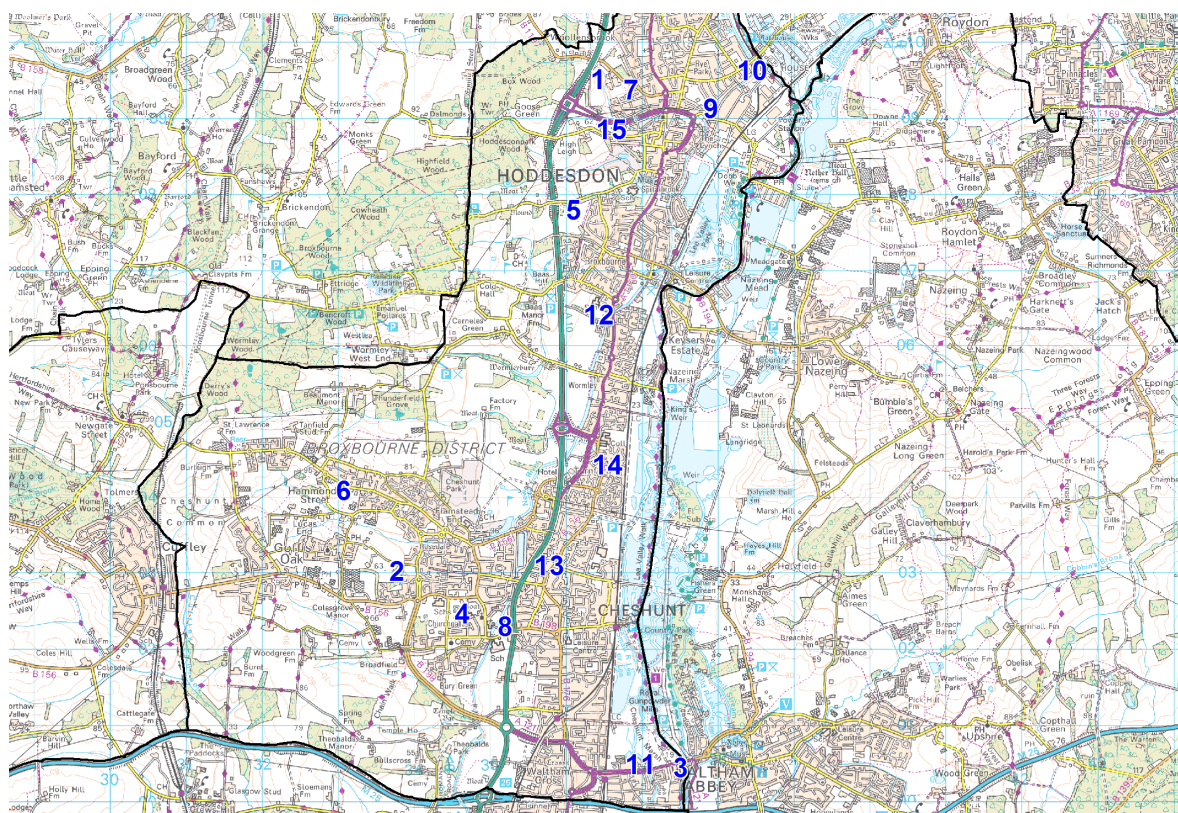
S7 It was decided that for Broxbourne the required guidance on viability would best be achieved by looking at a range of site sizes and at sites that were actual rather than notional. In discussion with the Council, it was decided that a total of ten representative sites should be examined, and this number would provide some scope for exploring viability on sites below the current national guidance size threshold of 15 dwellings.

S8 The key features were:

- i) A final list of 15 sites was established in discussion with the Council. It was chosen to give a range of typical development situations, an appropriate balance between previous uses, a range of site sizes and to give coverage across the four main market sub-areas of Broxbourne, Cheshunt, Wormley, Hoddesdon and Waltham Cross.
- ii) The sites ranged in size from seven to 185 dwellings. All but three sites were on previously developed land.
- iii) The sites were at various stages in the development process

S9 The 15 site locations are shown below:

Figure S1 Site locations

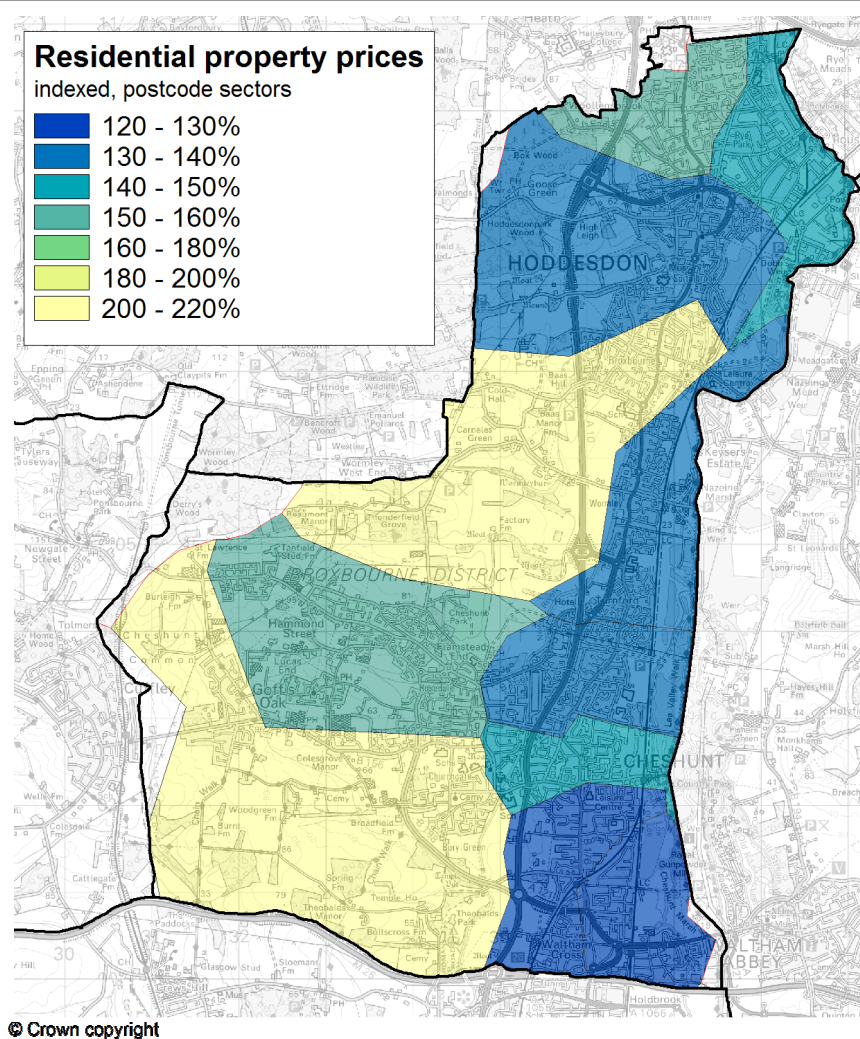


© Crown copyright

Source: Fordham Research 2009

- S10 The sites total 976 dwellings on an area of 23.7 ha, at an average density of 41 dwellings per ha net. There is a good range of site size, including five sites under the national threshold guidance size of 15 dwellings. Twelve of the sites are wholly residential and two (sites 11 and 13) are mixed use. Whilst site 3 would be developed to include a replacement marina, we have assessed only the residential component of the scheme.
- S11 A typical development in the Council area might generate 15,500 sq ft per acre (3,550 sq m/ha). This standard 'development density' was varied upwards for sites in more 'urban' situations, so as to provide the most plausible development scenario on each site, ensuring that they were representative of development opportunities in the area.
- S12 A wide range of data was collected about housing in Broxbourne: this included prices (second-hand, and newbuild, of which there is a relatively limited supply locally), rents and RSL information about affordable housing costs. The map below illustrates house price variations across the Council area:

Figure S2 Postcode price indices



Indices compare prices to value for median postcode sector in England & Wales

Source: Fordham Research 2009

Testing sites for viability assessment

- S13 In order to provide reliable evidence on deliverability, the sites were to be examined under a range of assumptions about the key factors affecting viability:
- i) Affordable housing target levels of 20%, 30%, and 40%
 - ii) Affordable housing split: 80% social rented and 20% intermediate
 - iii) Land values for alternative uses for the sites: clearly the site viability cannot plausibly fall below the level of alternative use, and so this must be established
 - iv) Assuming that Social Housing Grant (SHG) would be available at rates equivalent to £12k per bedspace for social rented units and £6k per bedspace for intermediate housing
 - v) The calculations consider levels of developer contributions ('planning gain') consistent with current policy at Borough level
 - vi) Level 3 of the Code for Sustainable Homes was assumed, and also the RSS requirement for 10% renewable energy
 - vii) Abnormal costs were assessed and the figures taken into account where information collected for the sites indicated they were likely
- S14 The appraisals considered viability for two variant scenarios with regard to future changes in price and cost levels. The first reflected a short-term decline (prices falling 10% relative to build) and the second a return to conditions equivalent to the autumn 2007 market peak (prices rising 15% and costs falling by 5%). We also considered the impact of different assumptions for tenure split and for the level of planning gain.
- S15 Clearly this range of elements generated a large range of possible outcomes. Those outcomes were assessed through our bespoke valuation methodology to indicate 'residual land values'. This is the standard approach, and assumes that all costs and returns are measured, except for the land value outcome. The latter is the key variable. It can then be compared with other scenarios and with alternative use values. The latter are commonly agricultural in rural areas and industrial/warehousing in urban locations.

Appraisal outcomes

- S16 To assess viability, the value of the land for the particular residential scheme adopted needs to be compared to the alternative use value to determine if there is another use which would derive more revenue for the landowner. If the assessed value does not exceed the alternative use value then the development is not viable. If the excess above alternative use value (the 'cushion') is sufficiently large the development is judged viable; if not, then it is marginal.
- S17 For the purpose of a strategic study like the present one it is necessary to take a comparatively simplistic approach to determining the alternative use value. In practice a wide range of considerations could influence the precise value that should apply in each case, and at the end of extensive analysis the outcome might still be contentious.
- S18 Our 'model' approach to alternative use value is outlined below:
- i) For sites previously in agricultural use, then agricultural land represents the existing use value
 - ii) Where the development is on former industrial, warehousing or similar land, then the alternative use value is considered to be industrial, and an average value of industrial land for the area is adopted as the alternative use value
 - iii) Where the site is occupied by buildings capable of beneficial use we would estimate their broad value
 - iv) Existing use as garden land would have a value greater than agricultural but significantly less than industrial, unless it could feasibly be developed in an industrial or commercial use
 - v) On one 'mixed use' site church facilities provided free within the scheme are taken to be the only payment for the land
- S19 The level of the 'cushion' was set at £75,000 per acre – something between 15-20% of the industrial/warehousing benchmark value. Applying this approach, the results for the 15 sites are shown in the table below:

Table S1 Appraisal outcomes: base appraisals, with grant						
No	Site	Alt use value	Value £k per acre			
			No affordable	20%	30%	40%
1	W of Hoddesdon	10	601	381	271	160
		85	VIABLE	VIABLE	VIABLE	VIABLE
2	Everest	100	633	420	312	204
		175	VIABLE	VIABLE	VIABLE	VIABLE
3	Hazelmere Marina	500	-172	-530	-711	-893
		575	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
4	Old St Marys	500	944	656	513	367
		575	VIABLE	VIABLE	MARGINAL	NOT VIAB
5	Cock Lane	10	1,353	1,019	850	679
		85	VIABLE	VIABLE	VIABLE	VIABLE
6	Hammondstreet Rd	50	837	601	482	362
		125	VIABLE	VIABLE	VIABLE	VIABLE
7	MAFF Depot	500	35	-254	-399	-546
		575	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
8	Cheshunt School	325	738	476	344	211
		400	VIABLE	VIABLE	MARGINAL	NOT VIAB
9	Oaklands	500	363	169	67	-39
		575	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
10	Petron Amusements	500	76	-450	-714	-983
		575	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
11	Eleanor Cross Rd	0	-9,436	-10,307	-10,770	-11,213
		75	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
12	Eaton Gardens	150	805	589	479	368
		225	VIABLE	VIABLE	VIABLE	VIABLE
13	Woolpack PH	750	1,354	1,084	935	792
		825	VIABLE	VIABLE	VIABLE	MARGINAL
14	Groom Road	500	-53	-245	-335	-436
		575	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
15	Burnside	500	-162	-373	-475	-586
		575	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB

Source: Affordable Housing Viability Study 2009

S20 The results can be summarised as follows:

- i) At 100% market housing, eight sites were fully viable and seven unviable. At 20% affordable housing all eight were still viable.

ii) At 30% six were viable, with two marginal. At 40% five were viable; by extrapolation we believe that at 50% three would still be viable, with one marginal.

S21 Sensitivity testing suggests that at conditions much closer to the peak viability level of autumn 2007, with prices 15% higher than those assumed in our study, and costs 5% lower, eight of the 15 schemes would have been viable at the 30% target level with none marginal. Even at 50% there are still seven viable sites and one marginal.

S22 Conversely, sensitivity testing also suggests that should prices fall by a further 10% relative to costs then only four schemes would be viable at the 30% level, with one marginal.

A two tier affordable housing target suggestion

S23 The requirement in PPS3 paragraph 29 is for a 'plan-wide' target that takes account of deliverability and of the future availability of public sector grant. This combination is impossible to achieve in a single target, because the future of grant is simply unknown for that period of time. The deliverable target is also unknown, due to the uncertainty as to the future path of the housing market, but this can be addressed through the Dynamic Viability process discussed below.

S24 We suggest that a two tier target is set out in the LDF Core Strategy, as follows:

Target A: Operational and deliverable affordable housing target

S25 This target is based on the analysis of sample sites listed above. It suggests that the current deliverable target is:

30%

S26 This would be updated by the Dynamic Viability process and may rise or fall. It would be hoped that the housing market recovers to the point where, over a plan period, it will average higher than 30%.

Target B: Strategic affordable housing target

S27 This target is designed to include the affordable housing generated by Target A plus an allowance for future public subsidy. Since the Homes and Community Agency grant is unknown for the plan period it is a matter of policy choice for the Council.

S28 The upper limit for the operation of the Dynamic Viability process is the SHMA target of 52%: no target can reasonably be set above that. But it might be reasonable, looking at the likely yield of Target A and adding in an assumption about grant, to set Target B to:

40%

S29 However, it is not a choice based on analysis but upon policy expectations and so not a matter upon which this report can be conclusive.

Size thresholds

S30 The national minimum threshold for site sizes to which affordable targets apply is 15 dwellings (PPS3). But provision is made for lower thresholds where appropriate. We have not examined the numbers of such sites, but simply whether lower site sizes could be viable. We used the two smaller sites which do show viability with zero affordable housing. They are Eaton Gardens (site 12) and Woolpack PH (site 13). We used a notional site approach to modelling reductions in site size from 14 dwellings to five dwellings.

S31 The findings of the analysis were that there is indeed scope for reducing thresholds. A cautious view would (based on Woolpack PH) be that 30% could be applied down to nine dwellings scale, and then 20% from nine down to five or six dwellings. If a rural target were set, based on Eaton Gardens, where the alternative use value is much lower, then 30% could be set down to five dwellings, and 40% down to six dwellings.

Commuting the affordable housing obligation offsite

S32 Successive Government guidance has required the affordable housing contribution to be provided on-site, for a range of reasons including the mix and balance of tenures on-site and value for money. However some sites may render it difficult or impractical to provide the due affordable housing on-site. Hence 'commuting off' the obligation has always been a thread of overall affordable housing provision under the tax regime begun by the Government in 1991.

S33 At the simplest level commuting off should simply mean providing the numbers and types of affordable dwellings due on-site, onto other sites elsewhere. However this is not always practicable and so a calculation of a commuting off value is required. This was once given by what is now the Homes and Communities Agency funding procedure. This is no longer available, and so we have calculated a value. This is based on the amount of value added to a site by excluding affordable housing: the value of the market housing foregone if affordable housing is provided on-site.

S34 Although this value will alter across the Borough, we calculated that an overall average value commuting off an affordable dwelling is:

£59,950 per standard dwelling or (where dwelling sizes are not standard)

£68.70 per sq ft/£739 per sq metre

S35 These values are as of September 2009, and will need to be updated in future.

Dynamic Viability analysis

S36 This is designed to overcome a dilemma created by the economic downturn. During the history of affordable housing targets since their creation in 1991 there had been a broadly rising market. This meant that targets could rise also, and reach their current level of around 40 to 50%.

S37 The downturn following the Credit Crunch meant that targets had to be lowered. It was always a condition of such targets that they should not remove viability from the market housing developments of which they were a part (such targets only apply to market housing developments, not to ones that are fully funded by public grants).

S38 There has been no practical suggestion for the way in which affordable housing targets should be treated given their fall in the recession. Many alternative scenarios can be generated, but that does not point to a single target. PPS3 is quite clear that there should be a plan-wide target. Targets cannot be substantially changed through supplementary guidance after the Core Strategy Examination. If a high ('normal market') target were set it would be correctly attacked as undeliverable, and thus contradict the Blyth Valley Court of Appeal decision which requires that targets should be deliverable.

S39 Fordham Research has therefore devised a system which permits deliverable targets to be set, regardless of future fluctuations in the market, using sets of price and cost indices. It means that the Core Strategy Examination can be presented with the full range of possible target outcomes, and once approved (in whatever form) no new policy change is required to alter the target. It is changed only by the movement of published indexes. The intervals at which it is changed must be infrequent enough to permit an orderly land market, thus perhaps annually.

S40 In order to generate the data below it is necessary to agree a Benchmark Site. This is necessary to permit a reasonably simple outcome. In the case of Broxbourne that site is 4: Old St Mary's Goffs Lane (as amended). It is judged to be typical of the Borough, and will remain so for the plan period. This is immaterial of whether the site itself is built. Sites of this character will remain typical: this is the assumption.

- S41 The mechanism for producing the target ranges is quite complex. It builds on the viability analysis set out in the summary above. It then examines the full range of possible cost and price changes and generates a matrix of possible affordable targets.
- S42 The procedure involves three published indexes. They are all that is required for updating purposes, and so the LDF Core Strategy can set a target which is then automatically updated without any further policy input, and so no requirement to recall the Core Strategy hearings.
- S43 The three indexes are firstly the Halifax Price Index for price (we used the national values for the original work, but would suggest the regional values for updating purposes). The national and regional values of the HPI have been close during the Credit Crunch, but may drift apart in the less dramatic housing market expected in the future. Secondly the BCIS construction cost figures as a proxy for all costs. Thirdly the Valuation Office index for the Benchmark site's alternative use value to give the index for alternative use value. The contact details for these indexes are provided in Appendix 5.
- S44 As can be seen from the illustration below, 30% (in grey) is the recommended deliverable target for the Borough as a whole. The indexes of cost and price shown in the margins of the table allow future changes in the published indexes to be translated into target changes.

Figure S3 Broxbourne Coarse Matrix with base Alternative Use Value

		Price Change HPI									
		%	-20%	-10%	0%	10%	20%	30%	40%	50%	60%
Cost Change BCIS Index	%		423.4	476.4	529.3	582.2	635.2	688.1	741.0	749.0	846.9
	-20%	228.4	30%	45%	55%	55%	55%	55%	55%	55%	55%
	-10%	257.0	10%	30%	45%	50%	55%	55%	55%	55%	55%
	0%	285.5	0%	15%	30%	40%	50%	55%	55%	55%	55%
	10%	314.1	0%	0%	20%	30%	40%	45%	50%	55%	55%
	20%	342.6	0%	0%	5%	20%	30%	40%	45%	50%	55%
	30%	371.2	0%	0%	0%	10%	25%	30%	40%	45%	50%
	40%	399.7	0%	0%	0%	0%	15%	25%	30%	40%	45%
	50%	428.3	0%	0%	0%	0%	5%	15%	25%	30%	40%

Source: Affordable Housing Viability Study 2009

- S45 For example if the Halifax price index rose in the next period (e.g. a year) to 582 or thereabouts, with no change in costs, then the target for the ensuing period would rise from 30% to 40%. If on the other hand prices did not rise at all, but costs (via the RICS index of building costs BCIS) to 314 or so, then the target for the ensuing period would fall to 20%.

S46 The full detail of this approach is set out in Chapter 10. It includes a 'fine matrix' which is in effect a close up of the one shown above, in order to allow more sensitive variations in the target. A 'supermatrix' of all Fine matrices has also been provided (in Excel) as a fall back, but for most practical purposes the Coarse and Fine matrices are easier to use.

Table of Contents

Executive summary	i
Introduction.....	i
Summary findings.....	i
The approach to valuation.....	i
Testing sites for viability assessment.....	iv
Appraisal outcomes.....	v
A two tier affordable housing target suggestion.....	vii
Size thresholds.....	viii
Commuting the affordable housing obligation offsite.....	viii
Dynamic Viability analysis.....	ix
List of abbreviations	v
1. Introduction	1
Introduction.....	1
Context.....	1
Reasons for this study.....	3
What this means for the study.....	4
Stage 1: Viability methodology.....	5
Stage 2: Dynamic Viability analysis.....	6
Fordham Research.....	6
Structure of this report.....	7
2. Individual development sites	9
Introduction.....	9
A Borough on the edge of London.....	9
Identifying a range of sites.....	10
The sites.....	10
Development assumptions.....	12
3. Affordable housing and other developer contributions	17
Introduction.....	17
Affordable housing assumptions.....	17
Other developer contributions.....	19

4. Local market conditions	21
Introduction.....	21
Issues to consider.....	21
The residential market.....	22
Price assumptions for financial appraisals	24
Commercial uses on mixed use sites.....	27
Land values	27
Current and Alternative use values	28
5. Assumptions for viability analysis	33
Introduction.....	33
Development costs	33
Financial and other appraisal assumptions	38
Site acquisition and disposal costs.....	40
Alternative use value comparison	41
6. Results of viability analysis.....	43
Introduction.....	43
Financial appraisal approach and assumptions	43
Appraisal results	43
Alternative use benchmarks	45
Comparison results.....	48
Sensitivity: price and cost levels.....	48
Sensitivity: the market peak	51
Sensitivity: tenure split.....	52
Sensitivity: other developer contributions.....	54
7. Threshold modelling: results	57
Introduction.....	57
Modelling variations in scheme size.....	57
Viability results.....	58
Conclusions	61
8. Commuted sum payments.....	63
Introduction.....	63
Approach	63
Review of Plan policy formulae	63
Alternative approach.....	64
Proposed guidance.....	66
Indexing Commuted Sum Contributions.....	66

9. Implications of the Stage 1 Results	67
Our approach	67
Basis for the affordable housing target	68
The threshold for affordable housing	69
10. Dynamic Viability results	71
What Dynamic Viability does.....	71
Details of the outputs.....	72
Full Fine matrix.....	75
Revising the target	75
Implementing Dynamic Viability	76
Conclusion.....	77
11. Stakeholder comments	79
Introduction.....	79
Stakeholder comments.....	79
Dynamic Viability	79
Appendices	81
Appendix 1 Newbuild schemes	83
Appendix 2 House price variations	85
Appendix 3 Small plots for sale	87
Appendix 4 Construction cost calculation	89
Appendix 5. Proposed benchmark appraisal	91
Appendix 6 Financial appraisal summaries	101
Appendix 7. Dynamic Viability Seminar in Birmingham: Notes	163

List of abbreviations

£ k	thousand pounds
£ m	million pounds
dw	dwelling
dwgs	dwellings
ft	foot
ha	hectare
m	metre
sq	square
Q1	Quarter 1
LA	Local Authority

1. Introduction

Introduction

- 1.1 Fordham Research was commissioned by Broxbourne Borough Council to produce guidance on the financial viability implications of alternative targets and size thresholds for affordable housing provision within the Borough. This is designed to supplement the findings of the London Commuter Belt Strategic Housing Market Assessment (by ORS) by indicating what are the deliverable affordable housing targets for Broxbourne.

Context

- 1.2 The context for this study consists of the Guidance which government has provided for doing such work and the broad principles of viability analysis which has of course existed in some form ever since settled civilisation meant that land was bought and sold.

Guidance

- 1.3 National guidance (Planning Policy Statement 3 (PPS3): Housing 2006) requires Councils to set a target for the proportion of affordable housing to be delivered through new developments. The recently completed SHMA was intended to provide guidance on the levels of affordable housing target that would be justified by the analysis of the area's housing requirements.
- 1.4 This SHMA advice was, essentially, based on an assessment of the balance between the need for market housing and the need for affordable housing. In doing so it did not take into account the commercial factor – i.e. what is viable and what it is realistic to ask developers to provide in this area at this time. Whilst a target of, say, 50% may be the appropriate figure to balance the overall housing market over time it may not be the appropriate target now.
- 1.5 The purpose of the present study is to address that issue, enabling the Council to set a robust target in the light of current commercial circumstances in Broxbourne. That latter target is just that – a target. The actual amount of affordable housing required on any particular site must be assessed for that actual site and take into account the peculiar factors of developing that site at that point of the economic cycle.
- 1.6 The Guidance position has been supplemented by the Homes and Communities Agency (HCA) in a recent Good Practice Note: *Investment and Planning Obligations: responding to the downturn* (July 2009). The range of guidance is reviewed below.

- 1.7 This study is designed to set the current target in an informed way. Given the pattern of housing market conditions since late 2007, and more particularly a general expectation that house prices may continue to fall for some time to come, it may be necessary for any proposed target to be reviewed regularly so as to reflect the resulting changes in the profitability of development.

The land market

- 1.8 The availability and cost of land are matters at the core of the viability for any development of new houses. The format of the typical valuation has been standard for centuries and looks like this:

$$\begin{array}{r} \textbf{Gross Development Value} \\ \text{(The combined value of the complete development)} \\ \\ \text{LESS} \\ \\ \textbf{Cost of creating the asset, including a profit margin} \\ \text{(Construction + fees + finance charges)} \\ \\ = \\ \\ \textbf{RESIDUAL VALUE} \end{array}$$

- 1.9 The result of the calculation indicates a land value, which acts as the top limit of what a bidder could offer for that site. In this study we use the procedure in reverse:

Given the likely land values, will a development including X% target for affordable housing be viable?

- 1.10 The calculation involves the same basic information but is designed for a different purpose. The 'likely land value' is a difficult topic since clearly a landowner will never be entirely frank about the price that would be acceptable: always seeking a higher one. This is one of the areas where an informed assumption has to be made about the 'cushion': the margin above the 'existing use value' which would make the landowner sell. Landowners and land buyers are surrounded by agents who argue in their clients' interest, so the process of selling and buying development land is not usually simple or quick.
- 1.11 This study does not attempt to assess the specific price that could or should be paid for each site (please see Figure 1.1 below). The appraisal works out what land on a site may be worth if a range of scenarios were to occur, and then compares that amount with its value in some other use to which it could be put. The study does not attempt to predict when a particular landowner may sell a given site, or even if they will sell, since that is a very site specific matter.

Reasons for this study

- 1.12 Government Guidance (PPS3: Housing (2006)) contains a paragraph which says that affordable targets should:

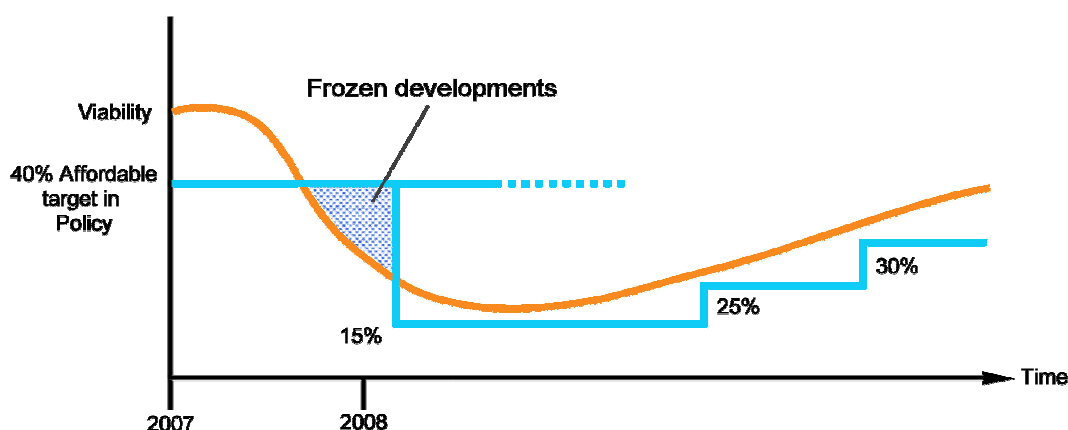
*'reflect an assessment of the **likely** economic viability of land for housing within the area, taking account of the risks to delivery and drawing on informed assessments of the likely levels of finance available for affordable housing, including public subsidy and the level of developer contribution that can reasonably be secured.'* (S29)
(Fordham Research's emphasis)

- 1.13 Until the Court of Appeal decision of August 2008 over the Blyth Valley Core Strategy Inspector's Report, nobody really understood that this statement in PPS3 conferred a new duty on local authorities. In summary:

'There is now a duty on every local authority to ensure that any affordable housing target is broadly deliverable within the area.'

- 1.14 The word 'likely' in the above quotation from PPS3 is taken to mean that the duty is a 'broad-brush' one: the typical site in the local authority should be able to bear whatever target is set. Some sites within the area will not be able to do so, but of course they still have the original scope to make specific submissions at the planning applications stage.
- 1.15 The date at which this new duty was legally defined to exist coincided with the economic downturn. This had the effect of reducing the profitability of new housing developments, and hence their viability. This situation is shown schematically in the figure below:

Figure 1.1 The effect of the economic downturn on viability



Source Fordham Research 2009

- 1.16 The diagram shows that where once a 40% target was easily viable, at the time shown in the diagram, only a 15% target is viable. Projected future improvements in viability mean that at various times in the future 25% and 30% targets may be viable.
- 1.17 The situation depicted in Figure 1.1 has caused difficulty in setting targets. The Homes and Communities Agency (HCA) issued Good Practice Guidance on affordable target setting in July 2009. This sets out (in paragraph 19) two alternative bases for target setting:
- i) Set the target to the minimum (probably current) level of viability: 15% in the example. This would evidently under-provide affordable housing when taken over a plan period
 - ii) Set the target for a 'normal' market and treat it as flexible
- 1.18 The second approach is based on an unpublished note from the Planning Inspectorate and the Good Practice note advises its use. But the result will not be robust:
- i) The concept of the 'normal' market is unsound. Prices have always varied, and it is not possible to state which of them is 'normal'. Prices rose unevenly for the whole period 1991 to 2007 but no part of the curve can be labelled 'normal'.
 - ii) In the present recession there is no agreement as to how long it will last, and what the curve of viability over time (as illustrated in Figure 1.1) will look like. It could be 'V' shaped, 'U' shaped or 'bath' shaped. Nobody knows. It is quite possible that things will get worse before they get better, and that there will be reverses along the way. In short, any 'normal market' target is likely to be undeliverable for much of its life. Some attempts to set one have based themselves on the 2007 peak. This is unlikely ever to repeat, as the cost and price environment will be quite different in future. There is no safe basis for guessing a 'deliverable' target for a 'normal' market.
- 1.19 The 'normal market' target would therefore be vulnerable to S78 appeal, probably for much of its life, and applicants who went to appeal saying that it was 'undeliverable' would be likely to succeed. Such targets are therefore not robust, or sensible to set.
- 1.20 The Dynamic Viability model was constructed by Fordham Research to provide a third option: affordable targets that are both deliverable, and provide a reasonable maximum of affordable housing.

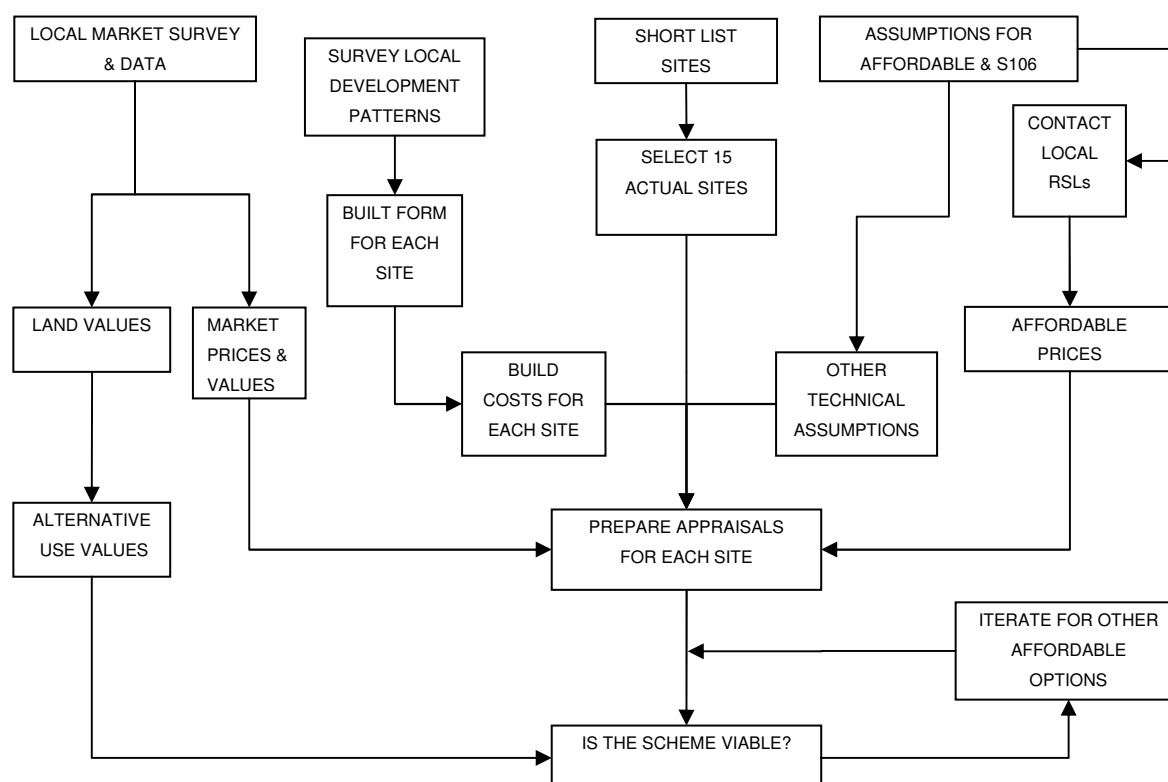
What this means for the study

- 1.21 This means that the study is in two stages: the first being the standard viability analysis (in Chapters 2 to 9) and then the second stage containing the Dynamic Viability analysis in Chapter 10.

Stage 1: Viability methodology

- 1.22 The Stage 1 viability methodology is summarised in Figure 1.2 below. Fundamentally, it involves preparing financial appraisals for a representative range of sites across the study area. In this case a selection of sites was chosen from a shortlist.
- 1.23 The appraisals tested alternative levels of affordable housing provision: in each case a combination of social rented and intermediate housing. We considered the likely purchase prices RSLs would pay for units in each category. Assumptions were also required for the developer contributions that would be sought under other headings like education and open space.
- 1.24 We surveyed the local housing market, in order to obtain a picture of sales values for the market housing. We also surveyed land values for residential development, to calibrate the appraisals and for other uses, to assess alternative use values. Alongside this we considered local development patterns, in order to arrive at appropriate built form assumptions for those sites where information from a current planning permission or application was not available. These in turn informed the appropriate build cost figures.

Figure 1.2 Stage 1 viability methodology



Source: Fordham Research 2009

- 1.25 A number of other technical assumptions were required before appraisals could be produced. The appraisal results were in the form of pounds (£) per acre/ha 'residual' land values, showing the maximum value a developer could pay for the site and still return a target profit level.
- 1.26 Finally, the residual value was compared to the benchmark alternative use value for each site. Only if the residual value exceeded the benchmark figure, and by what is explained in due course to be a satisfactory margin, could the scheme be judged to be viable.

Stage 2: Dynamic Viability analysis

- 1.27 Fordham Research has developed a model which enables the Council to establish through the Core Strategy Examination a matrix of possible future affordable targets. These would be automatically changed in accordance with published indexes of the performance of the housing market. In this way the target would always remain deliverable, but at the same time would ensure that windfall gains in land value are translated into increased affordable housing. This is in accordance with Government Guidance. It would also ensure that the landowners and house builders margins are not harmed.
- 1.28 The Dynamic Viability approach is set out in Chapter 10 below.

Fordham Research

- 1.29 Fordham Research has been providing advice to Councils in respect of planning gain and development viability since the late 1980s. The firm's approach throughout this time has involved the preparation of financial appraisals. Over the last few years in particular Councils have increasingly commissioned the firm to evaluate financial appraisals which have been prepared by developers in order to support a case for a reduced affordable housing contribution, for enabling development and so on.
- 1.30 Since 1993 Fordham Research has become a leading consultancy in carrying out Housing Needs Surveys and more recently the more wide ranging Strategic Housing Market Assessments that have largely replaced them, and advising Councils on affordable housing policy issues.
- 1.31 Since that time the firm has assisted Councils on very many occasions by providing expert witness services at Local Plan and S78 Inquiries, successfully supporting housing need and affordable housing policies. Particularly in recent years this has regularly included evidence in respect of viability issues.

Structure of this report

1.32 The remainder of the report covers the following topics:

Chapter 2 - The individual development sites

Chapter 3 - Affordable housing and developer contributions

Chapter 4 - Local market conditions

Chapter 5 - Assumptions for viability analysis

Chapter 6 - Results of viability analysis

Chapter 7 - Threshold modelling

Chapter 8 - Commuted sum payments

Chapter 9 - Implications of viability results

Chapter 10 - Dynamic viability

Chapter 11 - Stakeholder comments

2. Individual development sites

Introduction

- 2.1 This chapter deals with the sites identified for study first outlining the key characteristics of each site and then considering the assumptions made about proposed development upon each site for the purpose of producing a financial appraisal. The individual sites chosen were visited at an early stage in the work.

A Borough on the edge of London

- 2.2 The Borough of Broxbourne lies in south Hertfordshire. It is on the northern edge of London (12 miles from central London) and shares a boundary with the London Borough of Enfield. It is bounded by Epping Forest District Council to the east (in Essex) and Welwyn Hatfield Borough Council and East Herts District Council. The principal towns in the Borough are Cheshunt, Hoddesdon and Waltham Cross. Other areas in the Borough include Broxbourne, Bury Green, Flamstead End, Goff's Oak, Rosedale, Rye Park, Theobalds, Wormley and Turnford. The Borough is almost four miles wide (at its widest part) and seven miles from north to south. It is home to almost 90,000 people.
- 2.3 The Borough is well served by north/south transport links, being adjacent to the M25 motorway and having direct access to this via junction 25. This junction is with the A10, which runs in a northerly direction through the Borough heading for Cambridge. Other primary routes in the Borough are the A121 (linking Waltham Abbey to Waltham Cross) and the A1170 linking the A10, at Turnford, to Ware, via Wormley, Broxbourne and Hoddesdon. There are reasonable minor road links running north/south through the Borough, which tend to be quite congested.
- 2.4 The main urban areas run in a north/south direction in the eastern part of the Borough. This generally follows the route of the A10 and lies to the east of it, with the exception of parts of Cheshunt and Goff's Oak. Outside of these urban areas, the remainder is rural and is designated as Metropolitan Green Belt. The eastern part of the Borough is also generally low-lying, falls within a flood zone and includes the Lee Valley Regional Park. Much of it is designated and protected because of its value to nature conservation. The western area of the Borough is characterised by woodland, which is designated and protected as part of the Green Belt.

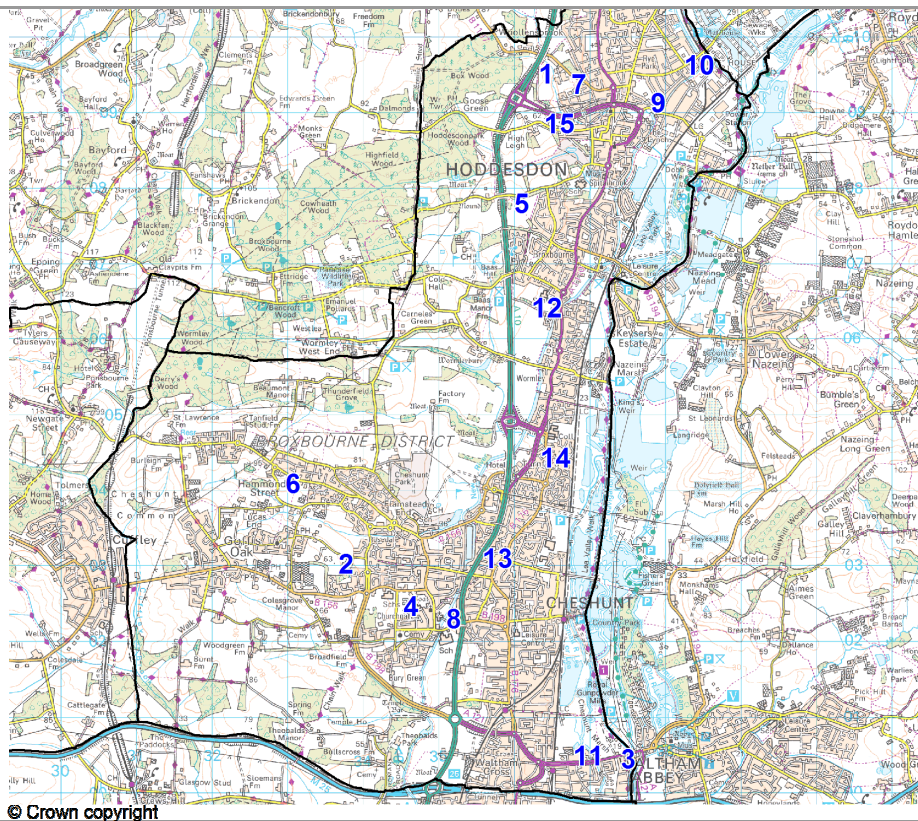
Identifying a range of sites

- 2.5 It was decided that, for Broxbourne, the required guidance on viability would best be achieved by looking at a range of site sizes and at sites that were actual rather than notional. In discussion with the Council it was decided that a total of 15 representative sites should be examined, and this number would provide some scope for exploring viability on sites below the current national guidance size threshold of 15 dwellings.
- 2.6 The use of 'actual' sites was preferred to 'notional' sites because they more accurately reflect the true market position in Broxbourne. It is possible to 'model' sites from local market information to produce a set of 'notional' sites to reflect the market situation. We do not feel that this is as convincing. We used the 'notional' site approach only when modelling threshold size reductions (Chapter 7) where it seems a more appropriate device.
- 2.7 A final list of 15 sites was established in discussion. They were chosen to reflect a range of typical development situations: an appropriate balance between previous uses, a range of site sizes, and to give coverage across the main market sub-areas of Broxbourne, Cheshunt, Wormley, Hoddesdon and Waltham Cross.
- 2.8 The sites ranged in size from seven to 550 dwellings. All but three of the sites were on previously developed land.
- 2.9 The sites were at various stages in the planning process. Eight were subject to a planning application: seven of these had been approved with one pending. Construction was under way on two of the permitted sites and another was completed. Of the other seven sites three were allocations, and two potential allocations or notional sites. The remaining two were on Council owned land, included for modelling purposes in order to explore the size threshold issue.
- 2.10 Information available from the various planning applications was taken into account in considering the appropriate development forms to use in our appraisals.

The sites

- 2.11 Locations for the sites identified by the Council are shown in the map below:

Figure 2.1 Site locations



Source: Fordham Research 2009

- 2.12 Summary details of the sites identified by the Council are set out in the table below. The table shows both total site area and, where a significant area of non-developable area applied, the net residential area.
- 2.13 The sites total 976 dwellings on a net area of just under 24 ha, at an average density of 41.1 dwellings per ha net. There is an emphasis on medium and smaller sites, and five are below the national guidance threshold of 15 dwellings.

Table 2.1 Site details

Site No	Name	Area ha		No	net	Planning status
		gross	Net	dwgs	dw ha	
1	W of Hoddesdon/S of Link Road	??	8.00	550	35.0	Potential allocation
2	Everest Site, Andrews Lane	3.80	3.50	150	39.5	Potential allocation
3	Hazelmere Marina, Station Road	1.60	1.00	128	80.0	Anticipated b'field site (SHLAA site)
4	Old St Marys Site, Goffs Lane	2.30	2.30	85	37.0	Outline consent lapsed
5	South of Cock Lane	2.46	2.46	75	30.5	Under construction
6	Land S of Hammondstreet Rd	2.80	2.00	80	40.0	Outline consent
7	Former MAFF Depot, Hertford Rd	0.87	0.87	62	71.3	Completed
8	Land Cheshunt School, College Rd	1.11	1.11	60	54.1	SHLAA site
9	Oaklands Ind Estate, Essex Rd	0.87	0.87	44	50.6	SHLAA site
10	Petron Amusements, Salisbury Rd	0.31	0.31	33	96.8	Consent
11	193 Eleanor Cross Road	0.07	0.07	14	200.0	Outline approval
12	Eaton Gardens off High Road	0.90	0.78	13	14.4	Revised scheme awaited. SHLAA site
13	Woolpack Public House High St	0.18	0.18	13	72.2	Under construction
14	Garages and parking Groom Rd	0.18	0.18	10	55.6	Model scheme
15	Garages off Burnside	0.11	0.11	7	63.6	Model scheme
<i>Total</i>		n/a	23.74	976	41.1	

Source: Fordham Research 2009

- 2.14 Three sites are mixed use, to be partly occupied by non-residential uses. Of these site 13 is of a conventional mixed use nature, with commercial use on the ground floor of the block at the front of the site. Site 11 involves replacing the existing church building on the site with church and ancillary accommodation on the ground floor and top floor of the mainly residential block. At site 3 the existing water mooring area would be reconfigured to provide a new marina and boat facilities, and possibly a hotel, alongside the residential blocks. For the purposes of the appraisal we have assumed a 100% residential development, on the majority of the site, with the marina costs split between the two elements.

Development assumptions

- 2.15 In arriving at appropriate assumptions for residential development on each site, the development form in an approved planning application must always be an important consideration. The application could, conceivably, now be so historic that it represents something that would either not now be proposed or not be permitted. After consideration we took the view that in each case the built form in the current application remains the best basis for carrying out appraisals.

- 2.16 Most Council areas in which we have carried out studies like the present one display a range of development situations and corresponding variety of densities. We have developed a typology which responds to that variety, which is used to inform development assumptions for sites (actual, or potential allocations) where no guidance is available from a submitted or permitted application. That typology enables us to form a view about floorspace density – the amount of development, measured in net floorspace per acre/hectare, to be accommodated upon the site, and which will vary with the intensity of the built form. This is a key variable because the volume of floorspace which can be accommodated on a site has a crucial key impact on its profitability, and is an amount which developers will normally seek to maximise (within the constraints set by the market).
- 2.17 The typology uses as a base or benchmark a typical post-PPG3/PPS3 built form which would provide development at around 15,500 sq ft per acre (3,550 sq m per ha) on a substantial site, or sensibly shaped smaller site. A representative density might be 40-45 dwellings per ha. This has been a common development format for significant sized brownfield sites and some greenfield sites in most urban centres, and increasingly also smaller centres. It provides for a majority of houses (with perhaps 15-25% flats) in a mixture of two storey and two and a half to three storey form, with some rectangular emphasis to the layout.
- 2.18 Alongside this, there would of course be some schemes of appreciably higher density development providing largely or wholly apartments, in blocks of three storeys or higher, with development densities of 30,000 sq ft per acre (6,900 sq m per ha) and dwelling densities of 100 dw/ha, upwards; and schemes of lower density, in sensitive rural or rural edge situations. However, the ‘base’ category as a common urban form referred to above, i.e. 15,500 sq ft per acre (3,550 sq m per ha), might well provide appropriate development assumptions for a majority of the sites in the study, with variations from the base informing the remainder.
- 2.19 In pressured housing locations like London and the adjoining areas, this standard typology will often be less reliable in providing model development assumptions for the sites where actual information on planning proposals is not available. This is because the great majority of development may be built at development densities significantly higher than the 15,500/3,550 benchmark. We have to be guided by information on typical development patterns from the sites where application details exist, or by other examples of recent development close to the site in question.
- 2.20 In Broxbourne’s case the market for high density apartment blocks – and currently, flats of any kind – appears to be limited. Much of the recent development appears to have been at the benchmark development density, or only slightly higher – say 17,000 sq ft per acre – with a greater emphasis on larger units, on two and a half or three storeys, rather than flats.
- 2.21 The standard built form typology does therefore have some relevance in Broxbourne. It is set out in the table below. We would stress that the short titles used to describe the categories have been adopted for convenience only and must not be taken to imply anything specific about where, or when, they might apply.

Table 2.2 Typology of development form			
Category title	Density		Built form characteristics
	Floorspace net sq ft/acre (sq m/ha)	Dwellings (typical dw/ha)	
Lower density	12,500 (2,875)	20-33	Edge of settlement, less pressured location. Mostly 2 storey, largely 3 & 4 bed detached houses with garages.
Base	15,500 (3,550)	40-45	Mixture of 2 & 2.5/3 storey houses, many terraced; some (15-25%) flats, limited garaging.
Urban	19,500 (4,480)	50	30-35% flats, and/or fewer 2 storey units than base
High	30,000 (6,900)	100+	Flats in small blocks on 3 storeys, parking spaces
Very high	50,000 (11,500)	150+	Flats in larger blocks on 4-6 storeys, parking limited or underground

Source: Fordham Research 2009

- 2.22 The above typology was used to develop model development assumptions for the sites where actual information on planning proposals was not available.
- 2.23 The resulting assumptions for residential development for each of the 15 sites are set out in the table below. The sites where actual data was available (shown as P in the table) conform fairly well with the sites using model data informed by the typology (shown as M).
- 2.24 Among the 15 sites there is quite a spread across the density range, with four sites in the Base category. This is felt to be representative of development opportunities in the area.

Table 2.3 Site development assumptions					
No	Site	Category	Net floorspace density (rounded)		Ave dwg net sq ft(m)
			Sq ft/acre	Sq m/ha	
1	Hoddesdon	Base M	15,500	3,550	1,094 (102)
2	Everest	Base M	15,500	3,550	1,116 (104)
3	Hazelmere Marina	High M	27,800	6,400	858 (80)
4	Old St Marys	Base P	15,900	3,650	1,064 (99)
5	Cock Lane	Base/urban P	16,300	3,700	1,322 (123)
6	Hammondstreet Road	Base/urban P	15,500	3,550	958 (89)
7	MAFF Depot	Urban P	19,600	4,500	679 (63)
8	Cheshunt School	Urban M	19,500	4,500	891 (83)
9	Oaklands	High P	19,500	4,500	953 (89)
10	Petron Amusements	High P	35,400	8,100	821 (76)
11	Eleanor Cross Road	Very high P	63,500	14,600	784 (73)
12	Eaton Gardens	Base P	14,700	3,400	2,186 (203)
13	Woolpack PH	High P	25,300	5,800	770 (72)
14	Groom Road	Urban M	18,000	4,100	801 (74)
15	Burnside	Urban M	20,000	4,600	777 (72)

Source: Fordham Research 2009

2.25 In Chapter 7 sites 12 and 13 are used as the basis for modelling threshold size effects on viability.

3. Affordable housing and other developer contributions

Introduction

- 3.1 This chapter considers the assumptions used to test a range of affordable housing scenarios for the individual sites and similarly the developer contributions assumed for each site.

Affordable housing assumptions

- 3.2 We undertook appraisals for a number of development scenarios involving varying proportions of affordable housing and tenure split. The assumptions in respect of proportions, and the financial terms on which they are to be provided, are considered below.

(i) Affordable proportion

- 3.3 Following discussions with the Council we agreed to test the following options:

- **NO** affordable housing
- 20% affordable
- 30% affordable
- 40% affordable

- 3.4 The Council's current policy provides for a target proportion of 40%.

- 3.5 New targets may be proposed in emerging Local Development Framework (LDF) Documents. Any such targets would, of course, be informed by the recent Strategic Housing Market Assessment as well as by the present study.

(ii) Tenure split

- 3.6 The Council currently seeks a mixture of social rented and intermediate housing, though with a large majority (80%) provided as social rented. The emerging SHMA document has suggested a ratio of 64%: 36%. We were asked to test the 80/20 option but also to provide some guidance on the impact of a reduction in the proportion of social rented. We therefore included 60:40, which covers the SHMA proposed figure.

3.7 In principle, intermediate tenure could constitute a wide range of different housing propositions. After discussion with the Council it was decided that intermediate housing should be assumed to be equivalent to 25% shared ownership with rent at 2% of the unsold equity. It might be provided in various forms, but the outgoings and RSL purchase price would be broadly similar.

(iii) Size profile

3.8 After discussion we assumed that the mix of affordable housing on each site should broadly follow the market housing, achieving an average dwelling size (i.e. net sq ft/sq m) in line with that of the market housing. As well as providing the maximum integration between market and affordable provision, this assumption is also a convenient one which ensures that as the affordable housing proportion varies between the options being tested the floorspace density remains constant. That is a desirable aim if the appraisals are to constitute a realistic development scenario, consistently, across the range of affordable options tested.

3.9 In working up development assumptions for the sites we made assumptions about the indicative mix of dwellings on each individual site. Collectively these deliver an overall mix profile as set out in the table below. These are based on the site characteristics and upon market intelligence gained from Broxbourne. The size mixes are not the same as those in the SHMA, which was of course looking at a much broader market area.

Table 3.1 Aggregate size mix profile		
	<i>No of dwgs</i>	<i>%</i>
1 bed flat	43	4.4
2 bed flat	258	26.5
2 bed house	55	5.6
3 bed flat/house	194	19.9
4 bed house	342	35.0
4 + bed house	84	8.6
Total	976	100

Source: Fordham Research 2009

3.10 The profile reflects the particular characteristics of the sites chosen for assessment. The largest numbers of dwellings are two bedroom flats and four bedroom houses.

(iv) Financial terms

- 3.11 To be consistent with national guidance the Viability Study must take into account the likely availability of public subsidy i.e. Social Housing Grant. The future availability of grant – both the total quantum of grant, and the amounts forthcoming for different sizes of dwelling and tenure – is typically subject to some uncertainty as increasingly the available funding has been directed to achieving specific regional or strategic priorities.
- 3.12 An assumption based on a ‘default position’ of zero Social Housing Grant has become a common starting point in this situation. The zero grant assumption also has the incidental advantage of allowing the requirement for grant in individual cases to be calculated more simply than if a set level were already allowed for.
- 3.13 After consideration it was decided that appraisals should be produced with an assumption that Social Housing Grant would be available at £12k per bedspace for social rented dwellings and £6k per bedspace for intermediate dwellings.
- 3.14 It was necessary to determine the financial terms on which RSLs should be able to purchase properties of various sizes from the developer under this grant scenario. We drew on recent experience from elsewhere to suggest indicative levels of purchase price.

Table 3.2 Selling prices: zero grant basis				
	£ per sq ft (sq m)			
	Social rented		Intermediate	
	Flat	House	Flat	House
Purchase price with grant	140 (1,505)	140 (1,505)	160 (1,720)	160 (1,720)

Source: Fordham Research 2009

Other developer contributions

- 3.15 Aside from affordable housing, developer contributions could potentially be sought by the Borough under a number of headings. They might be either made in kind or as financial payments. In either case it is necessary to allow for the additional financial cost of such contributions, in preparing appraisals for each site.
- 3.16 The Council has a current policy which seeks a contribution from developers towards Local Community Facilities. The policy currently requires a contribution of £3,000 per bedroom. Proposals for a Community Infrastructure Levy (CIL) are being formulated and might or might not come forward in due course. Currently it is envisaged that these would result in a levy on a per dwelling basis, at a figure totalling £23,000 per dwelling.

- 3.17 After consideration and discussion it was decided that for the purposes of preparing appraisals for the present study, developer contributions should be assumed to be in line with the Council's existing policy. The impact of the tentative CIL proposal would then be demonstrated through sensitivity tests. However it is apparent that the change to a flat roof tax would impact rather more severely on smaller dwellings than on larger ones.
- 3.18 The figures based on current policy and used in the appraisals are as set out below for each site. They varied between £5,750 and £8,250 per dwelling with the higher figures generally arising on sites with some or all houses. The figures are set out below:

Table 3.3 Developer contributions assumption		
Site		<i>total cost £ per: dwelling</i>
1	W of Hoddesdon	10,275
2	Everest	10,875
3	Hazelmere Marina	6,675
4	Old St Marys	10,412
5	Cock Lane	11,720
6	Hammondstreet Road	7,400
7	MAFF Depot	6,000
8	Cheshunt School	8,000
9	Oaklands	8,523
10	Petron Amusements	5,455
11	Eleanor Cross Road	6,000
12	Eaton Gardens	14,538
13	Woolpack PH	6,462
14	Groom Road	7,200
15	Burnside	7,286

Source: Fordham Research 2009

- 3.19 It must be emphasised that this approach is simply intended to treat the 15 sites consistently and equitably in order to allow financial appraisals to be produced which provide a strategic overview. The figures do not purport to represent necessarily what would be sought, offered or negotiated on specific sites.

4. Local market conditions

Introduction

- 4.1 This chapter sets out an assessment of the local housing market in the Borough of Broxbourne, providing a basis for the assumptions on house prices and costs to be used in financial appraisals for the 15 sites tested in the study.
- 4.2 As well as house prices, however, land values are also considered. They are required in order to form a view of likely alternative use values for all of the sites, and it is such values which will represent a minimum viability threshold when appraisals are prepared for the range of affordable housing scenarios.
- 4.3 Before looking at the results from the market assessments, there are some general points arising from the nature of the exercise.

Issues to consider

- 4.4 It is necessary to assess property market conditions in the study area in order to provide a reasonable guide as to likely values to use in evaluating different development proposals.
- 4.5 Although development schemes do have similarities, every scheme is unique to some degree, even schemes on neighbouring sites. While market conditions in general will broadly reflect a combination of national economic circumstances and local supply and demand factors, even within a town there will be particular localities, and ultimately site specific factors, that generate different values and costs. There are indeed quite significant value variations in different parts of the study area.
- 4.6 Property market forces are in a constant state of flux and assessments of viability can change over relatively short periods of time in response to broader economic fluctuations, such as the impact of changes in interest rates on the costs of borrowing, the actual availability of funding and the outlook in the employment market. Equally significant, sub-area market conditions are often changed by local factors.
- 4.7 For example, high value areas encourage demand in lower value neighbouring areas where new developments encourage changes in value growth in what perhaps were previously less popular areas.

The residential market

4.8 The housing market in the Borough will, to some extent, reflect national trends but there are local factors that underpin the market including:

- Attractive landscape, riverside, green and open space opportunities within and adjoining the Borough, including Lee Valley Regional Park and extensive woodlands to the west
- Town centres with a range of retail, leisure, cultural and education facilities
- A mix of attractive residential areas, providing housing within a convenient commuting distance of London
- A range of employment opportunities including a major commercial centre close to the A10 at Brookfield
- Strong commuting relationship with London
- Reasonably good transportation links via the A1 and M25 to the national motorway network
- Good mainline rail links to Stansted Airport, Cambridge and London Liverpool Street (although there are significant capacity issues on this line, with local services under pressure from the extension of services to Stansted Airport)
- The relatively low Borough unemployment rate masks pockets of relatively high local unemployment

4.9 We analysed various sources of market information but the most relevant are the prices of units on new developments. A list setting out details of relevant new developments in the area, as at September 2009, is provided in Appendix 1. Analysis of these and other schemes in the study area shows that prices for newbuild homes vary across the area ranging between approximately £200 and £340 per square foot (£2,150-£3,650 per square metre). This is the range for individual properties, averaged over the complete scheme the degree of variation would of course be somewhat less than this.

4.10 Table 4.1 shows average prices in Broxbourne for the latest quarter available from Land Registry, Q2 2009. Although the Land Registry data covers both second-hand and newbuild prices, the former will predominate. The average prices in the table are compared to a corresponding England and Wales figure and expressed as indices.

Table 4.1 Average house prices Q2 2009: comparison with England & Wales average

Area		Ave price (£k & % index)			
		Detached	Semi	Terrace	Flat
Q4 08	Price (£k)	£449.9	£247.5	£213.3	£171.4
	No of sales	30	55	79	80
	Index	153%	140%	130%	91%

Index compares LA's ave £k price figure to the median LA value across England & Wales for house type.

Source: Land Registry data

- 4.11 Prices in the Broxbourne area are between 30% and 50% above the average (median Local Authority area), though somewhat a little less for flats, which are the type with the largest number of sales.
- 4.12 As in the country generally, prices fell back between late 2007 and the middle of 2009. However, because Land Registry data reports sales after completion there is some lag and the figures show the decline to only a limited extent, although the decline in sales numbers does show up quite clearly (sales are seasonally low in the first quarter).

Table 4.2 Average house prices in previous quarters

Quarter		Ave price £k			
		Detached	Semi	Terrace	Flat
Q4 07	ave £k	£467.9	£277.5	£231.0	£160.8
	no of sales	68	86	141	178
Q1 08	ave £k	£503.6	£265.4	£229.8	£151.1
	no of sales	40	74	103	107
Q2 08	ave £k	£454.0	£257.0	£236.5	£154.1
	no of sales	39	64	93	107
Q3 08	ave £k	£480.3	£293.9	£219.7	£148.4
	no of sales	35	50	88	70
Q4 08	ave £k	£548.9	£259.7	£200.9	£137.6
	no of sales	31	38	53	52
Q1 09	ave £k	£453.6	£256.4	£197.8	£146.4
	no of sales	18	36	48	32
Q2 09	ave £k	£450.0	£247.5	£213.3	£171.4
	no of sales	30	55	79	80

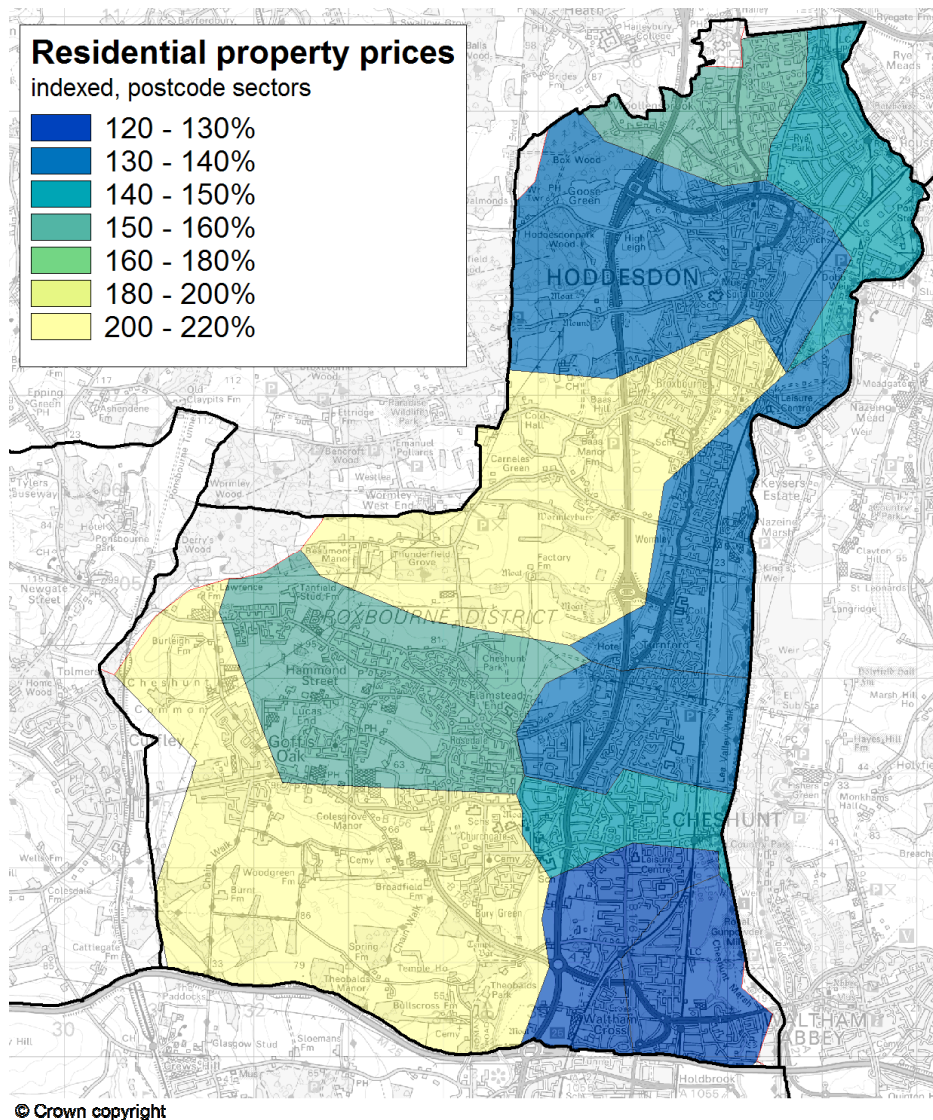
Source: Land Registry data.

- 4.13 Within a Council area there can be considerable variations in price, and Land Registry house price data at postcode sector level helps to illuminate these variations. Because the number of sales in individual postcode areas in a single quarter can be quite small, we looked at information for three separate quarters (Q2 2009, Qs 2 and 4 2008). The data has been expressed as an index – as a percentage of the nationwide average price level – and standardised, so as to allow for variations in type mix.
- 4.14 Appendix 2 provides a worked example of the index calculation and sets out the resulting price index figures for the three quarters examined.
- 4.15 It can be seen from Appendix 2 that whilst the variations between individual quarters are mostly quite modest, in a couple of postcode areas the variations between the three quarters' indices are more substantial. Such price fluctuations may be due to the relatively small number of sales and indeed variations tend to be greater for rural areas, which are mostly numerically smaller and/or more diverse, than for urban areas where postcode sectors are larger numerically and can also often be more uniform.
- 4.16 The average figures for the three quarters are mapped in Figure 4.1 below. This shows that prices in most postcode sectors are between 130% and 150% of the national average level. Two postcode sectors – covering the western rural areas – are significantly more expensive, at 200% plus. Cheshunt South and Waltham Cross have the lowest prices.

Price assumptions for financial appraisals

- 4.17 It is necessary to form a view about the appropriate prices for the 15 individual schemes to be appraised in the study. The preceding analysis suggests that although prices in much of the area will be quite close there will be some areas where prices are appreciably lower than or higher than the price 'standard'.

Figure 4.1 Postcode price indices



Indices compare prices to value for median postcode sector in England & Wales

Source: Land Registry

- 4.18 It is also clear that we should allow for differences between apartments, two storey houses and town houses, particularly in locations where flats are going to be attractive. Finally, in drawing on the newbuild price data we have to bear in mind that, particularly in the present market conditions, the prices at which homes are offered may include appreciable discounts such as deposit paid for first-time purchasers or stamp duty.
- 4.19 Taking these points into consideration we considered what sale prices should be for flats, for two storey and for town houses on each of the 15 sites. These were then to be combined on the basis of the proportions of each type on each scheme to produce a single composite average price.

- 4.20 We established across the study area a range of current newbuild schemes and a number of recently completed schemes. Whilst the number of newbuild schemes currently active were limited, they were located within the main areas of the study, being Waltham Cross, Cheshunt, Broxbourne and Hoddesdon. The specific details are set out within Appendix 1 of the report. These provided a useful basis to inform the market assessment and provide a guide for a number of sites.
- 4.21 In addition to this a range of second-hand properties were also researched to provide additional support to the market evidence. As there are very few at present the Appendix also provides details of recently developed and completed schemes directly relevant to the sample sites. Historic prices have been adjusted to current date levels by reference to the Halifax House Price Index.
- 4.22 Values within the Waltham Cross area were generally cheaper and ranged around a base level of £250-£270 per square foot. The sites tested within Broxbourne, South of Cock Lane (site 5) were subject to a premium commensurate with the particular location, and supported by evidence of schemes or individual properties that were on the market.
- 4.23 The site figures resulting from our type-specific assumptions are set out in the table below.

Table 4.3 Price bands						
Site/location	Price £ per		Site/location	Price £ per		
	Sq ft	Sq m		Sq ft	Sq m	
1 Hoddesdon	281	3,028	9 Oaklands	236	2,541	
2 Everest	269	2,891	10 Petron Amusements	270	2,905	
3 Hazelmere Marina	257	2,760	11 Eleanor Cross Road	260	2,798	
4 Old St Marys	304	3,275	12 Eaton Gardens	273	2,937	
5 Cock Lane	319	3,432	13 Woolpack PH	267	2,868	
6 Hammondstreet Road	279	3,000	14 Groom Road	235	2,529	
7 MAFF Depot	270	2,905	15 Burnside	234	2,518	
8 Cheshunt School	263	2,830				

Source: Fordham Research

- 4.24 The figures cover a range from the cheapest, £234 per sq ft (£2,518 per sq m) at Burnside, to £319 per sq ft (£3,432 per sq m) at Cock Lane.
- 4.25 It is necessary to consider whether the presence of affordable housing would have a discernible impact on sales prices. In fact affordable housing will be present on many of the sites whose selling prices have informed our analysis. Our view is that in any case any impact can and should be minimised through an appropriate quality design solution.

Commercial uses on mixed use sites

- 4.26 We also have to consider the likely income arising from non-residential uses on the two mixed use sites – sites 11 and 13.
- 4.27 Site 11 provides church social and office facilities. To produce appraisals we will assume these are provided free to the landowner (to replace the existing facility lost) but that their build cost will be allowed for.
- 4.28 Site 13 provides ground-floor retail floorspace. We assumed achieved rent of £20 per sq ft (£215 per sq m). This is capitalised at 7.0% yield. The capital value is discounted by 8.5% to allow for letting and disposal costs and a letting/disposal period. The resulting capital value, rounded, is £260 per sq ft (£2,800 per sq m) which relates reasonably well to the value of the market units (£267 per sq ft / £2,875 per sq m).

Land values

- 4.29 We have considered general figures from the Valuation Office Agency (VOA) relating to residential land values. Land values vary dramatically depending upon the development characteristics (size and nature of the site, density permitted etc.) and any affordable or other development contribution.
- 4.30 The VOA publishes figures for residential land in the Property Market Report. These cover areas which generate sufficient activity to discern a market pattern. That means locally we have figures for Outer London as a whole and major locations within Outer London or in the South East outside London – but no information for individual locations.
- 4.31 These values can, in any case, only provide broad guidance because it is likely that the figures will, to some degree, be net of allowances for developer contributions and/or affordable housing requirements. They can therefore be only indicative, and it may be that values for ‘oven ready’ land (i.e. land ready for immediate building) with no affordable provision or other contribution, or servicing requirement, are in fact higher.

Table 4.4 Residential Land Values half year to July 2009

Area	Land Value £m per acre (hectare)		
	Small sites (< 5 dwgs)	Bulk sites (> 2 ha)	Land for apartments
Cambridge	1.155	1.465	1.640
	2.855	3.615	4.055
South Cambridge	0.855	0.855	0.855
	2.110	2.110	2.110
Luton*	0.640	0.640	0.875
	1.580	1.580	2.160
Stevenage	0.810	0.730	0.690
	2.000	1.800	1.700
St Albans	1.740	1.700	2.105
	4.300	4.200	5.200
Chelmsford	1.500	1.500	1.700
	3.700	3.700	4.200

* all bulk greenfield sites are now fully developed in this locality, the bulk land value is an indicative value for previously developed sites

Source: VOA Property Market Report Jul 2009

- 4.32 With the decline in the market and general economic conditions these values may now be rather historic. We therefore sought information about values from residential land currently on sale in the Borough.
- 4.33 There are a small number of sites for residential development currently available in the immediate and adjacent areas. Those within the Borough area with sufficient detail pointed to an asking price of around £2.0m per acre. A more detailed schedule of residential land available is set out in Appendix 3.

Current and Alternative use values

- 4.34 In order to assess development viability it is necessary to analyse current and alternative use values. Current use values refer to the value of the land in its current use, for example, as agricultural land. Alternative use values refer to any potential use for the site. For example, a brownfield site may have an alternative use as industrial land.
- 4.35 To assess viability, the value of the land for the particular residential scheme adopted needs to be compared to the alternative use value to determine if there is another use which would derive more revenue for the landowner. If the assessed value does not exceed the alternative use value then the development is not viable.

- 4.36 For the purpose of the present study it is necessary to take a comparatively simplistic approach to determining the alternative use value. In practice a wide range of considerations could influence the precise value that should apply in each case, and at the end of extensive analysis the outcome might still be contentious.
- 4.37 Our 'model' approach is outlined below:
- i) For sites previously in agricultural use, then agricultural land represents the existing use value
 - ii) Where the development is on former industrial, warehousing or similar land, then the alternative use value is considered to be industrial, and an average value of industrial land for the area is adopted as the alternative use value
 - iii) Where the site is occupied by buildings capable of beneficial use we would estimate their broad value
 - iv) Existing use as garden land would have a value greater than agricultural but significantly less than industrial, unless it could feasibly be developed in an industrial or commercial use
 - v) The church site at Eleanor Cross Rd is assumed to be provided free in exchange for building the church space within the development
- 4.38 The VOA's typical industrial land values for the region and nearby locations for the first half of 2009 are set out in the table below.

Table 4.5 Industrial land values			
Area	Land Value per acre (hectare)		
	Low	High	Typical
Eastern Region	£135k (£330k)	£930k (£2,300k)	£380k (£936k)
Cambridge	£225k (£550k)	£485k (£1,200k)	£300k (£750k)
Luton*	£245k (£600k)	£295k (£725k)	£275k (£675)
Stevenage	£245k (£600k)	£770k (£1,900k)	£445k (£1,100k)
Walthamstow	£265k (£650k)	£1,010k (£2,500k)	£610k (£1,500k)
Colchester	£160k (£400k)	£315k (£775k)	£250k (£625k)

Source: VOA Property Market Report July 2009

- 4.39 Although across London as a whole there is quite a spread of values, the figures for individual locations in the Eastern Region are mostly in the range £400-600k per acre (£1.0m-£1.5m per ha).

- 4.40 These figures are felt to reflect the downturn in values from 2008 to a considerable degree. There is very little market evidence to suggest what current values might be. However a site sold by Broxbourne Borough Council recently is understood to have secured a figure of approximately £500k per acre (£1.2m per ha) and from some discussions with local property sources we believe this constitutes a reasonable benchmark.
- 4.41 Agricultural values rose for a time recently after a long historic period of stability. They are around £5-10k per acre (£15-25k per ha) depending upon the specific use. A benchmark of £10k per acre (£25k per ha) is assumed to apply here.
- 4.42 In Broxbourne, these two benchmark values lead directly or indirectly to an alternative use value for the bulk of the sites – 11 of the 15. A twelfth, site 11, as explained has a zero value, new church space constituting the land payment.
- 4.43 Taking the remaining three sites, site 8 Cheshunt School is regarded as a composite of a residential dwelling, open space and industrial land. These components taken together give an overall value calculated to be £325k per acre (£800k per ha). At site 13 the existing Woolpack Inn building, now demolished, is given a current capital value of £325k, or £750k per acre. Site 12 Eaton Gardens is on residential garden land which is estimated to have a value of £150k per acre.
- 4.44 The base £10k per acre agricultural value at sites 2 and 6 is augmented on two sites. The glasshouses at Hammondstreet Rd (site 6) have led to a figure of £50k per acre whilst the former Everest sports field, now pony paddock, is estimated at £100k per acre.
- 4.45 The value for each individual site that results from the foregoing analysis is summarised in the table below.

Table 4.6 Alternative Use Value bases				
	Site	Basis	£k per acre	£k per ha
1	Hoddesdon	Agricultural land	10	25
2	Everest	Pony paddock	100	250
3	Hazelmere Marina	Industrial/warehouse	500	1,235
4	Old St Marys	Industrial/warehouse	500	1,235
5	Cock Lane	Agricultural land	10	25
6	Hammondstreet Road	Agricultural – glasshouses	50	125
7	MAFF Depot	Industrial/warehouse	500	1,235
8	Cheshunt School	Mixed elements	325	805
9	Oaklands	Industrial/warehouse	500	1,235
10	Petron Amusements	Industrial/warehouse	500	1,235
11	Eleanor Cross Road	Replacement building only	0	0
12	Eaton Gardens	Garden land	150	370
13	Woolpack PH	Existing public house building	750	1,855
14	Groom Road	Industrial/warehouse	500	1,235
15	Burnside	Industrial/warehouse	500	1,235

Source: Fordham Research 2009

- 4.46 It was noted earlier that brownfield sites may face 'abnormal costs' if they are to be redeveloped for residential use. Some of those costs, but not necessarily all, might also arise if the site were redeveloped for the alternative use. The alternative use value would need to be reduced to allow for those costs that would still arise in that situation.
- 4.47 The costs arising from development or redevelopment of the 15 sites are considered in the next chapter along with the other financial and technical assumptions required to prepare financial appraisals for each of the sites.

5. Assumptions for viability analysis

Introduction

- 5.1 This chapter considers the costs and other assumptions required to produce financial appraisals for the 15 sites.

Development costs

(i) Construction costs: baseline costs

- 5.2 Drawing upon our own experience, and taking into account published Building Cost Information Service (BCIS) data, we have developed a set of base £ per sq ft construction costs for different built forms of residential development. The costs are specific to different built forms (flats vs. houses; number of storeys). On the basis of these cost figures it is possible to draw up appropriate cost levels for constructing newbuild market housing in Broxbourne at a base date of September 2009.
- 5.3 The question arises as to what extent the Code for Sustainable Development should impact on build costs in the study. Whilst from April 2008 the Code's Level 3 has been a requirement for all homes commissioned by RSLs, that would not necessarily be the case for affordable homes built by developers for disposal to an RSL, unless grant is made available from the Homes and Communities Agency. However, the Government indicates that Level 3 will apply to all newbuild housing (i.e. will be incorporated in Building Regulations) from 2010, with higher levels (Level 4 then 6) intended to be triggered from 2013 onwards. Accordingly for the present study we have assumed that Level 3 applies to both market and affordable housing on the sites being appraised.
- 5.4 Guidance on the impact of Level 3 is available from a Report commissioned by the Housing Corporation and English Partnerships (*A Code For Sustainable Development, 2007*) in respect of the impact of Level 3 on construction costs. The guidance estimates (Table S2) the increase in costs arising for different house types under various scenarios. On average, to achieve Level 3, current newbuild costs would need to increase by 4.2%, amounting to an additional £4,600 on the build cost for the average dwelling (£110,200) across the 15 sites .
- 5.5 In addition to this national requirement RSS policy ENG 2 also seeks a proportion of 10% of energy costs of new residential building to be from renewable sources. This requirement will add to baseline building costs although it is possible that there would be some overlap with the Level 3 specification. For the purpose of the study we assumed a 3.5% increase in costs representing an average premium of about £3,900 per dwelling.

5.6 After allowing for the above 'Level 3' and '10% renewable' premiums we drew up appropriate cost levels for constructing market housing for the various built forms in the study, taking into account the mix of house types on each. These are set out in the table below.

Table 5.1 Construction costs: market housing					
Build cost £ per sq ft/sq m					
Site	sq ft	(sq m)	Site	sq ft	(sq m)
1	108.5	1,167.2	9	111.2	1,196.7
2	107.9	1,160.5	10	130.8	1,407.5
3	131.6	1,415.5	11	153.9	1,655.5
4	107.8	1,160.0	12	104.7	1,126.9
5	105.8	1,138.5	13	109.7	1,180.7
6	106.6	1,146.7	14	116.7	1,255.5
7	129.5	1,393.4	15	116.7	1,255.5
8	110.2	1,185.4			

Source: Fordham Research derived from analysis of BCIS cost data

(ii) Construction costs: site specific adjustments

5.7 It is necessary to consider whether any site specific factors would suggest adjustments to these baseline cost figures. Two factors need to be considered in particular: small sites and high specification.

5.8 Since the mid-1990s planning guidance on affordable housing has been based on a view that construction costs were appreciably higher for smaller sites with the consequence that, as site size declined, an unchanging affordable percentage requirement would eventually render the development uneconomic. Hence the need for a 'site size threshold', below which the requirement would not be sought.

5.9 It is not clear to us that this view is completely justified. Whilst, other things held equal, build costs would increase for smaller sites, other things are not normally equal and there are other factors which may offset the increase. The nature of the development will change. The nature of the developer will also change as small local firms with lower central overheads replace the regional and national house builders. Furthermore, very small sites may be able to secure a 'non-estate' price premium which we have not allowed for.

- 5.10 In the present study five of the sites are considered to fall into the 'small site' category – those with less than 15 dwellings, i.e. sites 11 onwards. It is felt necessary to make some allowance for the economics of these sites in preparing financial appraisals. A range of cost premiums has been estimated for each specific site size, ranging from 1% for the 14 dwellings at Eleanor Cross Rd through to 8.5% for the smallest site, Burnside, with seven dwellings. Any such premium must be based on judgement; as explained above it is difficult to see how hard data could ever be obtained to show the effect of scale alone.
- 5.11 In addition, we considered that sites 2, 4, 5 and 6 would be built to a slightly higher specification than the other sites. An allowance of an additional 2.5% was assumed in order to cover this.

(iii) Construction costs: affordable dwellings and final figures

- 5.12 The procurement route for affordable housing is assumed to be through construction by the developer and disposal to an RSL on completion. In the past, when considering the build cost of affordable housing provided through this route we took the view that it should be possible to make a small saving on the market housing cost figure on the basis that one might expect the affordable housing to be built to a slightly different specification than market housing. However, the pressures of increasingly demanding standards for RSL properties have meant that for conventional schemes of houses at least, it is no longer appropriate to use a reduced build cost; the assumption is of parity.
- 5.13 Taking all the above into account we arrived at build costs for all (market and affordable) housing which after rounding were as in the table below. To aid understanding, a worked example for site 2 is provided at Appendix 4.

Table 5.2 Construction costs adjusted and rounded: all housing					
<i>Build cost £ per sq ft/sq m</i>					
<i>Site</i>	<i>sq ft</i>	<i>(sq m)</i>	<i>Site</i>	<i>sq ft</i>	<i>(sq m)</i>
1	108.5	1,165	9	111.0	1,195
2	110.5	1,190	10	131.0	1,405
3	131.5	1,415	11	155.5	1,670
4	110.5	1,190	12	107.0	1,150
5	108.5	1,165	13	112.0	1,205
6	109.0	1,175	14	122.5	1,320
7	129.5	1,395	15	126.5	1,360
8	110.0	1,185			

Source: Fordham Research derived from analysis of BCIS cost data

(iv) Other normal development costs

- 5.14 In addition to the per sq ft/m build cost figures described above, allowance needs to be made for a range of infrastructure costs (roads, drainage and services within the site, parking, footpaths, landscaping and other external costs), off-site costs for drainage and other services and so on. Many of these items will depend on individual site circumstances and can only properly be estimated following a detailed assessment of each site. This is not practical within the present study, and in any case would require at least a design or layout for every site.
- 5.15 Nevertheless it is possible to generalise. Drawing on experience it is possible to determine an allowance related to total build costs. This is normally lower for higher density than for lower density schemes since there is a smaller area of external works and services can be used more efficiently. Large greenfield sites would also be more likely to require substantial expenditure on bringing mains services to the site.
- 5.16 In the light of these considerations we have developed a scale of allowances, ranging from 25.0% of build costs for the base density greenfield site at W of Hoddesdon, down to 9% for the highest density scheme at Eleanor Cross Rd Waltham Cross. The table below sets out the individual site assumptions.

Table 5.3 Development cost allowances		
<i>Ref</i>	<i>Site/location</i>	<i>% of build costs</i>
1	W of Hoddesdon	25.0%
2	Everest	16.5%
3	Hazelmere Marina	10.0%
4	Old St Marys	13.0%
5	Cock Lane	13.0%
6	Hammondstreet Road	13.0%
7	MAFF Depot	11.5%
8	Cheshunt School	11.5%
9	Oaklands	11.5%
10	Petron Amusements	10.0%
11	Eleanor Cross Road	9.0%
12	Eaton Gardens	12.0%
13	Woolpack PH	11.0%
14	Groom Road	12.0%
15	Burnside	11.0%

Source: Fordham Research 2009

(v) Abnormal development costs

- 5.17 In some cases where the site involves redevelopment of land which was previously developed there is the potential for abnormal costs to be incurred. Abnormal development costs might include demolition of substantial existing structures, piling or flood prevention measures at waterside locations, remediation of any land contamination, remodelling of land levels and so on.
- 5.18 Most of the sites are on previously developed land. On several sites, from the information made available to us and visits to the sites, it appears that exceptional or abnormal development costs would need to be taken into account in preparing appraisals. As pointed out in the previous chapter (4.46) some abnormal costs could also arise in the event of the site's redevelopment with an alternative use.
- 5.19 The schedule below sets out the abnormal costs considered to apply in each case where they arise:

Table 5.4 Abnormal development costs					
Ref	Site	Item	Residential: cost		Industrial: cost
			Total £k	£k per acre	£k per acre
1	W of Hoddesdon	Covered in development cost allowance	0	0	n/appl-
2	Everest	None	0	0	n/appl-
3	Hazelmere Marina	Demolition, ground, contribution to marina groundwork	£188k	£76k	-
4	Old St Marys	Demolition, flood issues	£300k	£53k	-
5	Cock Lane	Possible migration from adjoining land fill	£75k	£12k	-
6	Hammondstreet Road	Clearance, sloping site	£100k	£12k	-
7	MAFF Depot	Boundary retailing	£35k	£16k	-
8	Cheshunt School	Demolition	£50k	£18k	-
9	Oaklands	Demolition	£50k	£23k	-
10	Petron Amusements	Demolition	£50k	£65k	-
11	Eleanor Cross Road	Demolition, basement car park	£285k	£1,648k	-
12	Eaton Gardens	None	0	0	n/appl-
13	Woolpack PH	Demolition/clearance	£35k	£79k	-
14	Groom Road	Demolish garages	£15k	£34k	-
15	Burnside	Demolish garages	£15k	£55k	-

Source: Fordham Research 2009

- 5.20 The table also shows the adjustment needed to ensure that an alternative land value reflects the costs incurred in developing an alternative use, where this is applicable. In fact in no case would abnormal costs arise.

(vi) Fees

5.21 We have assumed professional fees amount to 10% of build costs in each case.

(vii) Contingency

5.22 For previously undeveloped and otherwise straightforward sites we would normally allow a contingency of 2.5% with a higher figure of 5% on more risky types of development, previously developed land and central locations. The 5% figure was used on all the brownfield sites and the 2.5% rate on the four greenfield sites 1, 2, 5 and 6.

Financial and other appraisal assumptions

(i) VAT

5.23 For simplicity it has been assumed throughout, as with most financial appraisals, that either VAT does not arise, or its effect can be ignored.

(ii) Interest rate

5.24 Our appraisals assume 7.5% pa for debits and credits. This may seem high given the very low base rate figure (MLR 0.5% September 09) but has to reflect banks' view of risk for housing developers in the present situation.

5.25 Credit arises in practice only for a short time at the end of the scheme.

(iii) Developers' profit

5.26 We normally assume that the developer requires a return of 20% on total costs (equivalent to 16.7% of income) to reflect the risk of undertaking the development. That assumes that the costs are estimates of costs, as they are indeed here intended to be, rather than contract prices which would include a profit element.

5.27 However, where a guaranteed sale applies, the developer's profit margin ought to be reduced in order to reflect the reduction in risk. The affordable units will be sold at an agreed price and programme. With a range of affordable provision being tested it was felt appropriate to reflect the resulting variations in risk with variations in the developer's profit. Consequently a sliding scale of profit margins was used, as shown below. This effectively applies a reduced rate (15%) to the affordable component.

Table 5.5 Profit margins	
<i>% affordable</i>	<i>Profit % on costs</i>
0%	20.0%
20%	19.0%
30%	18.5%
40%	18.0%
50%	17.5%

Source: Fordham Research 2009

5.28 It should be noted that residential developers commonly use a slightly more conservative profit margin of 15% on income, which equates to about 17.5% on costs. Bearing in mind the current financial climate, we see no justification for reducing the profit margins from the levels suggested.

(iv) Void

5.29 On a scheme comprising mainly individual houses one would normally assume only a nominal void period as the housing would not be progressed if there was no demand. In the case of apartments in blocks this flexibility is reduced. Whilst these may provide scope for early marketing, the ability to tailor construction pace to market demand is more limited.

5.30 For the purpose of the present study a three month void period is assumed for all sites.

(v) Phasing and timetable

5.31 The appraisals are assumed to have been prepared using prices and costs at a base date of September 2009 with an immediate start on-site.

5.32 A pre-construction period of at least six months is assumed for all of the sites; it is extended to nine months for sites 1, 3, and 4. Each dwelling is assumed to be built over a nine month period.

5.33 The phasing programme for an individual site will reflect market take-up and would in practice be carefully estimated taking into account the site characteristics and, in particular, size and the expected level of market demand. We have developed a suite of modelled assumptions to reflect site size and development type, as set out in Table 5.6 below:

Table 5.6 Market pace assumptions			
	Site	dwgs	
		total	ceiling rate per qtr
1	W of Hoddesdon	280	14
2	Everest	120	11
3	Hazelmere Marina	80	12
4	Old St Marys	85	11
5	Cock Lane	75	11
6	Hammondstreet Rd	80	11
7	MAFF Depot	62	8
8	Cheshunt School	60	11
9	Oaklands	44	10
10	Petron Amusements	33	8
11	Eleanor Cross Road	14	4
12	Eaton Gardens	13	3
13	Woolpack PH	13	3
14	Groom Road	10	4
15	Burnside	7	4

Source: Fordham Research 2009

Site acquisition and disposal costs

(i) Site holding costs and receipts

5.34 Each site is assumed to proceed immediately and so, other than interest on the site cost during construction, there is no allowance for holding costs, or indeed income, arising from ownership of the site.

(ii) Acquisition costs

5.35 Acquisition costs include stamp duty at 4% on-site values of £0.5 million and above (reduced below this level) together with an allowance of 1.5% for acquisition agents' and legal fees.

(iii) Disposal costs

5.36 For the market housing, sales and promotion and legal fees are assumed to amount to some 3.5% of receipts. For disposals of affordable housing these figures can be reduced significantly depending on the category. We have assumed total allowances of 0.5% for social rented housing and 1.5% for shared ownership.

Alternative use value comparison

- 5.37 In the previous chapter we identified alternative use values to be used as benchmarks in determining viability for each site. As we saw above these values might need to be adjusted in some cases to allow for abnormal costs that would arise if the alternative use were implemented.
- 5.38 After considering each of the sites with abnormal costs we concluded that in each case no abnormal cost would need to be incurred in order to realise the alternative use. The values set out in Chapter 4 will therefore apply unadjusted.

6. Results of viability analysis

Introduction

- 6.1 This chapter considers the results of financial appraisals carried out for the identified sites.

Financial appraisal approach and assumptions

- 6.2 On the basis of the assumptions set out in Chapter 5 we prepared financial appraisals for each of the identified sites using a bespoke spreadsheet-based financial analysis package.
- 6.3 The appraisals use the residual valuation approach – that is, they are designed to assess the value of the site after taking into account the costs of development, the likely income from sales and/or rents and an appropriate amount of developer's profit. The payment would represent the sum paid in a single upfront transaction. The resulting valuation is commonly expressed in £s per acre (or hectare). In order for the proposed development to be described as viable it is necessary for this value to exceed the value from a valid alternative use. We have already seen that, for a greenfield site where the only alternative use is likely to be agricultural, this figure may be very modest. However, most of the sites have been previously developed and therefore have a more substantial existing or competing alternative use value.
- 6.4 As outlined in Chapter 3, our appraisals considered three options for the amount and type of affordable housing provision plus a zero affordable option.

Appraisal results

- 6.5 We produced financial appraisals based on the stated build, abnormal, and infrastructure costs and financial assumptions for the four options (three affordable options, plus all-market).
- 6.6 Detailed appraisal printouts for all the sites are provided as Appendix 6 to this report. To keep to a manageable sized document only one option, that of 30%, has been provided.
- 6.7 The resulting residual land values for the four options are set out in Table 6.1.

Table 6.1 Appraisal results for four affordable options

		With grant:			
No	Site	Residual value £k per acre for affordable option:			
		No affordable	20%	30%	40%
1	Hoddesdon	601	381	271	160
2	Everest	633	420	312	204
3	Hazelmere Marina	-172	-530	-711	-893
4	Old St Marys	944	656	513	367
5	Cock Lane	1,353	1,019	850	679
6	Hammondstreet Road	837	601	482	362
7	MAFF Depot	35	-254	-399	-546
8	Cheshunt School	738	476	344	211
9	Oaklands	363	169	67	-39
10	Petron Amusements	76	-450	-714	-983
11	Eleanor Cross Road	-9,436	-10,307	-10,770	-11,213
12	Eaton Gardens	805	589	479	368
13	Woolpack PH	1,354	1,084	935	792
14	Groom Road	-53	-245	-335	-436
15	Burnside	-162	-373	-475	-586

Source: Fordham Research 2009

- 6.8 Table 6.1 shows that with no requirement for affordable housing 11 sites deliver a positive land value. Six of these are in the range £600k-£950k per acre (£1.5m-£2.35m per ha). Two are rather higher, one a little lower and two generate only a nominal value.
- 6.9 Allowing for additional development costs and our planning gain assumptions, values on the remaining sites are broadly in line with but mostly below what the available information suggests for ‘oven ready’ land in Broxbourne . This confirms that our appraisal assumptions are, taken as a whole, unlikely to be unduly optimistic.
- 6.10 Table 6.1 confirms that, as increasing amounts of affordable housing are introduced, the land value reduces. In each case the impact is progressive, but at a broadly linear rate. At the maximum affordable contribution shown, 40%, however there are eight schemes which still deliver a positive land value.
- 6.11 However, it is clear that land value falls away more quickly for some schemes than for others. It is the most densely developed sites – Petron Amusements, Eleanor Cross Rd – where affordable housing has the greatest negative impact upon land value.

- 6.12 This is because the land value is the primary source of any developer subsidy. With the high density schemes, land value is a much lower proportion of the total value of the development and is therefore used up more quickly. To put it another way, broadly the same amount of land value is available to subsidise affordable units on a scheme of 120 flats on one hectare as on 35 houses occupying the same land. Clearly, that sum will 'buy' a higher percentage of the houses than of the flats. Similarly the affordable housing 'costs' more on the highest priced sites in terms of the receipts foregone.
- 6.13 In order to draw out the implications of these results for the Council's proposed affordable housing policy, as has already been suggested, it will be necessary to consider values from alternative uses for each. This step follows below.

Alternative use benchmarks

- 6.14 The results from Table 6.1 would need to be compared with the alternative use values set out in Table 4.6 in order to form a view about the likely viability of the affordable options for each site.
- 6.15 However it does not automatically follow that if the residual value produces a surplus over the alternative use value benchmark that the site is viable. The surplus needs to be sufficiently large to provide an incentive to the landowner to release the site and any other appropriate cost required to bring the site forward for development. We therefore have to consider how large such a 'cushion' should be for our sites.
- 6.16 In practice the size of the element will vary from case to case depending on how many landowners are involved, each landowner's attitude and their degree of involvement in the current property market, the location of the site and so on. A 'cushion' equivalent to, say, £25k per acre might be perfectly sufficient in some cases, whilst in a particular case it might need to be four or five times that figure, or even more.
- 6.17 After consideration we took the view that a broad average figure of £75k per acre (£185k per ha) should be used to provide an incentive to the landowner for all of the sites in the study. This figure for the 'cushion' would represent a mark-up of 15% on the industrial benchmark land value.
- 6.18 The figures are set out below and combined with the net alternative use values from Table 4.6 to show the resulting benchmark thresholds for viability.
- 6.19 It must be emphasised that these figures are simply a view of what it is reasonable to assume as a minimum residual value for the purposes of assessing viability. The figures do not represent what a landowner or promoter might actually receive. This will quite often be rather more; at any given affordable target some sites will generate a higher value and it is not unreasonable to expect at least some of the surplus to benefit the landowner or promoter rather than passing to the developer.

Table 6.2 Viability cushion & threshold values

Ref	Site	£ per acre		
		Alternative use value	Cushion	Viability threshold value
1	W of Hoddesdon	£10k	£75k	£85k
2	Everest	£100k	£75k	£175k
3	Hazelmere Marina	£500k	£75k	£575k
4	Old St Marys	£500k	£75k	£575k
5	Cock Lane	£10k	£75k	£85k
6	Hammondstreet Road	£50k	£75k	£125k
7	MAFF Depot	£500k	£75k	£575k
8	Cheshunt School	£325k	£75k	£400k
9	Oaklands	£500k	£75k	£575k
10	Petron Amusements	£500k	£75k	£575k
11	Eleanor Cross Road	£0	£75k	£75k
12	Eaton Gardens	£150k	£75k	£225k
13	Woolpack PH	£750k	£75k	£825k
14	Groom Road	£500k	£75k	£575k
15	Burnside	£500k	£75k	£575k

Source: Affordable Housing Viability Study 2009

6.20 The viability outcomes resulting from applying these threshold values are shown in the table below.

Table 6.3 Appraisal outcomes: base appraisals, with grant						
No	Site	Alt use value	Value £k per acre			
			No affordable	20%	30%	40%
1	W of Hoddesdon	10	601	381	271	160
		85	VIABLE	VIABLE	VIABLE	VIABLE
2	Everest	100	633	420	312	204
		175	VIABLE	VIABLE	VIABLE	VIABLE
3	Hazelmere Marina	500	-172	-530	-711	-893
		575	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
4	Old St Marys	500	944	656	513	367
		575	VIABLE	VIABLE	MARGINAL	NOT VIAB
5	Cock Lane	10	1,353	1,019	850	679
		85	VIABLE	VIABLE	VIABLE	VIABLE
6	Hammondstreet Rd	50	837	601	482	362
		125	VIABLE	VIABLE	VIABLE	VIABLE
7	MAFF Depot	500	35	-254	-399	-546
		575	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
8	Cheshunt School	325	738	476	344	211
		400	VIABLE	VIABLE	MARGINAL	NOT VIAB
9	Oaklands	500	363	169	67	-39
		575	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
10	Petron Amusements	500	76	-450	-714	-983
		575	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
11	Eleanor Cross Rd	0	-9,436	-10,307	-10,770	-11,213
		75	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
12	Eaton Gardens	150	805	589	479	368
		225	VIABLE	VIABLE	VIABLE	VIABLE
13	Woolpack PH	750	1,354	1,084	935	792
		825	VIABLE	VIABLE	VIABLE	MARGINAL
14	Groom Road	500	-53	-245	-335	-436
		575	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
15	Burnside	500	-162	-373	-475	-586
		575	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB

Source: Affordable Housing Viability Study 2009

Comparison results

- 6.21 With zero affordable housing eight of the 15 sites are viable, and none are marginal. Residential development as 100% market housing is, of course, a relatively profitable development option and in stable market conditions the sites should not be proposed for development otherwise. However market conditions are not stable. House prices have fallen considerably since autumn 2007, and so there are several sites which could not proceed at present – even as 100% market housing. Even so it is difficult to see how several of the sites could be considered for development under almost any circumstances.
- 6.22 Turning to the various levels of affordable contribution; at 20% eight sites are still viable. At 30% two of the sites become marginal: six sites are still viable. Moving to 40% the two marginal sites become unviable and another becomes marginal, leaving five viable. Whilst appraisals have not been prepared for 50%, extrapolation would suggest that three sites would remain viable, with a fourth being marginal.
- 6.23 These results are summarised in tabular form below;

Table 6.4 Viability results summary					
	No of sites in category with affordable at:				
	No aff	20%	30%	40%	50%
Viable	8	8	6	5	3
Marginal	0	0	2	1	1
Not viable	7	7	7	9	11
Total	15	15	15	15	15

Source: Affordable Housing Viability Study 2009

- 6.24 We will consider the implications of these results for future policy in Chapter 9. However before we can do this we should consider how likely future movements in our appraisal assumptions might impact upon them.

Sensitivity: price and cost levels

- 6.25 Whilst variations in any of the appraisal assumptions will affect the results, the key elements which most dramatically affect the outcome are the price and build cost assumptions. In the present market situation it is future movements in prices which are of greatest interest; what if prices continue to fall as they were doing until recently? What if they recover?

- 6.26 Over the last few months prices appear to have stabilised, and even to have risen slightly. However there is no consensus that the decline in prices is over. The view is that a limited supply of properties onto the market, rather than an increase in demand, has been responsible for the modest upturn, and a number of commentators still expect a further period of price decline in 2010.
- 6.27 Given the continuing uncertainty we considered two scenarios in order to illustrate the impact of future price and cost changes. The first took a moderately gloomy view assuming that prices would fall another 10% relative to costs, before a clear recovery begins.
- 6.28 As an alternative to this we assessed how viability might have looked around the market peak in autumn 2007, essentially reflecting newbuild market prices 15% higher than currently – a conservative view – and costs 5% lower. The results from this ‘market peak’ scenario are considered in the next section. The ‘short-term fall’ scenario results for the 30% affordable option are compared to the base appraisal results in Table 6.5 below:

Table 6.5 Sensitivity test: short-term market fall scenario				
No	Site	Value £k per acre		
		Alt use value	Base option	Prices down costs up
			30% affordable	30% affordable
1	W of Hoddesdon	10	271	95
		85	VIABLE	VIABLE
2	Everest	100	312	129
		175	VIABLE	MARGINAL
3	Hazelmere Marina	500	-711	-1,045
		575	NOT VIAB	NOT VIAB
4	Old St Marys	500	513	301
		575	MARGINAL	NOT VIAB
5	Cock Lane	10	850	612
		85	VIABLE	VIABLE
6	Hammondstreet Rd	50	482	288
		125	VIABLE	VIABLE
7	MAFF Depot	500	-399	-646
		575	NOT VIAB	NOT VIAB
8	Cheshunt School	325	344	114
		400	MARGINAL	NOT VIAB
9	Oaklands	500	67	-146
		575	NOT VIAB	NOT VIAB
10	Petron Amusements	500	-714	-1,168
		575	NOT VIAB	NOT VIAB
11	Eleanor Cross Rd	0	-10,770	-11,565
		75	NOT VIAB	NOT VIAB
12	Eaton Gardens	150	479	297
		225	VIABLE	VIABLE
13	Woolpack PH	750	935	651
		825	VIABLE	NOT VIAB
14	Groom Road	500	-335	-535
		575	NOT VIAB	NOT VIAB
15	Burnside	500	-475	-700
		575	NOT VIAB	NOT VIAB

Source: Affordable Housing Viability Study 2009

6.29 It can be seen that with a further price fall/cost increase, four sites are still viable, albeit one narrowly, at 30% affordable. A fifth site is marginal.

Sensitivity: the market peak

- 6.30 The above approach, varying the price level, can also be applied in order to assess retrospectively viability at the peak viability level of October/November 2007. In this case we believe that prices would have been at least 15% higher and costs 5% lower than those assumed in the base appraisals (effectively equivalent to a 20% increase in prices).
- 6.31 The approach was applied with target proportions of 30%, 40%, and 50% and the results are compared with the 30% 'base' option below.

Table 6.6 Sensitivity test: market peak						
No	Site	Alt use value	Value £k per acre			
			Base option	Prices up costs down		
			30% affordable	30% affordable	40% affordable	50% affordable
1	W of Hoddesdon	10	271	630	468	304
		85	VIABLE	VIABLE	VIABLE	VIAB
2	Everest	100	312	673	515	355
		175	VIABLE	VIABLE	VIABLE	VIAB
3	Hazelmere Marina	500	-711	-55	-329	-607
		575	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
4	Old St Marys	500	513	942	736	528
		575	MARGINAL	VIABLE	VIABLE	MARGINAL
5	Cock Lane	10	850	1,325	1,090	850
		85	VIABLE	VIABLE	VIABLE	VIABLE
6	Hammondstreet Rd	50	482	872	697	522
		125	VIABLE	VIABLE	VIABLE	VIABLE
7	MAFF Depot	500	-399	94	-120	-340
		575	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
8	Cheshunt School	325	344	814	616	415
		400	MARGINAL	VIABLE	VIABLE	VIAB
9	Oaklands	500	67	485	323	168
		575	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
10	Petron Amusements	500	-714	189	-207	-605
		575	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
11	Eleanor Cross Rd	0	-10,770	-9,178	-9,844	-10,451
		75	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
12	Eaton Gardens	150	479	851	689	524
		225	VIABLE	VIABLE	VIABLE	VIABLE

Table 6.6 Sensitivity test: market peak						
No	Site	Alt use value	Value £k per acre			
			Base option	Prices up costs down		
			30% affordable	30% affordable	40% affordable	50% affordable
13	Woolpack PH	750	935	1,398	1,221	1,011
		825	VIABLE	VIABLE	VIABLE	VIABLE
14	Groom Road	500	-335	74	-84	-239
		575	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
15	Burnside	500	-475	-14	-189	-364
		575	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB

Source: Affordable Housing Viability Study 2009

- 6.32 The results confirm that at the market peak level of prices viability would be improved. However the improvement is not particularly dramatic; there are still a significant number of sites which are unviable at 30% affordable. This finding tends to support the view that a couple of the sites at least may be fundamentally unviable, and would be unlikely to proceed under any market conditions that could be envisaged in the foreseeable future.
- 6.33 On the other hand, all of the sites which are viable at 30% remain viable at 40%, and even at 50% only one drops back to marginal.

Sensitivity: tenure split

- 6.34 The base appraisals were prepared using an 80:20 tenure split for affordable housing. It is necessary to consider the impact of changing the tenure split to a 60:40 alternative split. This can be expected to improve viability since social rented dwellings secure a lower selling price than intermediate units (Table 3.2)
- 6.35 Table 6.7 shows the results calculated for the 30% options (and mainly inferred outcomes, for 40%). The residual values are indeed higher with the alternative tenure split. However the scale of the improvement is really quite modest. At 30%, typically Residual Value increases by £12-20k per acre. At 40% the improvement is greater, around £15-25k per acre. The improvement is insufficient to change any of the viability outcomes in practice, for either option, although site 13 is now only narrowly marginal at 40%.

Table 6.7 Sensitivity test: variant tenure split						
No	Site	Alt use value	Value £k per acre			
			Base option = 80/20		Variant tenure split = 60/40	
			30% affordable	40% affordable	30% affordable	40% affordable
1	W of Hoddesdon	10	271	160	281	
		85	VIABLE	VIABLE	VIABLE	
2	Everest	100	312	204	323	
		175	VIABLE	VIABLE	VIABLE	
3	Hazelmere Marina	500	-711	-893	-690	
		575	NOT VIAB	NOT VIAB	NOT VIAB	
4	Old St Marys	500	513	367	524	381
		575	MARGINAL	NOT VIAB	MARGINAL	NOT VIAB
5	Cock Lane	10	850	679	862	
		85	VIABLE	VIABLE	VIABLE	
6	Hammondstreet Rd	50	482	362	493	
		125	VIABLE	VIABLE	VIABLE	
7	MAFF Depot	500	-399	-546	-384	
		575	NOT VIAB	NOT VIAB	NOT VIAB	
8	Cheshunt School	325	344	211	358	230
		400	MARGINAL	NOT VIAB	MARGINAL	NOT VIAB
9	Oaklands	500	67	-39	82	
		575	NOT VIAB	NOT VIAB	NOT VIAB	
10	Petron Amusements	500	-714	-983	-688	
		575	NOT VIAB	NOT VIAB	NOT VIAB	
11	Eleanor Cross Rd	0	-10,770	-11,213	-10,723	
		75	NOT VIAB	NOT VIAB	NOT VIAB	
12	Eaton Gardens	150	479	368	490	
		225	VIABLE	VIABLE	VIABLE	
13	Woolpack PH	750	935	792	951	813
		825	VIABLE	MARGINAL	VIABLE	MARGINAL
14	Groom Road	500	-335	-436	-325	
		575	NOT VIAB	NOT VIAB	NOT VIAB	
15	Burnside	500	-475	-586	-463	
		575	NOT VIAB	NOT VIAB	NOT VIAB	

Source: Affordable Housing Viability Study 2009

6.36 With the grant level and selling prices assumed, Residual Value does not improve sufficiently to impact on the target at either 30% or 40%, though we believe it might just slightly improve the situation at 35%.

Sensitivity: other developer contributions

6.37 We also looked at the impact upon viability of the proposals in preparation for a Community Infrastructure Levy (CIL). As presently envisaged the CIL proposals require a contribution of £23K per dwelling. The results with a target proportion of 30% are compared to the 30% ‘base’ option below.

Table 6.8 Sensitivity test: CIL				
No	Site	Alt use value	Value £k per acre	
			Base option 30% affordable	Prices up costs down 30% affordable
1	W of Hoddesdon	10	271	136
		85	VIABLE	VIABLE
2	Everest	100	312	174
		175	VIABLE	MARGINAL
3	Hazelmere Marina	500	-711	-1,168
		575	NOT VIAB	NOT VIAB
4	Old St Marys	500	513	357
		575	MARGINAL	NOT VIAB
5	Cock Lane	10	850	730
		85	VIABLE	VIABLE
6	Hammondstreet Rd	50	482	270
		125	VIABLE	VIABLE
7	MAFF Depot	500	-399	-829
		575	NOT VIAB	NOT VIAB
8	Cheshunt School	325	344	64
		400	MARGINAL	NOT VIAB
9	Oaklands	500	67	-198
		575	NOT VIAB	NOT VIAB
10	Petron Amusements	500	-714	1,392
		575	NOT VIAB	NOT VIAB
11	Eleanor Cross Rd	0	-10,770	-12,145
		75	NOT VIAB	NOT VIAB
12	Eaton Gardens	150	479	429
		225	VIABLE	VIABLE

Table 6.8 Sensitivity test: CIL				
No	Site	Alt use value	Value £k per acre	
			Base option	Prices up costs down
			30% affordable	30% affordable
13	Woolpack PH	750	887	522
		825	VIABLE	NOT VIAB
14	Groom Road	500	-335	-661
		575	NOT VIAB	NOT VIAB
15	Burnside	500	-475	-850
		575	NOT VIAB	NOT VIAB

Source: Affordable Housing Viability Study 2009

- 6.38 The introduction of CIL at the scale suggested would have a significant impact on scheme viability. As envisaged the impact would be greatest on schemes of mainly or wholly small units because the present contributions basis is related to dwelling size.
- 6.39 With the additional contributions burden only five sites are viable at 30%, with none marginal. Our assessment using interpolation would be that 20% affordable with £23k CIL would be broadly equivalent to 30% with the base contributions assumption. If anything it would be slightly worse, as site 13, viable at 30% base, would not be viable at 20% with the CIL.

7. Threshold modelling: results

Introduction

- 7.1 This chapter sets out how the viability assessment of model sites were prepared to provide guidance on the threshold issue, and presents the results of the model appraisals.

Modelling variations in scheme size.

- 7.2 For this threshold analysis we have taken the two smaller sites which are viable with no affordable housing: sites 12 and 13 – Eaton Gardens and Woopack PH. As will be seen from Table 6.3, all the other smaller sites are unviable even with no affordable housing, and cannot therefore be used for threshold viability analysis.
- 7.3 Sites 12 and 13 contain 13 dwellings each (Table 2.1). Model sites were created based on these two actual sites. In order to provide a full picture of how viability varied between five and 15 dwellings, we created a suite of model sites. It was felt that assumptions from the two actual sites could reasonably be carried over to the model sites with only a few exceptions.
- 7.4 Firstly we recognised that as site size declines it may be increasingly difficult to achieve the same site utilisation efficiency. Therefore as site size varied we allowed the development density (sq ft floorspace per acre/sq m per ha) to vary, increasing above ten dwellings though at a declining rate, and decreasing below ten dwellings, at an increasing rate. Since the average floor area of the dwellings remained constant this was achieved by varying the site area (i.e. so that it did not vary pro rata with dwelling numbers).
- 7.5 Secondly, we built in loadings for the build cost in line with those explained In Chapter 5 at 5.12.
- 7.6 Thirdly, we considered whether the developer contribution assumption should vary. In fact the contributions threshold in Broxbourne appears generally to be five dwellings. Had we modelled sites under five units the contribution would have been reduced substantially. However this did not apply.
- 7.7 Finally, we considered whether values might improve to reflect a ‘non-estate’ type of location on the smallest sites. However the predominant built form in Broxbourne made this less likely and no adjustments were made to values.
- 7.8 The variant floorspace densities and build costs are set out in the table below.

Table 7.1 Variant assumptions for model threshold sites

<i>Model sites from site 12 Eaton Gdns off High Rd Brox</i>			<i>Model sites from site 13 Woolpack PH High St Chesh</i>		
<i>No of dwgs</i>	<i>sq ft per acre</i>	<i>build cost £ per sq ft</i>	<i>No of dwgs</i>	<i>sq ft per acre</i>	<i>build cost £ per sq ft</i>
14	14,765	106.00	14	20,175	111.00
13	14,744	107.00	13	22,506	112.00
12	14,723	108.00	12	22,480	113.00
11	14,700	109.00	11	22,450	114.00
10	14,775	110.00	10	22,410	115.00
9	14,750	111.00	9	22,360	116.50
8	14,720	112.50	8	22,300	117.50
7	14,685	113.50	7	22,230	119.00
6	14,645	115.00	6	22,150	120.50
5	14,600	117.50	5	22,050	123.00

Source: Fordham Research derived from analysis of BCIS cost data

Viability results

- 7.9 Using the above assumptions, and deriving from the ‘actual site’ appraisals for sites 12 and 13, appraisals were prepared for the two suites of model sites.

Table 7.2 Appraisal outcomes: with grant Groom Rd				
No of dwgs	Site	Value £k per acre		
		Alt use value	30%	40%
	Base Valuation		479	368
			VIABLE	VIABLE
14	Eaton Gardens	150	499	400
	model site	225	VIABLE	VIABLE
13	Eaton Gardens	150	479	368
	model site	225	VIABLE	VIABLE
12	Eaton Gardens	150	460	349
	model site	225	VIABLE	VIABLE
11	Eaton Gardens	150	442	331
	model site	225	VIABLE	VIABLE
10	Eaton Gardens	150	425	318
	model site	225	VIABLE	VIABLE
9	Eaton Gardens	150	422	315
	model site	225	VIABLE	VIABLE
8	Eaton Gardens	150	389	278
	model site	225	VIABLE	VIABLE
7	Eaton Gardens	150	370	259
	model site	225	VIABLE	VIABLE
6	Eaton Gardens	150	342	236
	model site	225	VIABLE	VIABLE
5	Eaton Gardens	150	306	193
	model site	225	VIABLE	MARGINAL

Source: Affordable Housing Viability Study 2009

7.10 As can be seen, Eaton Gardens looks viable down to five dwellings at 30% and only becomes marginal at five dwellings at 40%. For balance it is useful to discuss this point further after considering the other, Woolpack PH site.

Table 7.3 Appraisal outcomes: with grant Woolpack PH site						
No dwgs	Site	Alt use value	Value £k per acre			
			No affordable	20%	30%	40%
	Base Valuation	750		1,086	935	771
		825		VIABLE	VIABLE	MARGINAL
14	Woolpack PH	750		996	866	720
	model site	825		VIABLE	VIABLE	NOT VIAB
13	Woolpack PH	750		1,061	935	747
	model site	825		VIABLE	VIABLE	NOT VIAB
12	Woolpack PH	750		1,058	911	742
	model site	825		VIABLE	VIABLE	NOT VIAB
11	Woolpack PH	750		1,024	874	711
	model site	825		VIABLE	VIABLE	NOT VIAB
10	Woolpack PH	750		996	845	696
	model site	825		VIABLE	VIABLE	NOT VIAB
9	Woolpack PH	750		956	810	655
	model site	825		VIABLE	MARGINAL	NOT VIAB
8	Woolpack PH	750		923	783	621
	model site	825		VIABLE	MARGINAL	NOT VIAB
7	Woolpack PH	750		896	744	582
	model site	825		VIABLE	NOT VIAB	NOT VIAB
6	Woolpack PH	750		857	703	544
	model site	825		VIABLE	NOT VIAB	NOT VIAB
5	Woolpack PH	750		781	634	473
	model site	825		MARGINAL	NOT VIAB	NOT VIAB

Source: Affordable Housing Viability Study 2009

7.11 The results for Woolpack PH provide a salutary change from Eaton Gardens. At 20% the site is clearly viable down to six dwelling, though marginal at five dwellings. But at 30% affordable housing the site become marginal at nine dwellings and unviable at seven dwellings. At 40% affordable housing the site is marginal at the base case (the original 13 dwellings) and then unviable at 14 dwellings (modelled) and at 13 dwellings (modelled). The slightly different assumptions for modelling account for the site being both ‘marginal’ and ‘unviable’ at the same size: we have taken more conservative assumptions for the modelling process.

Conclusions

- 7.12 Woopack PH clearly shows a much worse outcome than Eaton Gardens and the main reason evidently is a much higher alternative use value in the case of the Woolpack PH.
- 7.13 In terms of policy, the evidence of these two threshold assessments is that where the alternative use value is low (agricultural or greenfield) the threshold could be lower (down to five or six dwellings even if the target were set higher (40%) than the district wide proposal of 30%).
- 7.14 However it might be wiser, as a general principle to take the Woolpack example. This would allow the district-wide 30% to apply down to a site size of about nine dwellings, and then 20% for sites down to five dwellings.
- 7.15 It is clearly a matter of policy choice for the Council as to how it treats these findings. The comments above are merely suggestions. This issue is considered further in the next chapter.

8. Commuted sum payments

Introduction

- 8.1 There will be exceptional situations in which it is agreed that, whilst an affordable contribution should arise in respect of a particular development, it is appropriate that the contribution should be made off-site. In such situations the ideal, and most simple, approach is to seek the same number of affordable units to be provided by the developer on another site to be agreed with the Council.
- 8.2 However, where this approach of alternative provision elsewhere is not practical or for other reasons not desirable, it will be necessary to secure the due affordable contribution in the form of a commuted payment. This chapter provides guidance on the calculation of commuted sum payments in such a situation. Commuted sums can also come into play, however, where the affordable target leads to a contribution involving a fraction of a dwelling.
- 8.3 The financial appraisal analysis discussed earlier in the report provides a basis for calculating commuted sum payments.

Approach

- 8.4 One approach, used by some Councils to tackle off-site provision, is to require the developer to secure the provision on another site. However, there are always likely to be some cases where it might not be practical to do so. In such cases alternative provision has to be secured through payment of a commuted sum.
- 8.5 It is sensible for all Councils to set out guidance as to how a commuted sum would be calculated – so as to provide transparency, and to avoid the undue delays that might arise during s106 negotiations if details of a payment had to be developed from first principles on each occasion. As it happens, the viability study analysis provides a basis on which it would be possible to formulate appropriate arrangements for calculating the commuted sum.

Review of Plan policy formulae

- 8.6 Some time ago we researched the nature of commuted sum formulations in then approved or emerging local planning policies. Whilst some relied on generalities, the vast majority – almost all of those we looked at – which had developed a specific formula, had used one which derived from the Housing Corporation's Total Cost Indicator system.

- 8.7 This system was designed to provide cost discipline, so as to ensure that affordable housing was procured by Registered Social Landlords on terms which produced Value for Money for the public subsidy, Social Housing Grant, which had been the normal funding basis through which it was provided.
- 8.8 Given that this was its purpose, the TCI was extremely useful in providing a basis for calculating commuted sums. It was designed to provide cost guidance specifically related to each local Council area, contained such guidance for each of a large number of different dwelling size bands and was updated through indexing and readjustment each year so remained current.
- 8.9 Unfortunately the Housing Corporation replaced the TCI system with an approach which does not provide these benefits. This reflected, to some extent, the move towards a more targeted use of SHG and a greater reliance on developer subsidy. However, from the viewpoint of commuted sum formulation, the change is, in some respects, to be regretted.

Alternative approach

- 8.10 We have adopted a new approach to the calculation of the developer contribution, utilising the site viability analysis. It is based upon the contribution that the developer would have made if an on-site affordable contribution were delivered. The calculation works as follows:
- i) Estimate the value of the site with 100% market housing
 - ii) Estimate the value of the site with the target level of affordable housing contribution
- 8.11 The difference between (i) and (ii) is the loss in value experienced by the developer due to the affordable housing policy contribution.
- 8.12 Taking the appraisal for site 6, Hammondstreet Road, as an example, the residual value with no affordable housing, i.e. 80 market dwellings, is £4,137,361. With the 20% affordable option, the residual value falls to £2,972,871. The developer's contribution is £1,164,490; divided by sixteen affordable dwellings, this gives a cost of £72,781 per affordable dwelling.
- 8.13 The results of this calculation for the full range of sites are set out in Table 8.1.

Table 8.1 Affordable Housing Contribution: calculations

Site	£ RV @ no aff	£ RV 20% aff with grant	Contribution £ per aff dw	Contribution as £ per	
				sq ft	sq m
1 Hoddesdon	11,887,207	7,528,441	77,850	71.1	766
2 Everest	5,470,246	3,630,550	76,650	68.7	739
3 Hazelmere Marina	-425,046	-1,308,407	55,200	64.3	692
4 Old St Marys	5,366,551	3,736,923	95,850	90.1	969
5 Cock Lane	8,224,623	6,195,097	135,300	102.3	1,101
6 Hammondstreet Rd	4,137,361	2,972,871	72,800	76.0	817
7 MAFF Depot	74,537	-545,830	50,050	73.7	793
8 Cheshunt School	2,024,655	1,305,229	59,950	67.3	724
9 Oaklands	779,904	362,704	47,400	49.7	535
10 Petron Amusements	57,936	-343,951	60,900	74.2	798
11 Eleanor Cross Road	-1,632,311	-1,782,801	53,750	68.6	738
12 Eaton Gardens	1,554,300	1,135,753	161,000	73.6	792
13 Woolpack PH	602,375	482,117	46,250	60.1	646
14 Groom Road	-23,646	-108,000	42,200	52.7	567
15 Burnside	-44,199	-101,202	40,700	52.4	564
Overall median figure			59,950	68.7	739

Note: Contribution figures rounded to nearest £50 per dwelling

Source Fordham Research Viability Study.

- 8.14 The calculated contributions in Table 8.1 vary considerably, from a minimum of £40,700 to a maximum of £135,300, with a median figure of £59,950. The figures will vary to reflect location and hence price; and crucially, must also vary with the average dwelling size. The high figures for Eaton Gardens, particularly, but also Cock Lane, reflect an unusually large dwelling size. As the figures in the last two columns illustrate, expressed on a per sq ft/sq m basis the differences are much less extreme after dwelling size is allowed for.
- 8.15 On a £ per sq ft/sq m basis most of the sites are fairly well distributed around median figures of £68.70 per sq ft or £739 per sq m.

Proposed guidance

- 8.16 Whilst it would be possible to operate a range of commuted sum figures to cover variations in price level between different parts of the Borough, this may not be practical. Furthermore it is not necessarily the case that a commuted payment will always be used to provide an affordable unit in the same locality as the contributing site.
- 8.17 It is therefore suggested that there should be a single contributions figure covering the whole area.
- 8.18 The proposed figure as at September 2009 would be £59,950 per dwelling. However a single contributions figure does not allow for wide variations in the size of the dwellings which would be produced if an on-site contribution was required.
- 8.19 A solution to this would be to use the £ per sq ft/sq m figure as a basis for calculating a financial contribution from the dwellings that would have been produced on-site. In that case the figure would be £68.70 per sq ft/£739 per sq m.

Indexing Commuted Sum Contributions

- 8.20 At the conclusion of the study the appraisal software will be provided to the Council and training given in its operation. It is envisaged that the Council will undertake periodic updating of the appraisal calculations, taking account of changes in costs and values, and ensuring that the commuted payments figures continue to represent the cost of providing an affordable unit off-site.

9. Implications of the Stage 1 Results

Our approach

- 9.1 The purpose of the Viability Study was to assess the impact of alternative affordable housing requirements upon development viability. In order to provide appropriate guidance, we have produced financial appraisals in respect of residential developments on a range of sites selected following discussion. Our approach has involved the use of the actual development proposals for the sites with recent planning permissions and 'model' developments for six sites for which applications have yet to be submitted. A bespoke financial appraisal package has been used to produce residual valuations for each site under a series of affordable housing options.
- 9.2 In order to prepare financial appraisals, whether for a general study like this or on behalf of a landowner or developer proposing a specific development, it is necessary to make a considerable number of assumptions. We believe that, in general, the assumptions we have made are fair and reasonable. They reflect considerable experience drawn from a variety of development situations and are designed to reflect the circumstances of each site which, even in a relatively compact area like the Borough, in practice display a certain amount of diversity. The appraisal results would produce open market land values which, compared to the limited information we have about recent values and prices currently sought for small sites in the area, are consistent and if anything somewhat lower. This suggests that the package of development assumptions is not unduly optimistic.
- 9.3 The relatively low land values emerging also reflect two other factors which we will need to take into account when reflecting on the appraisal results:
- The combined effect of a serious restriction on credit availability from the early autumn of 2007 and the consequential, more general, business downturn which became increasingly established from the last quarter of 2008.
 - The impact of relatively challenging requirements in respect of sustainability:
 - Level 3 of the Sustainability Code for both market and affordable homes, without any offsetting uplift in values
 - A 'Merton rule' requirement for renewable energy

- 9.4 The financial appraisals produce a series of residual values showing the value generated for each site for all market housing, and further tested under a range of affordable housing scenarios. In an exercise of this nature, the figures have to be interpreted in order to draw conclusions for Plan policies. We have suggested a basis for interpretation which draws on indicative alternative use values, and sets a standard 'cushion' over alternative use value to provide an incentive for the landowner to bring the site forward. Again, as a strategic approach, we believe this to be reasonable. Producing detailed assessments and valuations for each site would involve resources well beyond the scope of the current exercise and we suspect would probably still leave room for dispute.
- 9.5 There are substantial variations in house prices between different parts of the study area. We feel those areas where prices are likely to be lowest are reasonably well represented. The sites covered the 'worst case' by fully including locations in which viability is (all other things being equal) likely to be worst. The range of sites includes both smaller and larger sites, straightforward and complex development situations and a range of previous uses for previously developed land.
- 9.6 The appraisals tested various proportions of affordable housing – combined with a proposed tenure split of 60:40 social rented: intermediate housing, with intermediate housing represented by shared ownership at 25% share. It was decided to assume that grant would normally be available on a substantial scale. In estimating the values which, under those terms, developers would be likely to achieve affordable housing of the above types we have used information on estimated purchase prices drawn from our experience elsewhere.
- 9.7 We have taken a strategic approach ensuring in particular that the sites were treated consistently. This is because the analysis is designed to test and demonstrate Borough-wide deliverability in line with the requirements in national guidance. This work is a strategic study designed to inform the development of Plan policy, rather than per se, as an exercise to predict as accurately as possible the actual financial outcomes of development on specific sites. The actual sites used in the study should be regarded as indicating more general patterns of development across the study area.

Basis for the affordable housing target

- 9.8 The requirement in PPS3 paragraph 29 is for a 'plan-wide' target that takes account of deliverability and of the future availability of public sector grant. This combination is impossible to achieve in a single target, because the future of grant is simply unknown for that period of time. The deliverable target is also unknown, due to the uncertainty as to the future path of the housing market, but this can be addressed through the Dynamic Viability process discussed in the next chapter.
- 9.9 We suggest that a two tier target is set out in the LDF Core Strategy, as follows:

Target A: Operational and deliverable affordable housing target

- 9.10 This target is based on the analysis of sample sites in the previous chapters of this report. It suggests that the current deliverable target is:

30%

- 9.11 This would be updated by the Dynamic Viability process described in the next chapter and may rise or fall. It would be hoped that the housing market recovers to the point where, over a plan period, it will average higher than 30%.

Target B: Strategic affordable housing target

- 9.12 This target is designed to include the affordable housing generated by Target A plus an allowance for future public subsidy. Since the Homes and Community Agency grant is unknown for the plan period it is a matter of policy choice for the Council.

- 9.13 The upper limit for the operation of the Dynamic Viability process is the SHMA target of 52%: no target can reasonably be set above that. But it might be reasonable, looking at the likely yield of Target A and adding in an assumption about grant, to set Target B to:

40%

- 9.14 However it is not a choice based on analysis but upon policy expectations and so not a matter upon which this report can be conclusive.

The threshold for affordable housing

- 9.15 National planning guidance requires some consideration to be given to the threshold at which the affordable housing is to be applied, if that is not at the 'national minimum' of 15 dwellings.

- 9.16 The five smallest sites in the study (with 7-14 dwellings) were included in order to provide guidance on the scope for reducing the size threshold from 15 dwellings. Only two of those five sites are viable even with no affordable housing. Those two viable without affordable housing sites (sites 12 and 13) were used for further analysis.

- 9.17 The findings of the analysis in the previous chapter are that there is indeed scope for reducing thresholds. A cautious view would (based on Woolpack PH) be that 30% could be applied down to nine dwellings scale, and then 20% from nine down to five or six dwellings. If a rural target were set, based on Eaton Gardens, where the alternative use value is much lower, then 30% could be set down to five dwellings, and 40% down to six dwellings.

10. Dynamic Viability results

- 10.1 This chapter takes the results of the viability analysis, the first stage, and provides a basis for policy by providing deliverable affordable housing targets through the plan period.

What Dynamic Viability does

- 10.2 The Dynamic Viability model is designed to provide robust targets at all phases of the housing market during the plan period. This is taken to mean that the full range of possibilities must be set out to the Core Strategy Examination, so that the mechanism for the level of target setting for the whole plan period can be set out for the Examination to consider.
- 10.3 The model begins with the viability assessment, based on the residual valuations carried out as part of the main Viability Study (covering a dozen or so sites characteristic of the area). In some cases the data may refer to notional sites, agreed to represent the viability situation of the local authority area.
- 10.4 The Dynamic Viability approach requires that a single benchmark site, or synthetic site, is identified that currently reflects the affordable target level that is deliverable in that area. This site should be consulted with stakeholders to ensure that so far as possible there is agreement that it is representative.
- 10.5 The model then takes the key factors affecting future viability and builds their future change into the model. Future change in target levels is purely dependent on published indexes. This means that the process of target setting through the plan period is entirely transparent. The model is set up prior to the Core Strategy Examination, is assessed and approved in whatever form during that Examination, and afterwards is entirely dependent on three published indexes:
- **Price change:** We use the Halifax Price Index (HPI). The calculations used the national value for this index, but we suggest that updates use the regional values. The national and regional values have been close during the Credit Crunch, but may diverge in the future, so the regional HPI is probably the best value to use.
 - **Building costs change:** The RICS building cost index based on tenders (BCIS) provides a general index of building costs
 - **Alternative use value:** The appropriate measure would depend on the specific alternative use applying to the benchmark site but usually it is the Valuation Office Agency's Industrial Land index

- 10.6 Each of the indexes is taken as a range, to produce a reasonably limited number of tabulations. The set of indices is based on the assumption that price and cost are the key changes that affect the viability of a benchmark site, and that alternative use value must be checked in case it has risen above newbuild housing value and thus limits the target in itself.

Table 10.1 Indices for automatic updating of Dynamic Viability		
Variable	Proposed index	Starting Value
House Price	Halifax House Price Index	Sept 2009 = 529.3
	Halifax House Price Index (free, monthly) http://www.lloydsbankinggroup.com/media1/research/halifax_api.asp	
Build cost	BCIS General Building Cost Index	Sept 2009 = 285.6.0
	BCIS Review Online (subscription only, monthly) Produced by the Royal Institute of Chartered Surveyors http://www.bcis.co.uk/online	
Alternative use value	Property Market Report (VOA) Various uses, but typically industrial use value: Value of Industrial/Warehousing Land for Eastern Region – ‘Typical’ Value	July 2009 = £936k per ha
	Valuation Office Agency: Property Market Reports (free, six monthly) http://www.voa.gov.uk/publications/index.htm	

Source: As indicated in the table

Details of the outputs

- 10.7 The model generates the full plausible range of target variations based on the above three indexes. The following illustration is one of a set of eight (one for each of the values for the alternative use values). In the example below it is the ‘base’ alternative use value. The full set of Dynamic Viability tables is presented in Appendix 5.
- 10.8 As will be noticed, the table below focussed upon the 30% target discussed as being deliverable in the previous chapter: the zero/zero point when looking at the percentage version of the indexes.

Figure 10.1 Broxbourne Coarse Matrix with base Alternative Use Value

		Price Change HPI								
		-20%	-10%	0%	10%	20%	30%	40%	50%	60%
	%	423.4	476.4	529.3	582.2	635.2	688.1	741.0	749.0	846.9
Cost Change BCIS Index	-20%	228.4	30%	45%	55%	55%	55%	55%	55%	55%
	-10%	257.0	10%	30%	45%	50%	55%	55%	55%	55%
	0%	285.5	0%	15%	30%	40%	50%	55%	55%	55%
	10%	314.1	0%	0%	20%	30%	40%	45%	50%	55%
	20%	342.6	0%	0%	5%	20%	30%	40%	45%	50%
	30%	371.2	0%	0%	0%	10%	25%	30%	40%	45%
	40%	399.7	0%	0%	0%	0%	15%	25%	30%	40%
	50%	428.3	0%	0%	0%	0%	5%	15%	25%	30%

Note that the figure shows proposed % target for each cost/price combination, with 0% change in alternative use value. The table also provides, inside the percentages, the actual values of the indexes, so that they can be read off in future

Source: Fordham Research 2009: Draft Broxbourne Viability Study

10.9 In effect, once the Core Strategy Examination has approved whatever the starting target is, the rest follows automatically from the index changes. There is one further point, which is that since the array of possible index changes is extremely large, when viewed as possibilities over a decade or two, the work is done in two stages:

- *Coarse Matrix*: This is calculated in 10% intervals of the indexes (all 3). The result provides broad coverage, but the change from one cell to another can produce large changes in targets: e.g. from 20% to 35%. But this stage provides wide coverage.
- *Fine Matrix*: This takes the area around the chosen target and uses 4% intervals in the indexes (the intervals can be varied). This produces results for the area around the chosen target that yield much smaller target changes: mostly 5% intervals and sometimes 10%.

10.10 Figure 10.2 shows the *Fine Matrix* outputs that relate to the Figure 10.1 Coarse Matrix. Again the full set of tables will be found in Appendix 5. As will be seen from Figure 10.2, the intervals in the targets around the base case of 30% are smaller than in Figure 10.1. They permit more sensitive adjustments of the target as the index numbers change in future.

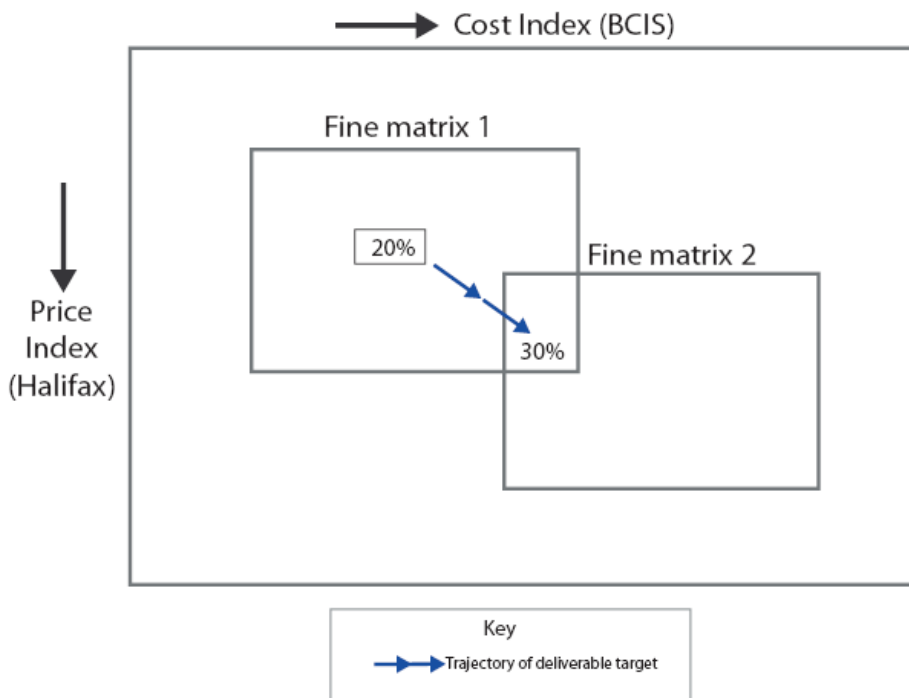
Figure 10.2 Fine Matrix with base alternative use value

		Price Change HPI								
		-8%	-4%	0%	4%	8%	12%	16%	20%	24%
%		487.0	508.1	529.3	550.5	571.6	592.8	614.0	635.2	656.3
Cost Change BCIS Index	%									
	-8%	262.7	30%	35%	40%	45%	50%	50%	55%	55%
	-4%	274.1	25%	30%	35%	40%	45%	45%	50%	55%
	0%	285.5	20%	25%	30%	35%	40%	45%	50%	50%
	4%	296.9	15%	20%	25%	30%	35%	40%	45%	50%
	8%	308.3	5%	15%	20%	25%	30%	35%	40%	45%
	12%	319.8	0%	10%	15%	20%	25%	30%	35%	40%
	16%	331.2	0%	5%	10%	15%	25%	25%	30%	35%
20%	342.6	0%	0%	5%	15%	20%	25%	30%	30%	

Source: Fordham Research 2009: Affordable Housing Viability Study 2009

10.11 The figure below shows how the Fine Matrix can move within the overall Coarse Matrix over time. Should the trajectory be as shown, the Fine Matrices will shift in the direction shown. Only the future trajectory of the housing market, as measured through the indexes, will determine the actual path. But the point is that the Fine Matrix can move as the indexes determine.

Figure 10.3 Coarse and Fine Matrices related



Source: Fordham Research 2009: Affordable Housing Viability Study 2009

- 10.12 It is important to emphasise that these *Fine Matrices* are like a 'close up' mechanism. The figures are all available from the initial *Coarse Matrix* and require no further policy or other judgements: they are automatically derived from the indexes. The only issue is the fineness of the intervals and the production of a manageable size of tabulation. The tabulation, of course, has to be accessible to a wide range of stakeholders and so must not be too daunting.

Full Fine matrix

- 10.13 In order to leave nothing to doubt, we have produced the complete Fine Matrix, covering the whole of the span of the Coarse Matrix. This is too large to include in the report and is provided as a separate Excel matrix. It simply provides the whole of the Fine Matrix across all the Coarse Matrix range. Its values differ slightly from those of the Coarse Matrix (where they overlap) due to the slightly different approximation process involved in the two matrices. This has no practical importance since the affordable target should always be set using the Fine Matrix. The Coarse Matrix is an illustrative device to provide a simple overview of the general range of affordable targets that could arise over the plan period.

Revising the target

- 10.14 At the annual revision point, the process that is to be followed is described below:

Figure 10.4 Checking the indexes in future

Step 1

The starting point is the Alternative Use Value. This will determine which of the eight sheets of Coarse Matrix is to be used.

Step 2

If the Alternative Use Value has changed by enough to move to one of the other seven sheets that may itself result in a target change, up or down.

Step 3

Next the BCIS and Halifax indexes must be checked to see whether the target should be changed. If the indexes suggest a move upwards but not quite to the level of a 5% shift, then the target should not be moved. If the movement of the indexes suggest a position below the current target, then the target should move down by 5%. That is because the target must be generally deliverable.

Step 4

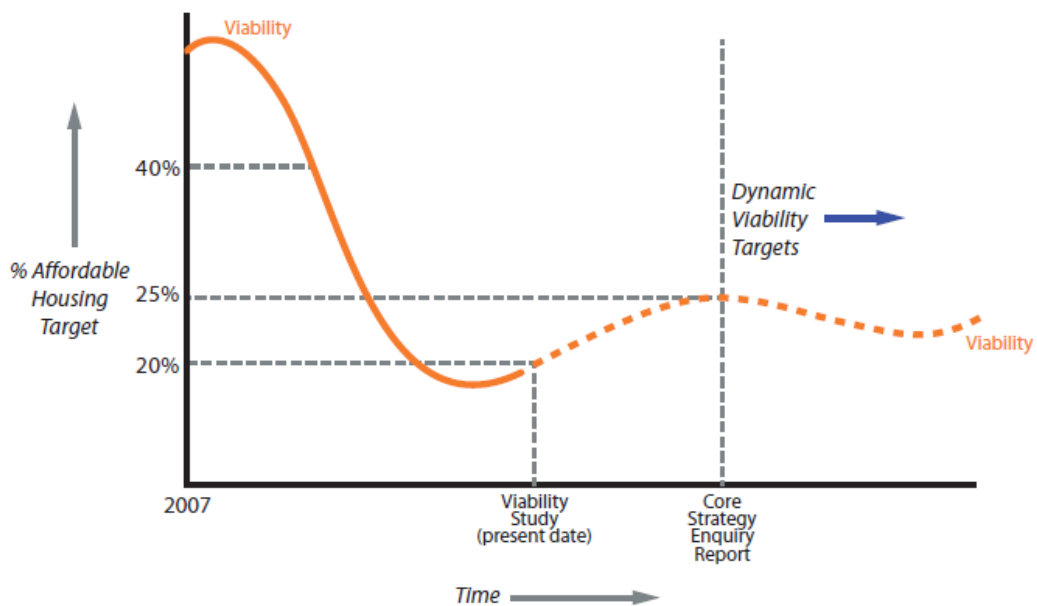
Whatever level of target emerges from checking the indexes in the indicated order is the set target for the next year.

Source: Fordham Research 2009: Affordable Housing Viability Study 2009

Implementing Dynamic Viability

- 10.15 The Viability study which is the input into Dynamic Viability is likely to be done as part of the preparation of the Core Strategy Affordable Housing Policy. There will then be a delay of months or years until the actual Examination. During that period there may well be changes in the market. When the Examination nears it is therefore wise to inspect the three indexes and publish any change in the target in good time beforehand so that the Examination is working with a currently relevant target.
- 10.16 Since the automatic target varying procedure cannot begin until approved by the Inspector's Report, it is desirable to have it as up to date as possible. Figure 10.5 indicates this process schematically.

Figure 10.5 Implementing Dynamic Viability



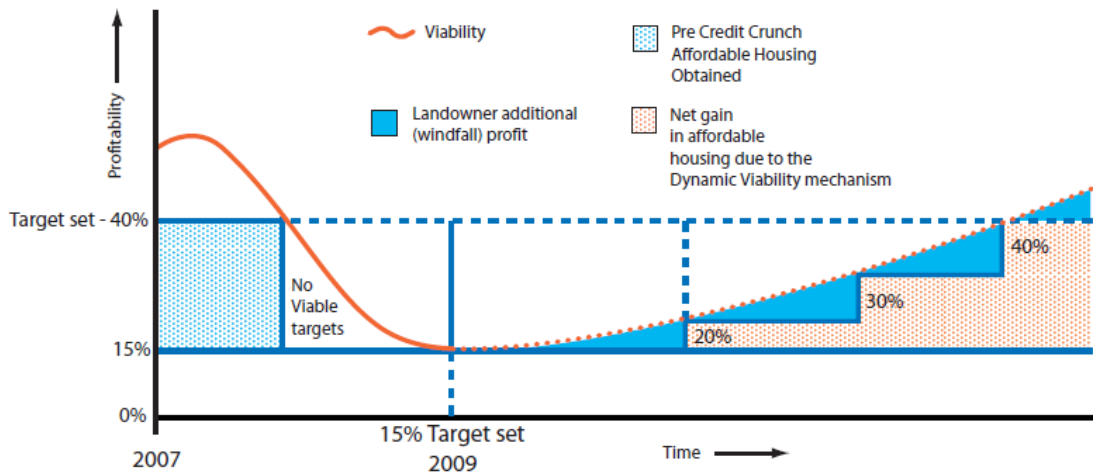
Source: Fordham Research 2009: Affordable Housing Viability Study 2009

- 10.17 The diagram illustrates the possible change in viability between study and Core Strategy Examination, after that, of course, the Dynamic Viability matrix will take account of future variations in viability. As the diagram suggests, these could be downward as well as upward. The future course of the market is uncertain.

Conclusion

- 10.18 The main point is that the Dynamic Viability matrices will ensure that all future changes in the housing market are tracked by deliverable affordable housing targets.

Figure 10.6 Gain of Affordable Housing from Dynamic Viability



Source: Fordham Research 2009: Affordable Housing Viability Study 2009

- 10.19 This figure also shows that the landowners/developers will gain from any uplift in the market. The basic viability assessment assures the landowner and the developer of a reasonable return. When the market goes up, the private sector will gain a windfall profit (shown by the blue areas under the viability curve) and the public interest will gain affordable housing as the targets are periodically altered.
- 10.20 The Dynamic Viability procedure ensures that the maximum of deliverable affordable housing is achieved.

11. Stakeholder comments

Introduction

- 11.1 The initial results of the study were discussed at a Stakeholder event on 29th October 2009. Detailed notes were taken of the discussion, which was lively. The main comments are summarised here.

Stakeholder comments

- 11.2 There was considerable discussion of the difficulty of obtaining credit and the impossibility of funding otherwise reasonable development in the present market situation for credit.
- 11.3 Comment was also made by several stakeholders about the impossibility of meeting three demands: for sustainable homes, Community Infrastructure Levy and affordable housing from the same land value. It was argued that one of these three could be afforded but that all three removed viability. The present study does allow inclusion of all three but not at the highest levels of Sustainability Code.
- 11.4 Questions were raised about the profit rate assumed. It is 20% on cost. It was argued by some developers that it should be 20% on Gross Development Value. However that represents 17.5% on cost, and so does not really change any major conclusions. No alteration to the report has been made on that account.

Dynamic Viability

- 11.5 Some stakeholders assumed that this broad-brush viability analysis would replace the site specific viability analysis which has always been the focus of negotiations at the planning applications stage. It was made clear that the Dynamic Viability approach had nothing to do with site specific matters.
- 11.6 The principle of simplifying target setting embodied in the Dynamic Viability approach was welcomed by a number of stakeholders. There was some discussion of the interval between checks of the indexes used for Dynamic Viability. Developers were inclined to want longer periods between checks. This would be rational from their point of view but, as and when the market rises again, it would reduce the amount of affordable housing to address housing need.

Appendices

Appendix 1 Newbuild schemes

A1.1 The schedule below provides details of a number of current newbuild developments and other comparable housing in the Borough.

Table A1.1 Newbuild schemes and second-hand comparable details

<i>Site / location</i>	<i>Builder</i>	<i>No. of dwgs</i>	<i>Range of dwgs</i>	<i>Prices</i>
Newbuild				
Grove House, High Street, Waltham Cross	Paradigm Housing	10	2 bed apartments	£166k
1WX High Street, Waltham Cross	Anderson Developments	25	1 bed apartments	£140k-£145k
Academia, The Springs, Turnford	Bellwinch Homes		3 & 4 bed townhouses	£240k-£250k
Hollybush Way, Cheshunt	Matthew Homes		2 bed apartments & 3 bed mews	£189k-£279k
Fawkon Walk, Chamberlayne Court, Hoddesdon	Beadie Group	44	1 & 2 bed apartments	£145k-£165k
The Paddocks, Cock Lane, Broxbourne	Leach Homes	75	3 bed det, 3 bed townhouses & 5 bed 2.5 storey det	£315k-£580k
Alfie Mews, High Street, Cheshunt	Brookfield Developments	8	2 bed house	£215k
Woolens Grove, Hertford Rd, Hoddesdon	Barratt Homes		2 bed apartments	£180k-£190k
Second-hand properties				
Lucern Close, Hammondstreet			2 bed mews	£215k
			3 bed semi	£240k-£250k
			4 bed det	£325k
Jepps Close, Hammondstreet			3 bed det	£300k
			4 bed det	£325k
Waterfall Close, Hoddesdon			1 bed apartment	£165k
			2 bed apartment	£180k
Eaton Gardens, Broxbourne			4 bed det	£440k

Appendix 2 House price variations

- A2.1 The indices in the table which follows compare prices in each postcode sector in the study area with an England and Wales 'average' figure – actually the median postcode value.
- A2.2 The indices are standardised, to eliminate the effect of variations in type mix; separate indices for each house type are combined with weightings based on the mix of overall sales.

Table A2.1 Price variations by postcode sector

<i>Postcode sector</i>	<i>Areas covered in sector</i>	<i>Q2 09</i>	<i>Q4 08</i>	<i>Q2 08</i>	<i>Ave</i>
EN8 8	Cheshunt South Waltham Cross W	122%	134%	129%	128%
EN8 7	Waltham Cross E	143%	124%	121%	130%
EN8 0	Cheshunt North	140%	128%	139%	136%
EN11 8	Hoddesdon Central, Southbrook	148%	126%	138%	137%
EN8 9	Cheshunt Central	136%	146%	142%	141%
EN11 0	Hoddesdon NE	173%	146%	126%	148%
EN11 9	Hoddesdon NW	145%	157%	149%	150%
EN7 6	Hammond Street Flamstead End	148%	157%	146%	150%
EN7 5	Goffs Oak Churchgate	209%	258%	136%	201%
EN10 7	Broxbourne [Wormley West End]	194%	279%	180%	218%

Source: Analysis of Land Registry data

Notes

1. Where a postcode sector includes areas inside and outside the Borough, the areas outside are shown in brackets
2. Data has been mix adjusted to remove differences in house type mix between postcode sectors; individual indices have been calculated for each house type, and combined using weights reflecting the nation-wide type mix. A worked example is provided below.

Table A2.2 Worked example for EN10 7 at Q2 2009

	<i>Land Registry data Q2 2009</i>				<i>Total</i>
	<i>Detached</i>	<i>Semi</i>	<i>Terraced</i>	<i>Flat</i>	
England & Wales - median price	£294,438	£173,597	£161,760	£197,546	
England & Wales - no of sales	28,017	35,283	34,299	19,600	117,199
EN10 7 – ave price	£456,177	£334,000	£322,500	£163,333	
EN10 7 price as % E & W median value	189.5%	274.4%	202.0%	82.7%	
Weighted average index for EN10 7 =	$\frac{[(28017 \times 189.5\%) + (35283 \times 274.4\%) + (34299 \times 202.0\%) + (19600 \times 82.7\%)]}{117,199}$				= 200.9%

Source: Analysis of Land Registry data

Appendix 3 Small plots for sale

Table A3.1 Asking prices for building sites/plots: values					
Location	No dwgs	site area acres (ha)	Asking price £K	Land value £m	
				per acre	per ha
Bottondene crescent Broxbourne	3	n/a	700.0	-	-
Kintor Hoddesdon	1	Est 0.11 (0.045)	OIEO 200.0	1.815	4.485
St David's Drive Broxbourne	2	0.32 (0.130)	650.0	2.031	5.019

Source: Internet listings September 2009

Appendix 4 Construction cost calculation

- A4.1 The table below shows stage by stage how unit construction cost is calculated consistent with the explanation in Chapter 5.
- A4.2 The starting point is the Fordham data base as indexed to September 2009 using BCIS General Cost Index value of 285.6 for September 2009.

Table A4.1 Example of construction cost calculation – site 2			
	Adjustment	Build cost £ per	
		sq ft	sq m
Base cost England & Wales at Sept 2009 for scheme of 8% 3 storey flats, 25% 2 storey house, 67% 3 storey house	Base cost	91.68	986.5
Rebase to Broxbourne	+18.0%	108.19	1,164.1
Level 3	+4.2%	112.73	1,213.0
10% non renewable	+3.5%	116.68	1,255.5
Higher spec	+2.5%	110.6	1,189.5
Small site loading	+0.0%	110.6	1,189.5
Rounded figure	round to £0.50 per sq ft, £5.0 per sq m	110.50	1,190

Source: Fordham Research data & BCIS indices

Appendix 5. Proposed benchmark appraisal

- A5.1 This appendix provides the detailed outputs for the Dynamic Viability analysis, as applied to the Benchmark Site (as per discussion in Chapter 9 above).
- A5.2 It is proposed that the benchmark site appraisal should be based upon an amended version of site 4, Old St Marys' Goffs Lane. The (minimal) amendment is necessary to ensure it is just viable at the proposed target level of 30%. The alternative use value for site 4 is industrial/warehousing land.
- A5.3 For reference the index numbers (also shown in Chapter 10) that are used to generate the three sets of tables are provided in the first table. The three dimensions of analysis are set out by providing 8 x 2 dimensional tables for each of the Coarse and Fine matrices. Each table gives HPI x BCIS and the eight tables in each of the two sets provide the range of alternative use values.

Table A5.1 Indices for automatic updating of Dynamic Viability		
<i>Variable</i>	<i>Proposed index</i>	<i>Starting Value</i>
House Price	Halifax House Price Index	Sept 2009 = 529.3
	Halifax House Price Index (free, monthly) http://www.lloydsbankinggroup.com/media1/research/halifax_api.asp	
Build cost	BCIS General Building Cost Index	Sept 2009 = 285.6.0
	BCIS Review Online (subscription only, monthly) Produced by the Royal Institute of Chartered Surveyors http://www.bcis.co.uk/online	
Alternative use value	Property Market Report (VOA) Various uses, but typically industrial use value: Value of Industrial/Warehousing Land for Eastern Region – 'Typical' Value	July 2009 = figure is £936k per ha
	Valuation Office Agency: Property Market Reports (free, six monthly) http://www.voa.gov.uk/publications/index.htm	

Sources: As shown in the boxes of the table

Broxbourne Benchmark Site Appraisal

Coarse Matrix

Table C1 Base Alternative Use Value: 0% Change - £500,000 Per Acre

		Price Change HPI								
		-20%	-10%	0%	10%	20%	30%	40%	50%	60%
Cost Change BCIS Index	%	423.4	476.4	529.3	582.2	635.2	688.1	741.0	749.0	846.9
	-20%	228.4	30%	45%	55%	55%	55%	55%	55%	55%
	-10%	257.0	10%	30%	45%	50%	55%	55%	55%	55%
	0%	285.5	0%	15%	30%	40%	50%	55%	55%	55%
	10%	314.1	0%	0%	20%	30%	40%	45%	50%	55%
	20%	342.6	0%	0%	5%	20%	30%	40%	45%	50%
	30%	371.2	0%	0%	0%	10%	25%	30%	40%	45%
	40%	399.7	0%	0%	0%	0%	15%	25%	30%	40%
	50%	428.3	0%	0%	0%	0%	5%	15%	25%	30%

Table C1 Base Alternative Use Value: 0% Change - £500,000 Per Acre

		Price Change HPI								
		-20%	-10%	0%	10%	20%	30%	40%	50%	60%
Cost Change BCIS Index	%	423.4	476.4	529.3	582.2	635.2	688.1	741.0	749.0	846.9
	-20%	228.4	30%	45%	55%	55%	55%	55%	55%	55%
	-10%	257.0	10%	30%	45%	50%	55%	55%	55%	55%
	0%	285.5	0%	15%	30%	40%	50%	55%	55%	55%
	10%	314.1	0%	0%	20%	30%	40%	45%	50%	55%
	20%	342.6	0%	0%	5%	20%	30%	40%	45%	50%
	30%	371.2	0%	0%	0%	10%	25%	30%	40%	45%
	40%	399.7	0%	0%	0%	0%	15%	25%	30%	40%
	50%	428.3	0%	0%	0%	0%	5%	15%	25%	30%

Table C2 Alternative Use Value: - 60% Change - £200,000 Per Acre

		Price Change HPI									
		-20%	-10%	0%	10%	20%	30%	40%	50%	60%	
		423.4	476.4	529.3	582.2	635.2	688.1	741.0	749.0	846.9	
Cost Change BCIS Index	%	-20%	228.4	55%	55%	55%	55%	55%	55%	55%	55%
	-10%	257.0	35%	50%	55%	55%	55%	55%	55%	55%	55%
	0%	285.5	15%	35%	45%	55%	55%	55%	55%	55%	55%
	10%	314.1	0%	20%	35%	45%	50%	55%	55%	55%	55%
	20%	342.6	0%	5%	20%	35%	40%	50%	55%	55%	55%
	30%	371.2	0%	0%	10%	25%	35%	40%	45%	50%	55%
	40%	399.7	0%	0%	0%	15%	25%	35%	40%	45%	50%
	50%	428.3	0%	0%	0%	5%	15%	25%	35%	40%	45%

Table C3 Alternative Use Value: - 40% Change - £300,000 Per Acre

		Price Change HPI									
		-20%	-10%	0%	10%	20%	30%	40%	50%	60%	
		423.4	476.4	529.3	582.2	635.2	688.1	741.0	749.0	846.9	
Cost Change BCIS Index	%	-20%	228.4	45%	55%	55%	55%	55%	55%	55%	55%
	-10%	257.0	25%	40%	55%	55%	55%	55%	55%	55%	55%
	0%	285.5	5%	25%	40%	50%	55%	55%	55%	55%	55%
	10%	314.1	0%	10%	30%	40%	45%	55%	55%	55%	55%
	20%	342.6	0%	0%	15%	30%	40%	45%	50%	55%	55%
	30%	371.2	0%	0%	5%	20%	30%	40%	45%	50%	55%
	40%	399.7	0%	0%	0%	10%	20%	30%	40%	45%	50%
	50%	428.3	0%	0%	0%	0%	10%	25%	30%	35%	40%

Table C4 Alternative Use Value: - 20% Change - £400,000 Per Acre

		Price Change HPI									
		-20%	-10%	0%	10%	20%	30%	40%	50%	60%	
		423.4	476.4	529.3	582.2	635.2	688.1	741.0	749.0	846.9	
Cost Change BCIS Index	%	-20%	228.4	35%	50%	55%	55%	55%	55%	55%	55%
	-10%	257.0	15%	35%	45%	55%	55%	55%	55%	55%	55%
	0%	285.5	0%	20%	35%	45%	55%	55%	55%	55%	55%
	10%	314.1	0%	5%	25%	35%	45%	50%	55%	55%	55%
	20%	342.6	0%	0%	10%	25%	35%	45%	50%	55%	55%
	30%	371.2	0%	0%	0%	15%	25%	35%	40%	45%	50%
	40%	399.7	0%	0%	0%	5%	20%	25%	35%	40%	45%
	50%	428.3	0%	0%	0%	0%	10%	20%	30%	35%	40%

Table C5 Alternative Use Value: + 20% Change - £600,000 Per Acre											
		Price Change HPI									
		%	-20%	-10%	0%	10%	20%	30%	40%	50%	60%
		%	423.4	476.4	529.3	582.2	635.2	688.1	741.0	749.0	846.9
Cost Change BCIS Index	-20%	228.4	20%	40%	50%	55%	55%	55%	55%	55%	55%
	-10%	257.0	0%	25%	40%	45%	55%	55%	55%	55%	55%
	0%	285.5	0%	10%	25%	35%	45%	50%	55%	55%	55%
	10%	314.1	0%	0%	15%	25%	35%	45%	50%	55%	55%
	20%	342.6	0%	0%	0%	15%	30%	35%	45%	50%	50%
	30%	371.2	0%	0%	0%	5%	20%	30%	35%	40%	45%
	40%	399.7	0%	0%	0%	0%	10%	20%	30%	35%	40%
	50%	428.3	0%	0%	0%	0%	0%	15%	20%	30%	35%

Table C6 Alternative Use Value: + 40% Change - £700,000 Per Acre											
		Price Change HPI									
		%	-20%	-10%	0%	10%	20%	30%	40%	50%	60%
		%	423.4	476.4	529.3	582.2	635.2	688.1	741.0	749.0	846.9
Cost Change BCIS Index	-20%	228.4	10%	30%	45%	55%	55%	55%	55%	55%	55%
	-10%	257.0	0%	15%	35%	45%	50%	55%	55%	55%	55%
	0%	285.5	0%	0%	20%	35%	40%	50%	55%	55%	55%
	10%	314.1	0%	0%	10%	25%	35%	40%	45%	50%	55%
	20%	342.6	0%	0%	0%	10%	25%	35%	40%	45%	50%
	30%	371.2	0%	0%	0%	0%	15%	25%	35%	40%	45%
	40%	399.7	0%	0%	0%	0%	5%	20%	25%	35%	40%
	50%	428.3	0%	0%	0%	0%	0%	10%	20%	25%	35%

Table C7 Alternative Use Value: + 60% Change - £800,000 Per Acre											
		Price Change HPI									
		%	-20%	-10%	0%	10%	20%	30%	40%	50%	60%
		%	423.4	476.4	529.3	582.2	635.2	688.1	741.0	749.0	846.9
Cost Change BCIS Index	-20%	228.4	5%	25%	40%	50%	55%	55%	55%	55%	55%
	-10%	257.0	0%	10%	25%	40%	45%	55%	55%	55%	55%
	0%	285.5	0%	0%	15%	30%	40%	45%	50%	55%	55%
	10%	314.1	0%	0%	5%	20%	30%	35%	45%	50%	55%
	20%	342.6	0%	0%	0%	10%	20%	30%	35%	45%	50%
	30%	371.2	0%	0%	0%	0%	10%	20%	30%	35%	40%
	40%	399.7	0%	0%	0%	0%	5%	15%	25%	30%	35%
	50%	428.3	0%	0%	0%	0%	0%	5%	15%	25%	30%

Table C8 Alternative Use Value: + 80% Change - £900,000 Per Acre

		Price Change HPI									
		%	-20%	-10%	0%	10%	20%	30%	40%	50%	60%
		%	423.4	476.4	529.3	582.2	635.2	688.1	741.0	749.0	846.9
Cost Change BCIS Index	-20%	228.4	0%	20%	35%	45%	50%	55%	55%	55%	55%
	-10%	257.0	0%	5%	20%	35%	45%	50%	55%	55%	55%
	0%	285.5	0%	0%	10%	25%	35%	40%	50%	55%	55%
	10%	314.1	0%	0%	0%	15%	25%	35%	40%	45%	50%
	20%	342.6	0%	0%	0%	5%	15%	25%	35%	40%	45%
	30%	371.2	0%	0%	0%	0%	10%	20%	25%	35%	40%
	40%	399.7	0%	0%	0%	0%	0%	10%	20%	30%	35%
	50%	428.3	0%	0%	0%	0%	0%	5%	15%	20%	30%

Broxbourne Benchmark Site Appraisal

Fine Matrix

Table F1 Base Alternative Use Value: 0% Change - £500,000 Per Acre

		Price Change HPI									
		-8%	-4%	0%	4%	8%	12%	16%	20%	24%	
Cost Change BCIS Index	%	487.0	508.1	529.3	550.5	571.6	592.8	614.0	635.2	656.3	
	-8%	262.7	30%	35%	40%	45%	50%	50%	55%	55%	55%
	-4%	274.1	25%	30%	35%	40%	45%	45%	50%	50%	55%
	0%	285.5	20%	25%	30%	35%	40%	45%	45%	50%	50%
	4%	296.9	15%	20%	25%	30%	35%	40%	40%	45%	50%
	8%	308.3	5%	15%	20%	25%	30%	35%	40%	40%	45%
	12%	319.8	0%	10%	15%	20%	25%	30%	35%	40%	40%
	16%	331.2	0%	5%	10%	15%	25%	25%	30%	35%	40%
	20%	342.6	0%	0%	5%	15%	20%	25%	30%	30%	35%

Table F1 Base Alternative Use Value: 0% Change - £500,000 Per Acre

		Price Change HPI									
		-8%	-4%	0%	4%	8%	12%	16%	20%	24%	
Cost Change BCIS Index	%	487.0	508.1	529.3	550.5	571.6	592.8	614.0	635.2	656.3	
	-8%	262.7	30%	35%	40%	45%	50%	50%	55%	55%	55%
	-4%	274.1	25%	30%	35%	40%	45%	45%	50%	50%	55%
	0%	285.5	20%	25%	30%	35%	40%	45%	45%	50%	50%
	4%	296.9	15%	20%	25%	30%	35%	40%	40%	45%	50%
	8%	308.3	5%	15%	20%	25%	30%	35%	40%	40%	45%
	12%	319.8	0%	10%	15%	20%	25%	30%	35%	40%	40%
	16%	331.2	0%	5%	10%	15%	25%	25%	30%	35%	40%
	20%	342.6	0%	0%	5%	15%	20%	25%	30%	30%	35%

Table F2 Alternative Use Value: - 60% Change - £200,000 Per Acre

		Price Change HPI								
		-8%	-4%	0%	4%	8%	12%	16%	20%	24%
	%	487.0	508.1	529.3	550.5	571.6	592.8	614.0	635.2	656.3
Cost Change BCIS Index	-8%	262.7	50%	50%	55%	55%	55%	55%	55%	55%
	-4%	274.1	40%	45%	50%	55%	55%	55%	55%	55%
	0%	285.5	35%	40%	45%	50%	50%	55%	55%	55%
	4%	296.9	30%	35%	40%	45%	50%	50%	55%	55%
	8%	308.3	25%	30%	35%	40%	45%	45%	50%	55%
	12%	319.8	20%	25%	30%	35%	40%	45%	45%	50%
	16%	331.2	15%	20%	25%	30%	35%	40%	45%	45%
	20%	342.6	10%	15%	20%	25%	30%	35%	40%	40%

Table F3 Alternative Use Value: - 40% Change - £300,000 Per Acre

		Price Change HPI								
		-8%	-4%	0%	4%	8%	12%	16%	20%	24%
	%	487.0	508.1	529.3	550.5	571.6	592.8	614.0	635.2	656.3
Cost Change BCIS Index	-8%	262.7	40%	45%	50%	55%	55%	55%	55%	55%
	-4%	274.1	35%	40%	45%	50%	50%	55%	55%	55%
	0%	285.5	30%	35%	40%	45%	50%	50%	55%	55%
	4%	296.9	25%	30%	35%	40%	45%	45%	50%	55%
	8%	308.3	20%	25%	30%	35%	40%	45%	45%	50%
	12%	319.8	15%	20%	25%	30%	35%	40%	45%	45%
	16%	331.2	5%	15%	20%	25%	30%	35%	40%	40%
	20%	342.6	0%	10%	15%	20%	25%	30%	35%	40%

Table F4 Alternative Use Value: - 20% Change - £400,000 Per Acre

		Price Change HPI								
		-8%	-4%	0%	4%	8%	12%	16%	20%	24%
	%	487.0	508.1	529.3	550.5	571.6	592.8	614.0	635.2	656.3
Cost Change BCIS Index	-8%	262.7	35%	40%	45%	50%	50%	55%	55%	55%
	-4%	274.1	30%	35%	40%	45%	50%	50%	55%	55%
	0%	285.5	25%	30%	35%	40%	45%	45%	50%	55%
	4%	296.9	20%	25%	30%	35%	40%	45%	45%	50%
	8%	308.3	15%	20%	25%	30%	35%	40%	40%	45%
	12%	319.8	5%	15%	20%	25%	30%	35%	40%	40%
	16%	331.2	0%	10%	15%	20%	25%	30%	35%	40%
	20%	342.6	0%	5%	10%	15%	25%	25%	30%	35%

Table F5 Alternative Use Value: + 20% Change - £600,000 Per Acre											
		Price Change HPI									
		%	-8%	-4%	0%	4%	8%	12%	16%	20%	24%
Cost Change BCIS Index	%		487.0	508.1	529.3	550.5	571.6	592.8	614.0	635.2	656.3
	-8%	262.7	25%	30%	35%	40%	45%	45%	50%	50%	55%
	-4%	274.1	20%	25%	30%	35%	40%	45%	45%	50%	50%
	0%	285.5	15%	20%	25%	30%	35%	40%	40%	45%	50%
	4%	296.9	5%	15%	20%	25%	30%	35%	40%	40%	45%
	8%	308.3	0%	10%	15%	20%	25%	30%	35%	40%	40%
	12%	319.8	0%	5%	10%	15%	20%	25%	30%	35%	40%
	16%	331.2	0%	0%	5%	15%	20%	25%	25%	30%	35%
	20%	342.6	0%	0%	0%	10%	15%	20%	25%	30%	30%

Table F6 Alternative Use Value: + 40% Change - £700,000 Per Acre											
		Price Change HPI									
		%	-8%	-4%	0%	4%	8%	12%	16%	20%	24%
Cost Change BCIS Index	%		487.0	508.1	529.3	550.5	571.6	592.8	614.0	635.2	656.3
	-8%	262.7	20%	25%	30%	35%	40%	40%	45%	50%	50%
	-4%	274.1	10%	20%	25%	30%	35%	40%	40%	45%	50%
	0%	285.5	5%	15%	20%	25%	30%	35%	40%	40%	45%
	4%	296.9	0%	10%	15%	20%	25%	30%	35%	40%	40%
	8%	308.3	0%	5%	10%	15%	20%	25%	30%	35%	40%
	12%	319.8	0%	0%	5%	10%	20%	25%	25%	30%	35%
	16%	331.2	0%	0%	0%	10%	15%	20%	25%	30%	30%
	20%	342.6	0%	0%	0%	5%	10%	15%	20%	25%	30%

Table F7 Alternative Use Value: + 60% Change - £800,000 Per Acre											
		Price Change HPI									
		%	-8%	-4%	0%	4%	8%	12%	16%	20%	24%
Cost Change BCIS Index	%		487.0	508.1	529.3	550.5	571.6	592.8	614.0	635.2	656.3
	-8%	262.7	10%	20%	25%	30%	35%	40%	40%	45%	45%
	-4%	274.1	5%	15%	20%	25%	30%	35%	40%	40%	45%
	0%	285.5	0%	10%	15%	20%	25%	30%	35%	40%	40%
	4%	296.9	0%	5%	10%	15%	20%	25%	30%	35%	40%
	8%	308.3	0%	0%	5%	10%	20%	25%	25%	30%	35%
	12%	319.8	0%	0%	0%	10%	15%	20%	25%	30%	30%
	16%	331.2	0%	0%	0%	5%	10%	15%	20%	25%	30%
	20%	342.6	0%	0%	0%	0%	5%	10%	15%	20%	25%

Table F8 Alternative Use Value: + 80% Change - £900,000 Per Acre

		Price Change HPI									
		%	-8%	-4%	0%	4%	8%	12%	16%	20%	24%
Cost Change BCIS Index	%		487.0	508.1	529.3	550.5	571.6	592.8	614.0	635.2	656.3
	-8%	262.7	5%	15%	20%	25%	30%	35%	40%	40%	45%
	-4%	274.1	0%	10%	15%	20%	25%	30%	35%	40%	40%
	0%	285.5	0%	5%	10%	15%	20%	25%	30%	35%	40%
	4%	296.9	0%	0%	5%	10%	20%	25%	25%	30%	35%
	8%	308.3	0%	0%	0%	5%	15%	20%	25%	25%	30%
	12%	319.8	0%	0%	0%	5%	10%	15%	20%	25%	30%
	16%	331.2	0%	0%	0%	0%	5%	10%	15%	20%	25%
	20%	342.6	0%	0%	0%	0%	0%	5%	10%	15%	20%

Appendix 6 Financial appraisal summaries

- A6.1 The development viability **summaries** contained in the following pages set out the assumptions and outputs of the viability appraisals for a 30% affordable scenario.

SITE 1: Land West of Hoddesdon

Affordable 30% = 80% social rented 20% intermediate

Scenario & option

Input assumptions

Broxbourne site viability study

Site details		Dwellings		ave floor space		build cost		sales value		
Site	Location	Market housing	Affordable soc rent	Aff intermediate	Aff other	gross sq ft	net sq ft	per sq ft	INDEX = 1,000	per sq ft
1A West of Hoddesdon	Hoddesdon	196.0	67.2	16.8	0.0	1,114	1,094	108.50	108.50	281.00
Area	ha							0.0%	108.50	140.00
	acres							0.0%	108.50	160.00
No dwgs								0.0%	108.50	0.00
Density dw/ha								0.0%	108.50	0.00
									108.50	0.00
Contingency		Total				Floorspace density				
allowance	2.50%	280.0	100.00%			311,920	306,320	= 15,496 net sq ft per acre		£33,843,320
		£k								£73,486,168
		846								

Development costs		Other costs	
standard % build	plus abnormal	Planning	Survey
8,672	0	533.4	200
		£ per dwelling	£ per dwelling

Design fees		Marketing	
on build costs	on dev costs	Total	Interest % per annum
3,469	694	0	7.50%
		£ per dwelling	

Planning gain	
£ per dwelling	Notes
10,275	

SITE 1 LAND COST & PHASING

Land	Iterate to achieve 20.0% profit											
	Affordable						No affordable					
Land purchase price	£ 5,355,000						£ 11,894,897					
RV per acre	£ 270,892						£ 601,725					
Dev profit	£ 11,475,381						£ 14,348,353					
Total costs	£ 62,012,812						£ 71,729,592					
profit as % of costs	18.50%						20.00%					

Hectare
Affordable No affordable
£669,375 £1,486,862

Programme	Year 1				Year 2				Year 3				Year 4				Year 5				Year 6				Year 7				TOTALS				
	C1	C2	C3	C4	C1	C2	C3	C4	C1	C2	C3	C4	C1	C2	C3	C4	C1	C2	C3	C4	C1	C2	C3	C4	C1	C2	C3	C4					
Units started																																	
Market housing																																	
Attributable soc rent	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	196.0
Attributable sh cashp	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	67.2
0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alt other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	280.0
Units "built" +2Q																																	
Market housing																																	
Attributable soc rent	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Attributable sh cashp	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Alt other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Units completed +3Q																																	
Market housing																																	
Attributable soc rent	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Attributable sh cashp	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Alt other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Units purchased +4Q																																	
Market housing																																	
Attributable soc rent	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Attributable sh cashp	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Alt other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

SITE 2: Everest Site Andrews Lane

Input assumptions		Scenario & option		Affordable 30% = 60% social rented 40% intermediate																																																				
Broxbourne site viability study																																																								
Site details																																																								
Site	2A Everest Andrews Lane																																																							
Location	Cheshunt																																																							
Area	3.50 ha	84.0	70.00%	1,130	1,116	110.50	1,000	269.00																																																
	8.65 acres																																																							
No dwgs	120	28.8	24.00%	1,130	1,116	110.50	110.50	140.00																																																
Density dw/ha	34.3																																																							
		7.2	6.00%	1,130	1,116	110.50	110.50	160.00																																																
		0.0	0.00%	1,130	1,116	110.50	110.50	0.00																																																
		0.0	0.00%	0	0	110.50	110.50	0.00																																																
		120.0	100.00%	135,600	133,920	£14,983,800		£31,002,480																																																
Contingency	allowance	375	2.50%																																																					
Development costs	standard % build	2,534	16.50%																																																					
	plus abnormalities	0	0.0%																																																					
Total			17%																																																					
Design fees	on build costs	1,536	10.0%																																																					
	on dev costs	203	8%																																																					
Planning gain	£ per dwelling	1,305	10.875																																																					
Dwellings				<table border="1"> <tr> <td>Market housing</td> <td>84.0</td> <td>70.00%</td> <td>1,130</td> <td>1,116</td> <td>110.50</td> <td>1,000</td> <td>269.00</td> </tr> <tr> <td>Affordable soc rent</td> <td>28.8</td> <td>24.00%</td> <td>1,130</td> <td>1,116</td> <td>110.50</td> <td>110.50</td> <td>140.00</td> </tr> <tr> <td>Aff intermediate</td> <td>7.2</td> <td>6.00%</td> <td>1,130</td> <td>1,116</td> <td>110.50</td> <td>110.50</td> <td>160.00</td> </tr> <tr> <td></td> <td>0.0</td> <td>0.00%</td> <td>1,130</td> <td>1,116</td> <td>110.50</td> <td>110.50</td> <td>0.00</td> </tr> <tr> <td>Aff other</td> <td>0.0</td> <td>0.00%</td> <td>0</td> <td>0</td> <td>110.50</td> <td>110.50</td> <td>0.00</td> </tr> <tr> <td>Total</td> <td>120.0</td> <td>100.00%</td> <td>135,600</td> <td>133,920</td> <td>£14,983,800</td> <td></td> <td>£31,002,480</td> </tr> </table>					Market housing	84.0	70.00%	1,130	1,116	110.50	1,000	269.00	Affordable soc rent	28.8	24.00%	1,130	1,116	110.50	110.50	140.00	Aff intermediate	7.2	6.00%	1,130	1,116	110.50	110.50	160.00		0.0	0.00%	1,130	1,116	110.50	110.50	0.00	Aff other	0.0	0.00%	0	0	110.50	110.50	0.00	Total	120.0	100.00%	135,600	133,920	£14,983,800		£31,002,480
Market housing	84.0	70.00%	1,130	1,116	110.50	1,000	269.00																																																	
Affordable soc rent	28.8	24.00%	1,130	1,116	110.50	110.50	140.00																																																	
Aff intermediate	7.2	6.00%	1,130	1,116	110.50	110.50	160.00																																																	
	0.0	0.00%	1,130	1,116	110.50	110.50	0.00																																																	
Aff other	0.0	0.00%	0	0	110.50	110.50	0.00																																																	
Total	120.0	100.00%	135,600	133,920	£14,983,800		£31,002,480																																																	
		Floorspace density = 15.485 net sq ft per acre																																																						
Other costs																																																								
Planning		451.3		£ per dwelling																																																				
Survey		200		£ per dwelling																																																				
Marketing		0		£ per dwelling																																																				
Interest	% per annum		7.50%																																																					
				Notes																																																				

SITE 2 CASH FLOW AFFORDABLE

	rate	Year 1				Year 2				Year 3				Year 4				Year 5	TOTALS	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1		
INCOME																				
Housing sales																				
Market housing																				
Affordable soc rent																				
Affordable sh oship																				
0																				
Af other																				
Sales fees																				
Total income		0	0	0	0	0	0	2,584	2,842	2,842	2,842	2,842	2,842	2,842	2,842	2,842	2,842	2,842	2,842	31,002
COSTS																				
Land																				
Land acquisition		2,700																		2,700
Stamp duty		108																		108
Purchase fees		74																		74
Total		2,882																		2,882
Build costs																				
Market housing																				
Affordable soc rent																				
Affordable sh oship																				
0																				
Af other																				
Build contingency																				
Total																				
Dev costs																				
Upfront		317	317	317	317	116	116	116	116	116	116	116	116	116	116	116	116	116	116	1,267
Build related		0	0	106	116															1,267
Abnormals		0	0	0	0															0
Total																				15,358
Fees																				
Fees on build costs		0	0	0	0	128	141	141	141	141	141	141	141	141	141	141	141	141	141	1,536
Fees on dev costs		0	0	0	0	9	9	9	9	9	9	9	9	9	9	9	9	9	9	203
Total		0	0	0	0	137	150	150	150	150	150	150	150	150	150	150	150	150	150	1,739
PG																				
Planning gain																				
Total																				375
Other																				
Planning		18	18	18	18															78
Survey		24																		24
Marketing																				
Total		42	18	18	18															102
Sales fees																				
b/forward from above																				
Total costs		3,267	360	583	587	1,653	1,794	1,871	1,878	1,878	1,878	1,878	1,878	1,878	1,633	1,633	85	85	924	24,821
Net profit/loss from quarter		-3,267	-360	-583	-587	-1,653	-1,794	713	963	963	963	963	963	963	1,209	1,209	2,757	2,757	0	6,181
Profit/loss bf from last quarter																				
Cumulative profit/loss		0	-3,328	-3,757	-4,421	-5,102	-6,882	-8,838	-8,278	-7,451	-6,609	-5,752	-4,878	-3,988	-3,081	-1,907	-712	2,084	4,841	4,841
Interest																				
Charged at																				
Total		-61	-69	-81	-94	-127	-163	-152	-137	-122	-106	-90	-73	-57	-35	-13	38	0	0	0
Cumulative developer profit carried forward to RV calc		-3,328	-3,757	-4,421	-5,102	-6,882	-8,838	-8,278	-7,451	-6,609	-5,752	-4,878	-3,988	-3,081	-1,907	-712	2,084	4,841	4,841	4,841

SITE 3: Hazelmere Marina

Input assumptions		Scenario & option		Affordable 30% = 80% social rented 20% intermediate											
Broxbourne site viability study															
Site details		3 Hazelmere Marina													
Site	Location	ha	acres	Waltham Cross		Market housing		Affordable soc rent		Aff intermediate		Aff other		Total	
		1.00	2.47	56.0	19.2	4.8	0.0	0.0	80.0	70.00%	24.00%	6.00%	0.00%	0.00%	100.00%
No dwgs	Density dw/ha	80	80.0												
				£k											
Contingency	allowance		5.00%												
				524											
Development costs	standard % build		10.00%												
				1,101											
plus abnormal			1.7%												
				188											
Total			12%												
				1,101											
Design fees	on build costs		10.0%												
				103											
on dev costs			8%												
				534											
Planning gain	£ per dwelling		6.675												
				534											

Dwellings		ave floor space		gross		net		build cost		build INDEX =		sales value	
		sq ft	sq ft	per sq ft	per sq ft	sq ft	sq ft	per sq ft	per sq ft	INDEX =	per sq ft	per sq ft	per sq ft
Market housing	56.0	997	858	131.50	131.50	997	858	131.50	131.50	1.000	257.00	257.00	257.00
Affordable soc rent	19.2	997	858	131.50	131.50	997	858	131.50	131.50	131.50	140.00	140.00	140.00
Aff intermediate	4.8	997	858	131.50	131.50	997	858	131.50	131.50	131.50	160.00	160.00	160.00
	0.0	997	858	131.50	131.50	997	858	131.50	131.50	131.50	0.00	0.00	0.00
Aff other	0.0	0	0	0	0	0	0	0	0	131.50	0.00	0.00	0.00
Total	80.0	79,760	68,640	100.00%	100.00%	79,760	68,640	131.50	131.50	131.50	£15,313,584	£15,313,584	£15,313,584

Floorspace density		= 27,778 net sq ft per acre	
Other costs	Planning	379.4	£ per dwelling
	Survey	500	£ per dwelling
	Marketing	0	£ per dwelling
Interest	% per annum	7.50%	

Notes	

SITE 3 LAND COST & PHASING

Programme	Year 1				Year 2				Year 3				Year 4				TOTALS					
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4						
Units started																						
Market housing	0	0	0.0	5.6	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	0.0	0.0	0.0	0.0	56.0
Affordable soc rent			0.0	1.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	0.0	0.0	0.0	0.0	19.2
Affordable sh oship			0.0	0.5	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.0	0.0	0.0	0.0	4.8
0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Aff other			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0	0	0	8	12	12	12	12	12	12	12	12	12	12	12	12	12	0	0	0	0	80.0
Units 'built' +2Q			0	0	0	6	8	8	8	8	8	8	8	8	8	8	8	0	0	0	0	56
Market housing			0	0	0	6	8	8	8	8	8	8	8	8	8	8	8	0	0	0	0	56
Affordable soc rent			0	0	0	2	3	3	3	3	3	3	3	3	3	3	3	0	0	0	0	19
Affordable sh oship			0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	5
0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aff other			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Units completed +3Q			0	0	0	0	6	8	8	8	8	8	8	8	8	8	8	8	0	0	0	56
Market housing			0	0	0	0	6	8	8	8	8	8	8	8	8	8	8	8	0	0	0	56
Affordable soc rent			0	0	0	0	2	3	3	3	3	3	3	3	3	3	3	3	0	0	0	19
Affordable sh oship			0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	5
0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aff other			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Units purchased +4Q			0	0	0	0	0	0	6	8	8	8	8	8	8	8	8	8	0	0	0	56
Market housing			0	0	0	0	0	0	6	8	8	8	8	8	8	8	8	8	0	0	0	56
Affordable soc rent			0	0	0	0	0	0	2	3	3	3	3	3	3	3	3	3	0	0	0	19
Affordable sh oship			0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	5
0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aff other			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Land	Affordable		No affordable		Hectare	
	Affordable	No affordable	Affordable	No affordable	Affordable	No affordable
Land purchase price	£ -1,756,017	-423,736	-£1,756,017	-£423,736		
RV per acre	£ -710,650	-171,484	-£1,756,017	-£423,736		
Dev profit	£ 2,390,936	2,940,371				
Total costs	£ 12,923,698	14,701,159				
profit as % of costs	18.50%	20.00%				

Iterate to achieve 20.0% profit

SITE 3 CASH FLOW AFFORDABLE

	rate	Year 1				Year 2				Year 3				Year 4				TOTALS	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
INCOME																			
Housing sales																			
Market housing																			
Affordable soc rent																			
Affordable sh oship																			
0																			
Aff other																			
Sales fees																			
Total income																			
COSTS																			
Land																			
Land acquisition																			
Stamp duty																			
Purchase fees																			
Total																			
Build costs																			
Market housing																			
Affordable soc rent																			
Affordable sh oship																			
0																			
Aff other																			
Build contingency	5.0%																		
Total																			
Dev costs																			
Upfront	5.0%	138	138	138	138														
Build related	5.0%	0	0	0	0														
Abnormals	2%	94	94	94	94														
Total																			
Fees																			
Fees on build costs	10.0%	0	0	0	0														
Fees on dev costs	8.0%	19	19	11	15														
Total																			
PG																			
Planning gain																			
Total																			
Other																			
Planning	£379	10	10	10	10														
Survey	£500	40																	
Marketing	£0																		
Total																			
Sales fees																			
b/forward from above																			
Total costs																			
Net profit/loss from quarter																			
Profit/loss bf from last quarter																			
Cumulative profit/loss																			
Interest	7.50%	28	24	21	17														
Charged at																			
Total																			
Cumulative developer profit																			
carried forward to RV calc																			

SITE 4: St Marys Goffs La

Input assumptions		Scenario & option		Affordable 30% = 80% social rented 20% intermediate							
Broxbourne site viability study											
Site details											
Site	4 St Marys Goffs La										
Location	Cheshunt										
Area	2.30	ha									
	5.68	acres									
No dwgs	85										
Density dw/ha	37.0										
Contingency											
allowance	5.00%	£k	509								
Development costs											
standard % build	13.00%		1,390								
plus abnormal	2.8%		300								
Total	16%										
Design fees											
on build costs	10.0%		1,069								
on dev costs	8%		135								
Planning gain	10,412		885								
£ per dwelling											
Dwellings											
				ave floor space	gross	net	build	build	sales		
				sq ft	sq ft	sq ft	cost	INDEX =	value		
							per sq ft		per sq ft		
Market housing	59.5		70.00%	1,084	1,064	110.50	110.50	1,000	304.00		
Affordable soc rent	20.4		24.00%	1,084	1,064	110.50	110.50	110.50	140.00		
Aff intermediate	5.1		6.00%	1,084	1,064	110.50	110.50	110.50	160.00		
	0.0		0.00%	1,084	1,064	110.50	110.50	110.50	0.00		
Aff other	0.0		0.00%	0	0	110.50	110.50	110.50	0.00		
Total	85.0		100.00%	92,140	90,440		£10,181,470		£23,152,640		
				Floorspace density = 15.913 net sq ft per acre							
Other costs											
Planning			392.1	£ per dwelling							
Survey			500	£ per dwelling							
Marketing			0	£ per dwelling							
Interest											
% per annum			7.50%								
Notes											

SITE 4 LAND COST & PHASING

Land		Iterate to achieve 20.0% profit		Hectare	
Land purchase price	Affordable	No affordable	Affordable	Affordable	No affordable
£ 2,913,000	£ 2,913,000	£ 5,364,500	£ 512,554	£ 1,266,522	£ 2,332,391
RV per acre	£ 3,614,665	£ 4,586,828	£ 19,539,100	£ 22,908,057	£ 2,332,391
Dev profit	£ 3,614,665	£ 4,586,828	£ 19,539,100	£ 22,908,057	£ 2,332,391
Total costs	£ 19,539,100	£ 22,908,057	£ 19,539,100	£ 22,908,057	£ 2,332,391
profit as % of costs	18.50%	20.02%	18.50%	20.02%	20.02%

Programme	Year 1				Year 2				Year 3				Year 4				TOTALS				
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4					
Units started																					
Market housing	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Affordable soc rent																					
Affordable sh oship																					
0																					
Aff other																					
TOTAL	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Units 'built' +2Q																					
Market housing																					
Affordable soc rent																					
Affordable sh oship																					
0																					
Aff other																					
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Units completed +3Q																					
Market housing																					
Affordable soc rent																					
Affordable sh oship																					
0																					
Aff other																					
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Units purchased +4Q																					
Market housing																					
Affordable soc rent																					
Affordable sh oship																					
0																					
Aff other																					
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

SITE 4 CASH FLOW AFFORDABLE

	rate	Year 1				Year 2				Year 3				Year 4				TOTALS	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
INCOME																			
Housing sales																			
Market housing																			
Affordable soc rent		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Affordable sh oship		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aff other		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sales fees		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total income		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COSTS																			
Land																			
Land acquisition		2,913																	
Stamp duty		117																	
Purchase fees		80																	
Total		3,110																	
Build costs																			
Market housing																			
Affordable soc rent		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Affordable sh oship		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aff other		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Build contingency	5.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dev costs																			
Upfront	6.5%	174	174	174	174	90	90	90	90	90	90	90	90	90	90	90	90	90	90
Build related	6.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Abnormals	3%	150	150	150	150	79	79	79	79	79	79	79	79	79	79	79	79	79	79
Total		324	324	324	324	169	169	169	169	169	169	169	169	169	169	169	169	169	169
Fees																			
Fees on build costs	10.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fees on dev costs	8.0%	26	26	26	26	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Total		26	26	26	26	7	7	7	7	7	7	7	7	7	7	7	7	7	7
PG																			
Planning gain		0	0	0	0	115	115	115	115	115	115	115	115	115	115	115	115	115	115
Total		0	0	0	0	115	115	115	115	115	115	115	115	115	115	115	115	115	115
Other																			
Planning	£392	11	11	11	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Survey	£500	43	43	43	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Marketing	£0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total		54	54	54	54	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sales fees																			
b/forward from above		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total costs		3,513	361	199	342	212	1,318	1,733	1,800	1,824	1,824	1,824	1,613	1,613	91	91	91	0	702
Net profit/loss from quarter		-3,513	-361	-199	-342	-212	-1,318	-1,733	360	1,172	1,172	1,172	1,384	1,384	2,905	2,905	0	4,795	4,795
Profit/loss bf from last quarter		0	-3,579	-4,014	-4,291	-4,720	-5,024	-6,461	-8,348	-8,118	-7,076	-6,015	-4,934	-3,616	-2,275	643	3,615	3,615	3,615
Cumulative profit/loss		-3,513	-3,940	-4,212	-4,633	-4,931	-6,342	-8,194	-7,968	-6,946	-5,904	-4,843	-3,550	-2,233	631	3,548	3,615	3,615	3,615
Interest	7.50%	66	-74	-79	-87	-92	-119	-154	-149	-130	-111	-91	-67	-42	12	67	0	0	0
Total		-3,579	-4,014	-4,291	-4,720	-5,024	-6,461	-8,348	-8,118	-7,076	-6,015	-4,934	-3,616	-2,275	643	3,615	3,615	3,615	3,614
Cumulative developer profit carried forward to RV calc																			

SITE 5: S of Cock Lane

Input assumptions		Scenario & option		Affordable 30% = 80% social rented 20% intermediate							
Broxbourne site viability study											
Site details											
Site	5 S of Cock Lane										
Location	Hoddesdon										
Area	2.46	6.08									
	ha	acres									
No dwgs	75										
Density dw/ha	30.5										
Contingency											
	allowance	2.50%	£k								
			269								
Development costs											
	standard % build	13.00%	1,433								
	plus abnormal	0.7%	75								
	Total	14%									
Design fees											
	on build costs	10.0%	1,103								
	on dev costs	8%	121								
	Planning gain	11.720	879								
	£ per dwelling										
Dwellings											
				ave floor space gross sq ft	ave floor space net sq ft	build cost per sq ft	build INDEX =	sales value per sq ft			
Market housing	52.5	70.00%		1,322	1,322	108.50	1,000	319.00			
Affordable soc rent	18.0	24.00%		1,322	1,322	108.50	108.50	140.00			
Aff intermediate	4.5	6.00%		1,322	1,322	108.50	108.50	160.00			
	0.0	0.00%		1,322	1,322	108.50	108.50	0.00			
Aff other	0.0	0.00%		0	0	108.50	108.50	0.00			
Total	75.0	100.00%		99,150	99,150			£26,423,475			
				Floorspace density = 16,311 net sq ft per acre							
Other costs											
Planning				£ per dwelling							
		365.0									
Survey				£ per dwelling							
		200									
Marketing				£ per dwelling							
		0									
Interest											
% per annum				7.50%							
Notes											

SITE 5 LAND COST & PHASING

Land		Iterate to achieve 20.0% profit		Hectare	
Land purchase price	Affordable	No affordable	Affordable	Affordable	No affordable
RV per acre	£ 5,164,174	£ 8,235,167	£ 1,354,767	£ 2,099,258	£ 3,347,629
Dev profit	£ 4,125,309	£ 5,271,537			
Total costs	£ 22,299,291	£ 26,358,438			
profit as % of costs	18.50%	20.00%			

Programme	Year 1				Year 2				Year 3				Year 4				TOTALS					
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4						
Units started																						
Market housing	0	0	6.3	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	52.5	
Affordable soc rent			2.2	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	18.0
Affordable sh oship			0.5	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	4.5
0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Aff other			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0	0	9	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	75.0	
Units 'built' +2Q			0	0	6	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	53
Market housing			0	0	6	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	53
Affordable soc rent			0	0	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	18
Affordable sh oship			0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5
0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aff other			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Units completed +3Q			0	0	0	6	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	53
Market housing			0	0	0	6	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	53
Affordable soc rent			0	0	0	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	18
Affordable sh oship			0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5
0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aff other			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Units purchased +4Q			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Market housing			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Affordable soc rent			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Affordable sh oship			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aff other			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

SITE 5 CASH FLOW AFFORDABLE

	rate	Year 1				Year 2				Year 3				Year 4				TOTALS
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
INCOME																		
Housing sales																		
Market housing		0	0	0	0	0	0	2,657	3,247	3,247	3,247	3,247	3,247	3,247	3,247	3,247	3,247	22,140
Affordable soc rent		0	0	0	0	0	0	400	489	489	489	489	489	489	489	489	489	3,331
Affordable sh oship		0	0	0	0	0	0	114	140	140	140	140	140	140	140	140	140	952
0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aff other		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sales fees		0	0	0	0	0	0	-97	-118	-118	-118	-118	-118	-118	-118	-118	-118	-806
Total income		0	0	0	0	0	0	3,171	3,875	3,875	3,875	3,875	3,875	3,875	3,875	3,875	3,875	26,423
COSTS																		
Land																		
Land acquisition		5,164																5,164
Stamp duty		207																207
Purchase fees		142																142
Total		5,513																5,513
Build costs																		
Market housing		0	0	0	0	904	1,104	1,104	1,104	1,104	1,104	1,104	1,104	1,104	1,104	1,104	1,104	7,530
Affordable soc rent		0	0	0	0	310	379	379	379	379	379	379	379	379	379	379	379	2,582
Affordable sh oship		0	0	0	0	77	95	95	95	95	95	95	95	95	95	95	95	645
0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aff other		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Build contingency	2.5%	0	0	0	0	32	39	39	39	39	39	39	39	39	39	39	39	269
Total		179	179	179	179	105	105	105	105	105	105	105	105	105	105	105	105	11,027
Dev costs																		
Upfront	6.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	717
Build related	6.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	717
Abnormals	1%	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	75
Total		37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	1,508
Fees																		
Fees on build costs	10.0%	0	0	0	0	132	162	162	162	162	162	162	162	162	162	162	162	1,103
Fees on dev costs	8.0%	17	17	17	17	8	8	8	8	8	8	8	8	8	8	8	8	121
Total		17	17	17	17	140	170	170	170	170	170	170	170	170	170	170	170	1,223
PG																		
Planning gain		0	0	0	0	129	129	129	129	129	129	129	129	129	129	129	129	879
Total		0	0	0	0	129	129	129	129	129	129	129	129	129	129	129	129	879
Other																		
Planning	£365	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	27
Survey	£200	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Marketing	£0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total		24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	42
Sales fees																		
b/forward from above		0	0	0	0	0	0	97	118	118	118	118	118	118	118	118	118	806
Total costs		5,771	243	401	436	1,698	2,021	2,118	2,140	2,140	1,897	1,897	1,897	1,897	1,897	1,897	1,897	20,998
Net profit/loss from quarter		-5,771	-243	-401	-436	-1,698	-2,021	1,053	1,736	1,978	1,978	1,978	3,757	3,757	3,757	3,757	3,757	5,425
Profit/loss bf from last quarter		0	-5,879	-6,237	-6,762	-7,333	-9,200	-11,432	-10,574	-9,004	-7,404	-5,528	-3,616	144	3,975	4,049	4,125	
Cumulative profit/loss		-5,771	-6,122	-6,638	-7,198	-9,031	-11,222	-10,379	-8,838	-7,268	-5,426	-3,549	141	3,901	3,975	4,049	4,125	
Interest	7.50%	-108	-115	-124	-135	-169	-210	-195	-166	-136	-102	-67	3	73	75	76	0	-1,301
Charged at Total		7,50%	7,50%	7,50%	7,50%	7,50%	7,50%	7,50%	7,50%	7,50%	7,50%	7,50%	7,50%	7,50%	7,50%	7,50%	7,50%	0,00%
Cumulative developer profit carried forward to RV calc		-5,879	-6,237	-6,762	-7,333	-9,200	-11,432	-10,574	-9,004	-7,404	-5,528	-3,616	144	3,975	4,049	4,125	4,125	4,124

SITE 6: S Hammondstreet Rd

Input assumptions		Scenario & option		Affordable 30% = 80% social rented 20% intermediate							
Broxbourne site viability study											
Site details		6 S Hammondstreet Rd Cheshunt									
Location	ha	2.00									
Area	acres	4.94									
No dwgs		80									
Density dw/ha		40.0									
Contingency		allowance	2.50%								
			£k								
			211								
Development costs		standard % build	13.00%								
			1,122								
		plus abnormal	1.2%								
			100								
Total			14%								
Design fees		on build costs	10.0%								
			863								
		on dev costs	8%								
			98								
Planning gain			7,400								
		£ per dwelling	592								
				Dwellings							
						ave floor space		build		sales	
						gross sq ft		cost		value	
						sq ft		per sq ft		per sq ft	
						net		INDEX =			
						sq ft		1.000			
						966		109.00		279.00	
						966		109.00		140.00	
						966		109.00		160.00	
						966		109.00		0.00	
						0		109.00		0.00	
						77,280		£8,423,520		£18,278,640	
				Total		76,640					
				Floorspace density		= 15.508		net sq ft per acre			
				Other costs							
				Planning		379.4		£ per dwelling			
				Survey		200		£ per dwelling			
				Marketing		0		£ per dwelling			
				Interest							
				% per annum		7.50%					
				Notes							

SITE 6 LAND COST & PHASING

Land		Iterate to achieve 20.0% profit		Hectare	
Land purchase price	Affordable	No affordable	Affordable	No affordable	No affordable
RV per acre	£ 2,384,346	£ 4,138,917	£ 837,498	£ 1,192,173	£ 2,069,459
Dev profit	£ 2,853,132	£ 3,562,195			
Total costs	£ 15,426,558	£ 17,821,415			
profit as % of costs	18.49%	19.99%			

Programme	Year 1				Year 2				Year 3				Year 4				TOTALS					
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4						
Units started																						
Market housing	0	0	3	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	56.0	
Affordable soc rent			0.7	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	19.2
Affordable sh oship			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8
0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Aff other			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0	0	3	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	80.0
Units 'built' +2Q																						
Market housing	0	0	0	0	2	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	56
Affordable soc rent			0	0	1	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	19
Affordable sh oship			0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5
0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aff other			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Units completed +3Q																						
Market housing	0	0	0	0	0	2	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	56
Affordable soc rent			0	0	0	1	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	19
Affordable sh oship			0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5
0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aff other			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Units purchased +4Q																						
Market housing	0	0	0	0	0	0	2	8	8	8	8	8	8	8	8	8	8	8	8	8	8	56
Affordable soc rent			0	0	0	0	1	3	3	3	3	3	3	3	3	3	3	3	3	3	3	19
Affordable sh oship			0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5
0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aff other			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

SITE 6 CASH FLOW AFFORDABLE

rate	Year 1		Year 2		Year 3		Year 4		TOTALS
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
INCOME									
Housing sales									
Market housing	0	0	0	0	2,058	2,058	2,058	2,058	14,968
Affordable soc rent	0	0	0	0	354	354	354	354	2,575
Affordable sh oship	0	0	0	0	101	101	101	101	736
0	0	0	0	0	0	0	0	0	0
Aff other	0	0	0	0	0	0	0	0	0
Sales fees	0	0	0	0	-75	-75	-75	-75	-548
Total income	0	0	0	0	2,513	2,513	2,513	2,513	18,279
COSTS									
Land									
Land acquisition	2,384								2,384
Stamp duty	95								95
Purchase fees	66								66
Total	2,545								2,545
Build costs									
Market housing	0	0	0	0	811	811	811	811	5,896
Affordable soc rent	0	0	0	0	278	278	278	278	2,022
Affordable sh oship	0	0	0	0	69	69	69	69	505
0	0	0	0	0	0	0	0	0	0
Aff other	0	0	0	0	0	0	0	0	0
Build contingency	0	0	0	0	29	29	29	29	211
Total	0	0	0	0	1,119	1,119	1,119	1,119	8,634
Dev costs									
Uprfront	140	140	140	140	77	77	77	77	561
Build related	0	0	21	77					561
Abnormals	50	50							100
Total	190	190	161	217	77	77	77	77	1,223
Fees									
Fees on build costs	0	0	0	0	119	119	119	119	863
Fees on dev costs	15	15	13	17	6	6	6	6	98
Total	15	15	13	17	125	125	125	125	961
PG									
Planning gain					81	81	81	81	592
Total	0	0	0	0	81	81	81	81	592
Other									
Planning	10	10	10	10	0	0	0	0	30
Survey	16				0	0	0	0	16
Marketing	£0	£0	£0	£0	0	0	0	0	0
Total	26	26	26	26	0	0	0	0	46
Sales fees									
b/forward from above	0	0	0	0	75	75	75	75	548
Total costs	2,777	2,777	2,777	2,777	1,546	1,546	1,546	1,546	14,549
Net profit/loss from quarter	-2,777	-2,777	-2,777	-2,777	967	967	967	967	3,729
Profit/loss bf from last quarter	0	-2,829	-3,102	-3,370	-3,756	-4,357	-5,936	-6,869	2,853
Cumulative profit/loss	-2,777	-5,606	-8,708	-12,078	-15,834	-20,191	-26,127	-33,000	2,853
Interest	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	0.00%
Charged at	-52	-57	-62	-69	-80	-109	-126	-111	0
Total	-52	-114	-176	-245	-325	-434	-560	-711	-877
Cumulative developer profit carried forward to RV calc	-2,829	-5,606	-8,708	-12,078	-15,834	-20,191	-26,127	-33,000	2,853

SITE 7: MAFF Depot

Input assumptions		Scenario & option		Affordable 30% = 80% social rented 20% intermediate									
Broxbourne site viability study													
Site details													
Site	7 MAFF depot Hertford Rd												
Location	Hoddesdon												
Area	0.87	2.15											
	ha	acres											
No dwgs	62												
Density dw/ha	71.3												
Contingency													
allowance	5.00%	£k	321										
Development costs													
standard % build	11.50%	£k	775										
plus abnormal	0.5%	£k	35										
Total	12%												
Design fees													
on build costs	10.0%	£k	674										
on dev costs	8%	£k	65										
Planning gain	6.000	£ per dwelling	372										
Dwellings													
Market housing	43.4	70.00%		ave floor space gross sq ft	799	ave floor space net sq ft	679	build cost per sq ft	129.50	build INDEX =	1.000	sales value per sq ft	270.00
Affordable soc rent	14.9	24.00%		799	679	129.50	0.0%	129.50	129.50	140.00			
Aff intermediate	3.7	6.00%		799	679	129.50	0.0%	129.50	129.50	160.00			
	0.0	0.00%		799	679	129.50	0.0%	129.50	129.50	0.00			
Aff other	0.0	0.00%		0	0	129.50	0.0%	129.50	129.50	0.00			
Total	62.0	100.00%		49,538	42,098			£6,415,171		£9,775,156			
Floorspace density = 19,583 net sq ft per acre													
Other costs													
Planning		£ per dwelling	316.8										
Survey		£ per dwelling	500										
Marketing		£ per dwelling	0										
Interest													
% per annum			7.50%										
Notes													

SITE 7 LAND COST & PHASING

Land		Iterate to achieve 20.0% profit		Hectare	
Land purchase price	Affordable	No affordable	Affordable	No affordable	No affordable
RV per acre	£ -858,000	£ 75,200	£ 34,980	£ -£986,207	£ £86,437
Dev profit	£ 1,526,247	£ 1,895,166			
Total costs	£ 8,249,959	£ 9,472,344			
profit as % of costs	18.50%	20.01%			

Programme	Year 1				Year 2				Year 3				Year 4				TOTALS						
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4							
Units started																							
Market housing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Affordable soc rent																							
Affordable sh oship																							
0																							
Aff other																							
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Units 'built' +2Q																							
Market housing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Affordable soc rent																							
Affordable sh oship																							
0																							
Aff other																							
Units completed +3Q																							
Market housing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Affordable soc rent																							
Affordable sh oship																							
0																							
Aff other																							
Units purchased +4Q																							
Market housing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Affordable soc rent																							
Affordable sh oship																							
0																							
Aff other																							
TOTALS	43.4	14.9	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	62.0

SITE 7 CASH FLOW AFFORDABLE

	rate	Year 1				Year 2				Year 3				Year 4				TOTALS
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
INCOME																		
Housing sales																		
Market housing		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Affordable soc rent		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Affordable sh oship		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Aff other		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sales fees		0	0	0	0	0	0	-28	-38	-38	-38	-38	-38	-38	-38	-38	-38	
Total income		0	0	0	0	0	0	946	1,261	1,261	1,261	1,261	1,261	1,261	1,261	1,261	0	
COSTS																		
Land		-858																
Land acquisition		0																
Stamp duty		-24																
Purchase fees																		
Total		-882																
Build costs		0	0	0	0	435	579	579	579	579	579	579	579	579	579	579	0	
Market housing		0	0	0	0	149	199	199	199	199	199	199	199	199	199	199	0	
Affordable soc rent		0	0	0	0	37	50	50	50	50	50	50	50	50	50	50	0	
Affordable sh oship		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Aff other		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Build contingency	5.0%	0	0	0	0	31	41	41	41	41	41	41	41	41	41	41	0	
Total		97	97	97	97	50	50	50	50	50	50	50	50	50	50	50	0	
Dev costs		18	18	18	18													
Upfront	5.8%	0	0	0	0													
Build related	5.8%	0	0	0	0													
Abnormals	1%	0	0	0	0													
Total		18	18	18	18	0	0	0	0	0	0	0	0	0	0	0	0	
Fees		9	9	9	9	65	87	87	87	87	87	87	87	87	87	87	0	
Fees on build costs	10.0%	0	0	0	0													
Fees on dev costs	8.0%	9	9	9	9	4	4	4	4	4	4	4	4	4	4	4	0	
Total		9	9	9	9	65	87	87	87	87	87	87	87	87	87	87	0	
PG		36	36	36	36	48	48	48	48	48	48	48	48	48	48	48	0	
Planning gain		7	7	7	7													
Total		7	7	7	7	0	0	0	0	0	0	0	0	0	0	0	0	
Other		31	31	31	31	0	0	0	0	0	0	0	0	0	0	0	0	
Planning	£317																	
Survey	£500																	
Marketing	£0																	
Total		31	31	31	31	0	0	0	0	0	0	0	0	0	0	0	0	
Sales fees		0	0	0	0	0	0	28	38	38	38	38	38	38	38	38	0	
Total costs		-721	130	188	207	819	1,058	1,086	1,096	1,096	1,096	1,096	1,096	1,096	1,096	1,096	0	
Net profit/loss from quarter		721	-130	-188	-207	-819	-1,058	-140	166	166	268	268	268	268	268	268	0	
Profit/loss bf from last quarter		0	734	616	436	234	-596	-1,685	-1,860	-1,860	-1,450	-1,205	-1,205	-954	274	1,526	1,526	
Cumulative profit/loss		721	604	428	229	-585	-1,654	-1,825	-1,694	-1,423	-937	-937	-937	269	1,498	1,526	1,526	
Interest	7.50%	14	11	8	4	-11	-31	-34	-32	-29	-27	-22	-18	5	28	0	0	
Charged at Total	7.50%	734	616	436	234	-596	-1,685	-1,860	-1,726	-1,589	-1,450	-1,205	-954	274	1,526	1,526	1,526	
Cumulative developer profit carried forward to RV calc		734	616	436	234	-596	-1,685	-1,860	-1,726	-1,589	-1,450	-1,205	-954	274	1,526	1,526	1,526	

SITE 8: Cheshunt School

Input assumptions		Scenario & option		Affordable 30% = 80% social rented 20% intermediate						
Broxbourne site viability study										
Site details										
Site	8 Cheshunt School									
Location	Cheshunt									
Area	1.11 ha	2.74 acres	60							
No dwgs	60									
Density dw/ha	54.1									
Contingency										
	allowance	5.00%	305							
Development costs										
	standard % build	11.50%	736							
	plus abnormal	0.8%	50							
Total	12%									
Design fees										
	on build costs	10.0%	640							
	on dev costs	8%	63							
Planning gain										
	£ per dwelling	8,000	480							
Dwellings										
				ave floor space gross sq ft	ave floor space net sq ft	build cost per sq ft	build INDEX =	sales value per sq ft		
Market housing	42.0	70.00%		923	891	110.00	110.00	263.00		
Affordable soc rent	14.4	24.00%		923	891	110.00	110.00	140.00		
Aff intermediate	3.6	6.00%		923	891	110.00	110.00	160.00		
	0.0	0.00%		923	891	110.00	110.00	0.00		
Aff other	0.0	0.00%		0	0	110.00	110.00	0.00		
Total	60.0	100.00%		55,380	53,460		£6,091,800	£12,151,458		
Floorspace density										
				= 19,491 net sq ft per acre						
Other costs										
				£ per dwelling						
Planning		307.5								
Survey		500		£ per dwelling						
Marketing		0		£ per dwelling						
Interest										
	% per annum	7.50%								
Notes										

SITE 8 LAND COST & PHASING

Programme	Year 1				Year 2				Year 3				TOTALS	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
Units started														
Market housing														
Affordable soc rent														
Affordable sh oship														
0														
Aff other														
TOTAL	0	0	5	11	7.7	7.7	7.7	7.7	0.0	0.0	0.0	0.0	0.0	60.0
Units 'built' +2Q														
Market housing														
Affordable soc rent														
Affordable sh oship														
0														
Aff other														
Units completed +3Q														
Market housing														
Affordable soc rent														
Affordable sh oship														
0														
Aff other														
Units purchased +4Q														
Market housing														
Affordable soc rent														
Affordable sh oship														
0														
Aff other														

Land		Hectare	
Iterate to achieve 20.0% profit			
Affordable	No affordable	Affordable	No affordable
£ 944,275	£ 2,026,846	£ 850,698	£ 1,825,988
£ 344,273	£ 738,967		
£ 1,896,762	£ 2,341,550		
£ 10,255,596	£ 11,719,330		
18.49%	19.98%		

SITE 8 CASH FLOW AFFORDABLE

	rate	Year 1		Year 2		Year 3		Year 4		TOTALS
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
INCOME										
Housing sales		0	0	0	0	0	0	0	0	0
Market housing		0	0	820	1,804	1,804	1,804	1,804	1,804	9,842
Affordable soc rent		0	0	150	329	329	329	329	329	1,796
Affordable sh oship		0	0	43	94	94	94	94	94	513
0		0	0	0	0	0	0	0	0	0
Aff other		0	0	0	0	0	0	0	0	0
Sales fees		0	0	-30	-66	-66	-66	-66	-66	-361
Total income		0	0	1,013	2,228	2,228	2,228	2,228	2,228	12,151
COSTS										
Land		944								944
Stamp duty		38								38
Purchase fees		26								26
Total		1,008								1,008
Build costs		0	0	782	782	782	782	782	782	0
Market housing		0	0	268	268	268	268	268	268	0
Affordable soc rent		0	0	30	67	67	67	67	67	0
Affordable sh oship		0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	0	0
Aff other		0	0	0	0	0	0	0	0	0
Build contingency	5.0%	0	0	56	56	56	56	56	56	0
Total		92	92	92	92	92	92	92	92	368
Dev costs		0	0	31	67	67	67	67	67	368
Upfront	5.8%	0	0	25	25	25	25	25	25	50
Build related	1%	0	0	0	0	0	0	0	0	785
Abnormals		0	0	0	0	0	0	0	0	640
Total		9	9	10	13	13	13	13	13	63
Fees		0	0	40	88	88	88	88	88	702
Fees on build costs	10.0%	0	0	0	0	0	0	0	0	480
Fees on dev costs	8.0%	9	9	10	13	13	13	13	13	480
Total		6	6	6	6	6	6	6	6	18
PG		30								30
Planning gain		0	0	0	0	0	0	0	0	0
Total		£308	£500	£0	£0	£0	£0	£0	£0	48
Other		0	0	0	0	0	0	0	0	0
Planning		0	0	0	0	0	0	0	0	0
Survey		0	0	0	0	0	0	0	0	0
Marketing		0	0	0	0	0	0	0	0	0
Total		1,170	132	179	260	260	260	260	260	361
Sales fees										
b/forward from above										
Total costs		-1,170	-132	-179	-260	-260	-260	-260	-260	9,782
Net profit/loss from quarter		0	-1,192	-1,349	-1,557	-4,094	-3,222	-2,411	-2,94	0
Profit/loss bf from last quarter		-1,170	-1,325	-1,528	-1,817	-2,598	-2,411	-2,94	-2,94	1,897
Cumulative profit/loss		7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	0.00%
Interest	7.50%	-22	-25	-29	-34	-49	-60	-75	-87	0
Charged at		-1,192	-1,349	-1,557	-1,851	-2,646	-3,282	-2,456	-300	1,897
Total										0
Cumulative developer profit carried forward to RV calc		-1,192	-1,349	-1,557	-1,851	-2,646	-3,282	-2,456	-300	1,897
										1,897

SITE 9: Oaklands

Input assumptions		Scenario & option		Affordable 30% = 80% social rented 20% intermediate						
Broxbourne site viability study										
Site details										
Site	9 Oaklands Ind Estate									
Location	Hoddesdon									
Area	0.87	ha								
	2.15	acres								
No dwgs	44									
Density dw/ha	50.6									
Contingency										
allowance	5.00%	£k	242							
Development costs										
standard % build	11.50%	£k	584							
plus abnormal	1.0%	£k	51							
Total	13%									
Design fees										
on build costs	10.0%	£k	508							
on dev costs	8%	£k	51							
Planning gain										
£ per dwelling	8,523		375							
Dwellings										
				ave floor space gross sq ft	ave floor space net sq ft	build cost per sq ft	build INDEX =	sales value per sq ft		
Market housing	30.8	70.00%		990	953	111.00	1.000	236.00		
Affordable soc rent	10.6	24.00%		990	953	111.00	111.00	140.00		
Aff intermediate	2.6	6.00%		990	953	111.00	111.00	160.00		
	0.0	0.00%		990	953	111.00	111.00	0.00		
Aff other	0.0	0.00%		0	0	111.00	111.00	0.00		
Total	44.0	100.00%		43,560	41,932		£4,835,160	£8,738,629		
Floorspace density										
				= 19,505 net sq ft per acre						
Other costs										
Planning		£ per dwelling	515.0							
Survey		£ per dwelling	500							
Marketing		£ per dwelling	0							
Interest										
% per annum			7.50%							
Notes										

SITE 9 LAND COST & PHASING

Land		Iterate to achieve 20.0% profit																
		Affordable				No affordable				Hectare								
		£ 144,765				£ 802,475				Affordable				No affordable				
		£ 67,340				£ 373,284				£ 166,397				£ 922,385				
		£ 1,364,687				£ 1,649,851												
		£ 7,374,767				£ 8,246,926												
profit as % of costs		18.50%				20.01%												
Programme	Year 1	Year 2				Year 3				Year 4				TOTALS				
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4					
Units started																		
Market housing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Affordable soc rent		2.8	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Affordable sh oship		1.0	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
0		0.2	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Aff other		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL		4	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Units 'built' +2Q																		
Market housing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Affordable soc rent		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Affordable sh oship		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aff other		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Units completed +3Q																		
Market housing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Affordable soc rent		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Affordable sh oship		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aff other		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Units purchased +4Q																		
Market housing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Affordable soc rent		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Affordable sh oship		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aff other		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

SITE 9 CASH FLOW AFFORDABLE

	rate	Year 1				Year 2				Year 3				Year 4				TOTALS
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
INCOME																		
Housing sales		0	0	0	0	0	0	630	1,574	1,574	1,574	0	0	0	0	0	0	6,927
Market housing		0	0	0	0	0	128	320	320	320	320	0	0	0	0	0	0	1,409
Affordable soc rent		0	0	0	0	0	37	91	91	91	91	0	0	0	0	0	0	403
Affordable sh oship		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aff other		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sales fees		0	0	0	0	0	0	-23	-58	-58	-58	0	0	0	0	0	0	-256
Total income		0	0	0	0	0	794	1,986	1,986	1,986	1,986	0	0	0	0	0	0	8,739
COSTS																		
Land		145																145
Land acquisition		1																1
Stamp duty		4																4
Purchase fees																		150
Total		145																3,385
Build costs		0	0	0	0	308	769	769	769	769	769	0	0	0	0	0	0	1,160
Market housing		0	0	0	0	105	264	264	264	264	264	0	0	0	0	0	0	290
Affordable soc rent		0	0	0	0	26	66	66	66	66	66	0	0	0	0	0	0	0
Affordable sh oship		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aff other		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Build contingency	5.0%	0	0	0	0	22	55	55	55	55	55	0	0	0	0	0	0	242
Total		73	73	73	73	66	66	66	66	66	66	0	0	0	0	0	0	5,077
Dev costs		0	0	0	0	46	115	115	115	115	115	0	0	0	0	0	0	292
Upfront	5.8%	0	0	0	0	5	5	5	5	5	5	0	0	0	0	0	0	292
Build related	5.8%	25	25	25	25	85	85	85	85	85	85	0	0	0	0	0	0	51
Abnormals	1%																	635
Total		0	0	0	0	46	115	115	115	115	115	0	0	0	0	0	0	508
Fees		8	8	8	8	5	5	5	5	5	5	0	0	0	0	0	0	51
Fees on build costs	10.0%																	51
Fees on dev costs	8.0%																	558
Total		8	8	8	8	85	85	85	85	85	85	0	0	0	0	0	0	375
PG																		375
Planning gain																		375
Total		8	8	8	8	0	0	0	0	0	0	0	0	0	0	0	0	23
Other		22	22	22	22	0	0	0	0	0	0	0	0	0	0	0	0	22
Planning	£515																	45
Survey	£500																	45
Marketing	£0																	23
Total		0	0	0	0	0	0	23	58	58	58	0	0	0	0	0	0	45
Sales fees		286	114	149	236	665	1,426	1,449	1,327	1,327	58	58	58	0	0	0	0	256
Total costs		286	114	149	236	665	1,426	1,449	1,327	1,327	58	58	58	0	0	0	0	7,095
Net profit/loss from quarter																		
		-286	-114	-149	-236	-665	-1,426	-655	659	1,928	1,928	0	0	0	0	0	0	1,643
Profit/loss bf from last quarter		0	-291	-413	-572	-823	-1,515	-2,997	-3,720	-3,118	-2,506	-588	1,365	1,365	1,365	1,365	1,365	1,365
Cumulative profit/loss		-286	-405	-562	-808	-1,488	-2,941	-3,651	-3,061	-2,460	-578	1,339	1,365	1,365	1,365	1,365	1,365	1,365
Interest	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Charged at		-5	-8	-11	-15	-28	-55	-68	-57	-46	-11	25	0	0	0	0	0	-279
Total		-291	-413	-572	-823	-1,515	-2,997	-3,720	-3,118	-2,506	-588	1,365	1,365	1,365	1,365	1,365	1,365	1,364
Cumulative developer profit carried forward to RV calc																		

SITE 10: Petron Amusements

Input assumptions		Scenario & option		Affordable 30% = 80% social rented 20% intermediate						
Broxbourne site viability study										
Site details										
Site	10A Petron Amusements									
Location	Hoddesdon									
Area	0.31	ha								
	0.77	acres								
No dwgs	33									
Density dw/ha	106.5									
Contingency										
allowance	5.00%	£k	209							
Development costs										
standard % build	10.00%		438							
plus abnormal	1.2%		50							
Total	11%									
Design fees										
on build costs	10.0%		438							
on dev costs	8%		39							
Planning gain	5.455	£ per dwelling	180							
Dwellings										
				ave floor space gross sq ft	ave floor space net sq ft	build cost per sq ft	build INDEX =	sales value per sq ft		
Market housing	23.1			966	821	131.00	1.000	270.00		
Affordable soc rent	7.9			966	821	131.00	131.00	140.00		
Aff intermediate	2.0			966	821	131.00	131.00	160.00		
	0.0			966	821	131.00	131.00	0.00		
Aff other	0.0			0	0	131.00	131.00	0.00		
Total	33.0			31,878	27,093		£4,176,018	£6,290,995		
Floorspace density = 35.369 net sq ft per acre										
Other costs										
Planning	515.0	£ per dwelling								
Survey	500	£ per dwelling								
Marketing	0	£ per dwelling								
Interest										
% per annum	7.50%									
Notes										

SITE 10 LAND COST & PHASING

Programme	Year 1				Year 2				Year 3				Year 4				TOTALS					
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4						
Units started																						
Market housing	0	0	0.7	5.6	5.6	5.6	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.1
Affordable soc rent			0.2	1.9	1.9	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.9
Affordable sh oship			0.1	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Aff other			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0	0	1.8	8.8	8.8	8.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.0
Units 'built' +2Q																						
Market housing	0	0	0	6	6	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23
Affordable soc rent			0	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Affordable sh oship			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aff other			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Units completed +3Q																						
Market housing	0	0	0	6	6	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23
Affordable soc rent			0	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Affordable sh oship			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aff other			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Units purchased +4Q																						
Market housing	0	0	0	6	6	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23
Affordable soc rent			0	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Affordable sh oship			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aff other			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Iterate to achieve 20.0% profit

Hectare

Affordable **-547,227** No affordable **60,644**

Affordable **-£1,765,249** No affordable **£195,627**

RV per acre **-714,386**

-£1,765,249 **£195,627**

Dev profit **£ 981,674**

1,218,327

Total costs **£ 5,310,146**

6,097,608

profit as % of costs **18.49%**

19.98%

SITE 10 CASH FLOW AFFORDABLE

	rate	Year 1				Year 2				Year 3				Year 4				TOTALS
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
INCOME																		
Housing sales		0	0	0	0	0	0	155	1,241	1,241	1,241	1,241	0	0	0	0	0	5,121
Market housing		0	0	0	0	0	0	28	221	221	221	221	0	0	0	0	0	910
Affordable soc rent		0	0	0	0	0	0	8	63	63	63	63	0	0	0	0	0	260
Affordable sh oship		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aff other		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sales fees		0	0	0	0	0	0	-6	-45	-45	-45	-45	0	0	0	0	0	-188
Total income		0	0	0	0	0	0	191	1,525	1,525	1,525	1,525	0	0	0	0	0	6,291
COSTS																		
Land		-547																-547
Stamp duty		0																0
Purchase fees		-15																-15
Total		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-562
Build costs		0	0	0	0	89	709	709	709	709	709	709	0	0	0	0	0	2,923
Market housing		0	0	0	0	30	243	243	243	243	243	243	0	0	0	0	0	1,002
Affordable soc rent		0	0	0	0	8	61	61	61	61	61	61	0	0	0	0	0	251
Affordable sh oship		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aff other		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Build contingency	5.0%	0	0	0	0	6	51	51	51	51	51	51	0	0	0	0	0	209
Total		55	55	55	55	53	53	53	53	53	53	53	0	0	0	0	0	4,385
Dev costs		0	0	0	0	13	106	106	106	106	106	106	0	0	0	0	0	219
Upfront	5.0%	0	0	0	0	25	25	25	25	25	25	25	0	0	0	0	0	219
Build related	1%	0	0	0	0	4	4	4	4	4	4	4	0	0	0	0	0	50
Abnormals		0	0	0	0	4	4	4	4	4	4	4	0	0	0	0	0	489
Total		6	6	6	6	4	4	4	4	4	4	4	0	0	0	0	0	438
Fees		0	0	0	0	44	44	44	44	44	44	44	0	0	0	0	0	39
Fees on build costs	10.0%	0	0	0	0	4	4	4	4	4	4	4	0	0	0	0	0	478
Fees on dev costs	8.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	180
Total		6	6	6	6	4	4	4	4	4	4	4	0	0	0	0	0	180
PG		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
Planning gain		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
Total		6	6	6	6	6	6	6	6	6	6	6	0	0	0	0	0	33
Other		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Planning	£515	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Survey	£500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Marketing	£0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sales fees	b/forward from above	-454	92	77	160	247	1,270	1,276	1,215	1,215	45	45	45	0	0	0	0	188
Total costs		-454	92	77	160	247	1,270	1,276	1,215	1,215	45	45	45	0	0	0	0	5,190
Net profit/loss from quarter		454	-92	-77	-160	-247	-1,270	-1,085	310	310	1,480	1,480	0	0	0	0	0	1,101
Profit/loss bf from last quarter		0	462	377	305	148	-101	-1,397	-2,529	-2,260	-1,986	-516	982	982	982	982	982	982
Cumulative profit/loss		454	370	300	145	-99	-1,371	-2,482	-2,219	-1,950	-507	964	982	982	982	982	982	982
Interest	7.50%	9	7	6	3	-2	-26	-47	-42	7.50%	7.50%	7.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Charged at		7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total		462	377	305	148	-101	-1,397	-2,529	-2,260	-1,986	-516	982	982	982	982	982	982	981
Cumulative developer profit carried forward to RV calc																		-120

SITE 11: Eleanor Cross Road

SITE 11 LAND COST & PHASING

Programme		Year 1				Year 2				Year 3				Year 4				TOTALS	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
Units started	Market housing	0	0	2.0	2.6	2.6	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.8
	Affordable soc rent			0.7	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4
	Affordable sh oship			0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8
	Church + ancillary			0.2	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
TOTAL		0	0	3	4	4	4	0	0	0	0	0	0	0	0	0	0	0	15.0
Units 'built' +2Q	Market housing			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
	Affordable soc rent			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	Affordable sh oship			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	Church + ancillary			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Units completed +3Q	Market housing			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
	Affordable soc rent			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	Affordable sh oship			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	Church + ancillary			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Units purchased +4Q	Market housing			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
	Affordable soc rent			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	Affordable sh oship			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	Church + ancillary			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Land	Iterate to achieve 20.0% profit		Hectare	
	Affordable	No affordable	Affordable	No affordable
Land purchase price	£ -1,862,947	£ -1,638,676		
RV per acre	£ -10,770,350	£ -9,473,761	-£26,613,534	-£23,409,663
Dev profit	£ 381,228	£ 475,453		
Total costs	£ 2,091,317	£ 2,379,057		
profit as % of costs	18.23%	19.98%		

SITE 11 CASH FLOW AFFORDABLE

	rate	Year 1				Year 2				Year 3				Year 4				TOTALS
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
INCOME																		
Housing sales		0	0	0	0	0	0	0	0	533	533	0	0	0	0	0	0	1,998
Market housing		0	0	0	0	0	0	0	0	98	98	0	0	0	0	0	0	369
Affordable soc rent		0	0	0	0	0	0	0	0	28	28	0	0	0	0	0	0	105
Affordable sh oship		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Church + ancilary		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sales fees		0	0	0	0	0	0	-15	-20	-20	-20	0	0	0	0	0	0	-73
Total income		0	0	0	0	0	0	494	659	659	659	0	0	0	0	0	0	2,472
COSTS																		
Land		-1,863																-1,863
Land acquisition		0																0
Stamp duty		-51																-51
Purchase fees																		
Total		0	0	0	0	0	0	388	388	388	388	0	0	0	0	0	0	1,457
Build costs		0	0	0	0	291	388	133	133	133	133	0	0	0	0	0	0	499
Affordable soc rent		0	0	0	0	100	133	33	33	33	33	0	0	0	0	0	0	125
Affordable sh oship		0	0	0	0	25	33	0	0	0	0	0	0	0	0	0	0	0
Church + ancilary		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Build contingency	5.0%	0	0	0	0	161	214	214	214	214	214	0	0	0	0	0	0	803
Total		34	34	34	34	29	38	36	36	36	36	0	0	0	0	0	0	144
Dev costs		34	34	34	34	36	36	0	0	0	0	0	0	0	0	0	0	136
Upfront	4.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	136
Build related	4.5%	142	142	142	142	142	142	0	0	0	0	0	0	0	0	0	0	285
Abnormals	9%	0	0	0	0	61	81	81	81	81	81	0	0	0	0	0	0	557
Total		14	14	5	6	3	3	81	81	81	81	0	0	0	0	0	0	303
Fees		14	14	5	6	3	3	0	0	0	0	0	0	0	0	0	0	45
Fees on build costs	10.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fees on dev costs	8.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total		3	3	17	22	22	22	0	0	0	0	0	0	0	0	0	0	347
PG		3	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	84
Planning gain		8	8	8	8	0	0	0	0	0	0	0	0	0	0	0	0	84
Other		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Planning	£515	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Survey	£500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Marketing	£0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total		0	0	0	0	0	0	15	20	20	20	0	0	0	0	0	0	15
Sales fees	b/forward from above	-1,714	193	86	98	728	950	903	908	20	20	0	0	0	0	0	0	73
Total costs		-1,714	193	86	98	728	950	903	908	20	20	0	0	0	0	0	0	2,191
Net profit/loss from quarter																		
Profit/loss bf from last quarter		1,714	-193	-86	-98	-728	-950	-409	-249	640	640	0	0	0	0	0	0	281
Cumulative profit/loss		0	1,746	1,582	1,524	1,453	739	-215	-635	-900	-265	381	381	381	381	381	381	381
Interest	7.50%	32	29	28	27	14	-4	-12	-17	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	0.00%
Charged at		1,746	1,582	1,524	1,453	739	-215	-635	-900	-265	381	381	381	381	381	381	381	381
Total		1,746	1,582	1,524	1,453	739	-215	-635	-900	-265	381	381	381	381	381	381	381	381
Cumulative developer profit carried forward to RV calc		1,746	1,582	1,524	1,453	739	-215	-635	-900	-265	381	381	381	381	381	381	381	381

SITE 12: Eaton Gardens

Input assumptions		Scenario & option	
Broxbourne site viability study		12 Eaton Gardens Broxbourne	
Site Location	Area	ha	acres
		0.78	1.93
No dwgs	Density dw/ha	13	16.7
Contingency		£k	
allowance		5.00%	152
Development costs		383	
standard % build		12.00%	
plus abnormal		0.0%	0
Total		12%	
Design fees		319	
on build costs		10.0%	
on dev costs		8%	31
Planning gain		189	
£ per dwelling		14,538	

Dwellings		ave floor space		gross		net		build cost		build INDEX =		sales value	
		sq ft	sq ft	sq ft	sq ft	sq ft	sq ft	per sq ft	per sq ft			per sq ft	per sq ft
Market housing	9.1	2,186	2,186	2,186	2,186	2,186	2,186	107.00	107.00	1,000	107.00	273.00	273.00
Affordable soc rent	3.1	2,186	2,186	2,186	2,186	2,186	2,186	107.00	107.00	107.00	107.00	140.00	140.00
Aff intermediate	0.8	2,186	2,186	2,186	2,186	2,186	2,186	107.00	107.00	107.00	107.00	160.00	160.00
	0.0	2,186	2,186	2,186	2,186	2,186	2,186	107.00	107.00	107.00	107.00	0.00	0.00
	0.0	6,688	5,484	6,688	5,484	6,688	5,484	120.00	120.00	0.00	0.00	0.00	0.00
Total	13.0	28,418	28,418	28,418	28,418	28,418	28,418	100.00%	100.00%	£3,040,726	£3,040,726	£6,658,337	£6,658,337

Floorspace density = 14,744 net sq ft per acre

Other costs		£ per dwelling	
Planning		515.0	
Survey		500	
Marketing		0	
Interest	% per annum	7.50%	

SITE 12 LAND COST & PHASING

Programme	Year 1				Year 2				Year 3				Year 4				TOTALS				
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4					
	Hectare																				
Units started	<p>Iterate to achieve 20.0% profit</p> <p>Affordable No affordable Affordable No affordable</p> <p>£ 923,157 £ 1,551,752</p> <p>£ 478,970 £ 805,110 £ 1,183,535 £ 1,989,426</p>																				
Market housing	0	0	0	0	2.1	2.1	2.1	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.1
Affordable soc rent			0.7	2.1	0.7	0.7	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1
Affordable sh oship			0.1	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8
0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0	0	1	3	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	13.0
Units 'built' +2Q	<p>Affordable No affordable</p> <p>£ 1,040,266 £ 1,297,269</p> <p>£ 5,618,896 £ 6,461,670</p> <p>18.51% 20.08%</p>																				
Market housing	0	0	0	0	1	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	9
Affordable soc rent			0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	3
Affordable sh oship			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Units completed +3Q	<p>Affordable No affordable</p> <p>£ 1,040,266 £ 1,297,269</p> <p>£ 5,618,896 £ 6,461,670</p> <p>18.51% 20.08%</p>																				
Market housing	0	0	0	0	0	1	2	2	2	2	0	0	0	0	0	0	0	0	0	0	9
Affordable soc rent			0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	3
Affordable sh oship			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Units purchased +4Q	<p>Affordable No affordable</p> <p>£ 1,040,266 £ 1,297,269</p> <p>£ 5,618,896 £ 6,461,670</p> <p>18.51% 20.08%</p>																				
Market housing	0	0	0	0	0	0	1	2	2	2	2	0	0	0	0	0	0	0	0	0	9
Affordable soc rent			0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	3
Affordable sh oship			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

SITE 12 CASH FLOW AFFORDABLE

	rate	Year 1				Year 2				Year 3				Year 4				TOTALS
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
INCOME																		
Housing sales	Market housing	0	0	0	0	0	0	418	1,253	1,253	1,253	0	0	0	0	0	0	5,431
	Affordable soc rent	0	0	0	0	0	0	73	220	220	220	0	0	0	0	0	0	965
	Affordable sh oship	0	0	0	0	0	0	21	63	63	63	0	0	0	0	0	0	273
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Sales fees	0	0	0	0	0	0	-15	-46	-46	-46	0	0	0	0	0	0	-199
Total income		0	0	0	0	0	0	512	1,537	1,537	1,537	0	0	0	0	0	0	6,658
COSTS																		
Land	Land acquisition	923																923
	Stamp duty	37																37
	Purchase fees	25																25
	Total	0	0	0	0	0	0	491	491	491	491	0	0	0	0	0	0	985
Built costs	Market housing	0	0	0	0	0	0	168	168	168	168	0	0	0	0	0	0	2,129
	Affordable soc rent	0	0	0	0	0	0	42	42	42	42	0	0	0	0	0	0	730
	Affordable sh oship	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	182
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Build contingency	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	35	35	35	35	0	0	0	0	0	0	152
Dev costs	Upfront	48	48	48	48	44	44	44	44	44	44	0	0	0	0	0	0	192
	Build related	0	0	15	15	44	44	44	44	44	44	0	0	0	0	0	0	192
	Abnormals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	74	74	74	74	0	0	0	0	0	0	383
Fees	Fees on build costs	4	4	5	7	4	4	4	4	4	4	0	0	0	0	0	0	31
	Fees on dev costs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	4	4	5	7	4	4	4	4	4	4	0	0	0	0	0	0	31
PG	Planning gain	2	2	15	44	44	44	44	44	44	44	0	0	0	0	0	0	189
	Total	2	2	15	44	44	44	44	44	44	44	0	0	0	0	0	0	189
Other	Planning	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	7
	Survey	7	7	7	7	0	0	0	0	0	0	0	0	0	0	0	0	7
	Marketing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	9	9	9	9	0	0	0	0	0	0	0	0	0	0	0	0	13
Sales fees	b/forward from above	0	0	0	0	0	0	15	46	46	46	0	0	0	0	0	0	199
Total costs		1,046	54	84	143	362	902	917	856	856	46	46	0	0	0	0	0	5,312
Net profit/loss from quarter		-1,046	-54	-84	-143	-362	-902	-405	680	1,491	1,491	0	0	0	0	0	0	1,346
Profit/loss bf from last quarter		0	-1,065	-1,140	-1,248	-1,417	-1,811	-2,764	-3,228	-2,596	-1,952	-470	1,040	1,040	1,040	1,040	1,040	0
Cumulative profit/loss		-1,046	-1,119	-1,225	-1,391	-1,778	-2,713	-3,169	-2,548	-1,916	-461	1,021	1,040	1,040	1,040	1,040	1,040	0
Interest	Charged at	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	0.00%
	Total	-20	-21	-23	-26	-33	-51	-59	-48	-36	-9	19	0	0	0	0	0	-306
Cumulative developer profit carried forward to RV calc		-1,065	-1,140	-1,248	-1,417	-1,811	-2,764	-3,228	-2,596	-1,952	-470	1,040	1,040	1,040	1,040	1,040	1,040	1,039

SITE 13: Woolpack PH

Input assumptions		Scenario & option		Affordable 30% = 80% social rented 20% intermediate							
Broxbourne site viability study											
Site details		13 Woolpack PH									
Site	Location	Area	ha	8.5	65.00%						
			acres	2.9	22.29%						
No dwgs				0.7	5.57%						
Density dw/ha				0.0	0.00%						
				0.9	7.14%						
		£k									
Contingency	allowance	5.00%	84								
Development costs		194									
standard % build		11.00%									
plus abnormal		1.0%	18								
Total		12%									
Design fees		177									
on build costs		10.0%									
on dev costs		8%	17								
Planning gain		84									
£ per dwelling		6,462									
				Dwellings							
				ave floor space gross sq ft	809	770	112.00	112.00	1.000	sales value per sq ft	267.00
				net sq ft	770	770	112.00	112.00	112.00	140.00	160.00
				build cost per sq ft	0.0%	0.0%	0.0%	0.0%	0.0%	0.00	0.00
				build INDEX =	112.00	112.00	112.00	112.00	95.00	260.00	260.00
				Total	13.0	100.00%	15,974	14,386	£1,683,543	£3,462,281	
				Floorspace density	= 32,343 net sq ft per acre						
				Other costs							
				Planning	515.0		£ per dwelling				
				Survey	500		£ per dwelling				
				Marketing	0		£ per dwelling				
				Interest							
				% per annum	7.50%						
				Notes							

SITE 13 LAND COST & PHASING

Programme	Land																
	Year 1				Year 2				Year 3				Year 4				
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Units started	0	0	0	0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	TOTALS
Market housing			0.7	2.0													8.5
Affordable soc rent			0.2	0.7													2.9
Affordable sh oship			0.1	0.2													0.7
0			0.0	0.0													0.0
Retail/office unit			0.1	0.2													0.0
TOTAL			1	3													13.0
Units 'built' +2Q			0	0	1	2	2	2	2	0	0	0	0	0	0	0	8
Market housing			0	0													
Affordable soc rent			0	0													3
Affordable sh oship			0	0													1
0			0	0													0
Retail/office unit			0	0													0
Units completed +3Q			0	0	0	1	2	2	2	2	0	0	0	0	0	0	8
Market housing			0	0													
Affordable soc rent			0	0													3
Affordable sh oship			0	0													1
0			0	0													0
Retail/office unit			0	0													0
Units purchased +4Q			0	0	0	0	1	2	2	2	2	0	0	0	0	0	8
Market housing			0	0													
Affordable soc rent			0	0													3
Affordable sh oship			0	0													1
0			0	0													0
Retail/office unit			0	0													0

Iterate to achieve 20.0% profit		Hectare	
Affordable	No affordable	Affordable	No affordable
£ 415,707	£ 561,732	£ 2,309,483	£ 3,120,732
£ 934,635	£ 1,262,943	£ 2,309,483	£ 3,120,732
£ 534,689	£ 632,908		
£ 2,928,417	£ 3,173,223		
18.26%	19.95%		

SITE 13 CASH FLOW AFFORDABLE

	rate	Year 1				Year 2				Year 3				Year 4				TOTALS
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
INCOME																		
Housing sales		0	0	0	0	0	0	134	401	401	401	401	401	0	0	0	0	1,737
Market housing		0	0	0	0	0	24	72	72	72	72	72	72	0	0	0	0	312
Affordable soc rent		0	0	0	0	0	7	21	21	21	21	21	21	0	0	0	0	89
Affordable sh oship		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Retail/office unit		0	0	0	0	0	102	305	305	305	305	305	305	0	0	0	0	1,323
Sales fees		0	0	0	0	0	-5	-15	-15	-15	-15	-15	-15	0	0	0	0	-64
Total income		0	0	0	0	0	266	799	799	799	799	799	799	0	0	0	0	3,462
COSTS																		
Land		416																416
Stamp duty		12																12
Purchase fees		11																11
Total		0	0	0	0	0	177	177	177	177	177	177	177	0	0	0	0	440
Build costs		0	0	0	0	0	61	61	61	61	61	61	61	0	0	0	0	766
Market housing		0	0	0	0	0	15	15	15	15	15	15	15	0	0	0	0	263
Affordable soc rent		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	66
Affordable sh oship		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Retail/office unit		0	0	0	0	0	136	136	136	136	136	136	136	0	0	0	0	590
Build contingency	5.0%	0	0	0	0	0	6	19	19	19	19	19	19	0	0	0	0	84
Total		24	24	24	24	22	22	22	22	22	22	22	22	0	0	0	0	1,768
Dev costs		24	24	24	24	22	22	22	22	22	22	22	22	0	0	0	0	97
Upfront	5.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
Build related	5.5%	9	9	9	9	9	9	9	9	9	9	9	9	0	0	0	0	212
Abnormals	1%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	177
Total		3	3	3	3	2	2	2	2	2	2	2	2	0	0	0	0	17
Fees		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	194
Fees on build costs	10.0%	3	3	3	3	2	2	2	2	2	2	2	2	0	0	0	0	17
Fees on dev costs	8.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total		2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	84
PG		2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	84
Planning gain		7	7	7	7	0	0	0	0	0	0	0	0	0	0	0	0	7
Total		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Other		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Planning	£515	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Survey	£500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Marketing	£0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total		484	38	43	70	193	492	497	463	463	463	463	463	15	15	15	15	64
Sales fees		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total costs		-484	-38	-43	-70	-193	-492	-231	336	336	336	336	336	0	0	0	0	2,774
Net profit/loss from quarter		0	-493	-541	-595	-677	-887	-1,405	-1,666	-1,666	-1,666	-1,666	-1,666	0	0	0	0	688
Profit/loss bf from last quarter		0	-493	-541	-595	-677	-887	-1,405	-1,666	-1,666	-1,666	-1,666	-1,666	-260	535	535	535	535
Cumulative profit/loss		-484	-531	-584	-665	-870	-1,379	-1,636	-1,331	525	535	535	535	535	535	535	535	535
Interest	7.50%	-9	-10	-11	-12	-16	-26	-31	-25	7.50%	7.50%	7.50%	7.50%	0.00%	0.00%	0.00%	0.00%	0.00%
Charged at		7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	0.00%	0.00%	0.00%	0.00%	0.00%
Total		-493	-541	-595	-677	-887	-1,405	-1,666	-1,356	-1,039	-260	535	535	535	535	535	535	534
Cumulative developer profit carried forward to RV calc		-493	-541	-595	-677	-887	-1,405	-1,666	-1,356	-1,039	-260	535	535	535	535	535	535	534

SITE 14: Groom Road

Input assumptions		Scenario & option		Affordable 30% = 80% social rented 20% intermediate								
Broxbourne site viability study												
Site details												
Site	14A Groom Rd Garages											
Location	Wormley											
Area	0.18 ha											
	0.44 acres											
No dwgs	10											
Density dw/ha	55.6											
Contingency		£k										
allowance	5.00%	53										
Development costs												
standard % build	12.00%	134										
plus abnormal	1.3%	15										
Total	13%											
Design fees												
on build costs	10.0%	112										
on dev costs	8%	12										
Planning gain												
£ per dwelling	23,000	230										
Dwellings												
				ave floor space gross sq ft	net sq ft	build cost per sq ft	build INDEX =	sales value per sq ft				
Market housing	7.0	70.00%		869	801	122.50	1.000	235.00				
Affordable soc rent	2.4	24.00%		869	801	122.50	122.50	140.00				
Aff intermediate	0.6	6.00%		869	801	122.50	122.50	160.00				
	0.0	0.00%		869	801	122.50	122.50	0.00				
Church + ancillarity	0.0	0.00%		6,688	5,484	120.00	120.00	0.00				
Total	10.0	100.00%		8,690	8,010		£1,064,525	£1,663,677				
				Floorspace density = 18,009 net sq ft per acre								
Other costs												
Planning		515.0		£ per dwelling								
Survey		500		£ per dwelling								
Marketing		0		£ per dwelling								
Interest												
% per annum		7.50%										
				Notes								

SITE 14 LAND COST & PHASING

Programme	Land																				
	Year 1				Year 2				Year 3				Year 4				TOTALS				
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4					
Units started	0	0	2	4	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0
Market housing			1.4	2.8																	
Affordable soc rent			0.5	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4
Affordable sh oship			0.1	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Church + ancillary			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0	0	2	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10.0
Units 'built' +2Q			0	0	1	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Market housing			0	0																	
Affordable soc rent			0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Affordable sh oship			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Church + ancillary			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Units completed +3Q			0	0	0	1	3	3	0	0	0	0	0	0	0	0	0	0	0	0	7
Market housing			0	0																	
Affordable soc rent			0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
Affordable sh oship			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Church + ancillary			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Units purchased +4Q			0	0	0	0	1	3	3	0	0	0	0	0	0	0	0	0	0	0	7
Market housing			0	0																	
Affordable soc rent			0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
Affordable sh oship			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Church + ancillary			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Iterate to achieve 20.0% profit		Hectare	
Affordable	No affordable	Affordable	No affordable
£ -295,565	£ -168,297		
£ -664,520	£ -378,382	£ -1,642,030	£ -934,982
£ 259,833	£ 313,544		
£ 1,404,519	£ 1,569,481		
18.50%	19.98%		

SITE 14 CASH FLOW AFFORDABLE

	rate	Year 1				Year 2				Year 3				Year 4				TOTALS
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
INCOME																		
Housing sales	Market housing	0	0	0	0	0	0	264	527	527	0	0	0	0	0	0	0	1,318
	Affordable soc rent	0	0	0	0	0	0	54	108	108	0	0	0	0	0	0	0	269
	Affordable sh oship	0	0	0	0	0	0	15	31	31	0	0	0	0	0	0	0	77
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Church + ancillary	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Sales fees	0	0	0	0	0	0	-10	-19	-19	0	0	0	0	0	0	0	-49
Total income																		
1,664																		
COSTS																		
Land	Land acquisition	-296																-296
	Stamp duty	0																0
	Purchase fees	-8																-8
	Total																	-304
Build costs	Market housing	0	0	0	0	149	298	298	0	0	0	0	0	0	0	0	0	745
	Affordable soc rent	0	0	0	0	51	102	102	0	0	0	0	0	0	0	0	0	255
	Affordable sh oship	0	0	0	0	13	26	26	0	0	0	0	0	0	0	0	0	64
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Church + ancillary	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Build contingency	0	0	0	0	11	21	21	0	0	0	0	0	0	0	0	0	53
	Total																	1,118
Dev costs	Upfront	17	17	17	17	27	0	0	0	0	0	0	0	0	0	0	0	67
	Build related	0	0	13	27													15
	Abnormals	7	7															149
	Total																	112
Fees	Fees on build costs	0	0	0	0	22	45	45	0	0	0	0	0	0	0	0	0	12
	Fees on dev costs	2	2	2	3	2	0	0	0	0	0	0	0	0	0	0	0	124
	Total																	230
PG	Planning gain			46	92	92	0	0	0	0	0	0	0	0	0	0	0	230
Other	Planning	2	2	2														5
	Survey	5																5
	Marketing																	0
	Total																	10
Sales fees	b/forward from above	0	0	0	0	0	0	10	19	19	0	0	0	0	0	0	0	49
	Total costs	-271	28	80	139	367	492	502	19	19	0	0	0	0	0	0	0	1,375
Net profit/loss from quarter																		
		271	-28	-80	-139	-367	-492	-169	646	646	0	0	0	0	0	0	0	289
Profit/loss bf from last quarter		0	276	253	176	38	-335	-842	-1,030	-391	260	260	260	260	260	260	260	260
Cumulative profit/loss		271	249	173	37	-329	-827	-1,011	-384	255	260	260	260	260	260	260	260	260
Interest	Charged at	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	Total	5	5	3	1	-6	-16	-19	-7	5	0	0	0	0	0	0	0	-29
Cumulative developer profit carried forward to RV calc		276	253	176	38	-335	-842	-1,030	-391	260	260	260	260	260	260	260	260	260

SITE 15: Burnside

Input assumptions		Scenario & option		Affordable 30% = 80% social rented 20% intermediate						
Broxbourne site viability study										
Site details										
Site	15A Burnside garages									
Location	Hoddesdon									
Area	0.11 ha									
	0.27 acres									
No dwgs	7									
Density dw/ha	63.6									
Contingency		£k								
allowance	5.00%	37								
Development costs										
standard % build	11.00%	86								
plus abnormal	1.9%	15								
Total	13%									
Design fees										
on build costs	10.0%	78								
on dev costs	8%	8								
Planning gain										
£ per dwelling	7,286	51								
				Dwellings						
				Dwellings						
				ave floor space gross sq ft						
				net sq ft						
				build cost per sq ft						
				INDEX =						
				sales value per sq ft						
				70.00%						
				22.50%						
				7.50%						
				0.00%						
				0.00%						
				0.00%						
				0.00%						
				100.00%						
				Floorspace density = 20,010 net sq ft per acre						
				Other costs						
				Planning						
				Survey						
				Marketing						
				Interest % per annum						
				Notes						

SITE 15 LAND COST & PHASING

Programme	Year 1				Year 2				Year 3				Year 4				TOTALS				
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4					
	Hectare																				
Units started	<div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid black; padding: 2px;">Iterate to achieve 20.0% profit</div> <div style="text-align: center;"> Affordable No affordable No affordable £ -129,129 £ -44,215 £ -401,955 £ -475,071 £ -162,669 £ -1,173,900 £ -£401,955 </div> </div>																				
Market housing	0	0	2.1	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.9
Affordable soc rent			0.7	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6
Affordable sh oship			0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Church + ancillary			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0	0	3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7.0
Units 'built' +2Q	<div style="display: flex; justify-content: space-between;"> <div style="text-align: center;"> Affordable No affordable No affordable £ 176,220 £ 212,286 £ 1,061,040 </div> </div>																				
Market housing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Affordable soc rent			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Affordable sh oship			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Church + ancillary			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Units completed +3Q	<div style="display: flex; justify-content: space-between;"> <div style="text-align: center;"> Affordable No affordable No affordable £ 176,220 £ 212,286 £ 1,061,040 </div> </div>																				
Market housing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Affordable soc rent			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Affordable sh oship			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Church + ancillary			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Units purchased +4Q	<div style="display: flex; justify-content: space-between;"> <div style="text-align: center;"> Affordable No affordable No affordable £ 176,220 £ 212,286 £ 1,061,040 </div> </div>																				
Market housing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Affordable soc rent			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Affordable sh oship			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Church + ancillary			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

SITE 15 CASH FLOW AFFORDABLE

INCOME	rate	Year 1				Year 2				Year 3				Year 4				TOTALS
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Housing sales		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	891
Market housing		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	171
Affordable soc rent		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	65
Affordable sh oship		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Church + ancillary		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sales fees		0	0	0	0	0	0	-14	-19	0	0	0	0	0	0	0	0	-33
Total income		0	0	0	0	0	0	483	644	0	0	0	0	0	0	0	0	1,128
COSTS																		
Land		-129	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-129
Land acquisition		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stamp duty		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Purchase fees		-4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-4
Total		0	0	0	0	223	298	0	0	0	0	0	0	0	0	0	0	-133
Build costs		0	0	0	0	72	96	0	0	0	0	0	0	0	0	0	0	521
Market housing		0	0	0	0	24	32	0	0	0	0	0	0	0	0	0	0	167
Affordable soc rent		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56
Affordable sh oship		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Church + ancillary		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Build contingency	5.0%	0	0	0	0	16	21	0	0	0	0	0	0	0	0	0	0	37
Total		11	11	11	11	0	0	0	0	0	0	0	0	0	0	0	0	781
Dev costs		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43
Upfront	5.5%	0	0	18	25	0	0	0	0	0	0	0	0	0	0	0	0	43
Build related	2%	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
Total		7	7	0	0	33	45	0	0	0	0	0	0	0	0	0	0	101
Fees		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	78
Fees on build costs	10.0%	1	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	8
Fees on dev costs	8.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total		1	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	8
PG		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	51
Planning gain		0	0	22	29	0	0	0	0	0	0	0	0	0	0	0	0	51
Total		1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	4
Other		4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Planning	£515	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Survey	£500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Marketing	£0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total		0	0	0	0	0	0	14	19	0	0	0	0	0	0	0	0	7
Sales fees b/forward from above		-108	21	55	67	368	491	14	19	0	0	0	0	0	0	0	0	33
Total costs		-108	21	55	67	368	491	14	19	0	0	0	0	0	0	0	0	926
Net profit/loss from quarter		108	-21	-55	-67	-368	-491	469	625	0	0	0	0	0	0	0	0	201
Profit/loss bf from last quarter		0	110	91	38	-30	-406	-913	-453	176	176	176	176	176	176	176	176	176
Cumulative profit/loss		108	90	37	-30	-398	-897	-444	173	176	176	176	176	176	176	176	176	176
Interest	7.50%	2	2	1	-1	-7	-17	-8	3	0	0	0	0	0	0	0	0	-26
Charged at Total	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Cumulative developer profit carried forward to RV calc		110	91	38	-30	-406	-913	-453	176	176	176	176	176	176	176	176	176	176

Appendix 7. Dynamic Viability Seminar in Birmingham: Notes

Introduction

- A7.1 This is intended to assist councils involved in, or considering becoming involved in the Dynamic Viability route to establishing a sound and automatically updateable affordable housing policy. I was rather pleased by the comment from one officer who said that the Councillors had found it easy to relate to: 'it sells itself' he said.
- A7.2 The following is an attempt to summarise the lively discussion held on 19th March at the wonderful Birmingham and Midlands Institute Building. It also includes comments prompted by that discussion. The discussion and contacts emanating from it will, we hope, assist the councils involved. This note is intended to summarise discussion of the key points. The topics are roughly those used as an overhead for the short presentation, but with others put in as and when they arose.

Update period

- A7.3 If it were annual at a given fixed date it would avoid any annual housing market cycles by being at the same point in the annual cycle. It was agreed that revisions should not be more frequent than annual. The Annual Monitoring Report (otherwise a good vehicle for this update) takes a long time to come out so it may be better to have an update location on the Council's website.

Indexes used

- A7.4 The three indexes are Halifax (for price), BCIS (for cost) and Valuation Office Agency (for alternative use values). It was agreed that the regional HPI indexes are the best to use from now on. Discussion of the index base helps to engage developers. We originally used the national HPI, which is more or less the same across England and Wales for the period 2007-2010 (save London). But we are now using the regional HPI for initial and monitoring purposes. The disadvantage of the regional indexes is that they are only quarterly: the national HPI is monthly, and the BCIS (for cost) is updated all the time. So use of regional HPI figures does introduce a bit of a lag, if the market is shifting rapidly.

Coarse and Fine matrices of targets

- A7.5 The Coarse Matrix is useful for strategic purposes (and should be in the Viability Reports and SPD) but the policy should not contain more than the Fine Matrix, as that gives workable intervals for target changes. The Fine Matrix should be such as to ensure no more than 5% target changes.
- A7.6 The 'standard' Fine Matrix is set at 4% gaps in the index, which usually generates 5% gaps in the targets, but in Lichfield (as it happens) this is not always so and we are going to produce a 2% index version of the Fine Matrix there, in addition to the normal one. This is best avoided where possible, as it generates so many tables. The same is true of making a Fine Matrix to cover the full range of the Coarse Matrix: this produces a very daunting looking page of figures, but it is very inclusive (Broxbourne feel that this is necessary).

Two types of affordable target

- A7.7 The situation now is best described by two levels of target. Paragraph 29 of PPS3 slightly muddies the waters by saying that targets should be deliverable but also that they should take account of public subsidy (grant). This is not workable as nobody knows what grant will be over a 20 year plan period.
- A7.8 The most sensible outcome seems to be a two tier target statement:
- i) A target tested by broad-brush deliverability (a set of sample sites) which is then updated by the Dynamic Viability process. This will ensure that there is a general deliverable target at any period during the plan
 - ii) A statement in the Core Strategy such as that the Council aims to achieve X% of affordable housing over the plan period. This to be clearly stated as an aspiration, and can take account of the best guess the Council can make about the likely future availability of grant and the yield of affordable housing from sites not affected by the target in (i) such as exceptions sites. But nobody can then argue about detailed deliverability: its an aim

Grant

- A7.9 We usually (except in London) have done viability analyses on zero grant, and then examined scenarios involving various possible levels of grant. This is consistent with the two tier target suggestion set out above. We (like others) have generally assumed a positive grant level in London (and some other places outside it such as where no development would be viable without it). But this is not altogether wise, as the future may produce situations where little or no grant is available. It was suggested that grant levels may be halved in future. But this is really quite unknowable at this stage.

A7.10 If the viability base (the Tier one target in paragraph A7.8 above) is done using zero grant, it can be adjusted using assumptions about grant. This has the value that deliverability can be assessed in the most cautious way: zero grant. Assumptions about grant can then be made on a site by site basis as the plan (and future grant levels) unfold.

Proportion of social rented and intermediate housing

A7.11 It should be possible to construct a table showing the proportions of more expensive social rented and cheaper intermediate housing (e.g. intermediate rent) that equate to the same overall viability level. There is also a case for adding in things like shared ownership which normally fall above the affordable housing entry level.

A7.12 If grant is included, the cost of both types of affordable housing is typically nearly equalised, since social rented housing attracts a much higher proportion of grant than intermediate.

A7.13 Targets in Plans do not always make this split, but in view of the cost difference should do so. There is also the split (required by PPS3 paragraph 22) shown by the housing needs assessment, before deliverability is checked. Clearly this has to be part of the policy consideration.

S106 and varying targets

A7.14 This issue relates to site specific negotiation, not general affordable housing policy, though it may be the subject of specific policies. There is a parallel process in which some sites will conform to the broad-brush policy target, but in other cases the applicants will seek to negotiate down the target.

A7.15 At the general level the statute, S106, contains a provision that allows triggers and index values to be inserted such that if the market improves, additional money for affordable housing is triggered. The bit of statute involved is S106(2)(a).

A7.16 There may well be existing S106 where the downturn has frozen development, and so re-negotiation and the insertion of clauses such as discussed in the previous paragraph are the way both to unlock sites and to ensure that they do make a contribution of affordable housing as and when the market permits. At the policy level there would need to be clear criteria eg limiting this to larger sites or to stopping applicants from 'storing' permissions against an upturn in the market. Such 'storing' cannot really be stopped on small sites, though.

A7.17 There is an argument (Hilda Lee from Croydon) for having some such mechanism set into the negotiations when there is a prospectively long gap between initial submission of a planning application (or negotiation) and its completion. A different and possibly higher target level may by then apply.

Transparency

- A7.18 It is fairly obvious that in setting up some of the policies discussed here, designed both to permit market development when conditions allow, but to ensure that applicants do not escape the requirement to provide a deliverable amount of affordable housing, it is important for both policy and processes to be transparent.

Targets and sub-targets

- A7.19 There is no difficulty in principle with having a single plan-wide target (as required by PPS3) which is updated by Dynamic Viability but which has linked to it sub-targets. These can be for urban or rural areas which have substantially different market conditions from the average for the district (the broad-brush).

Effect of targets on market

- A7.20 Duncan Hall used the example of North Norfolk, whose target is 50% and which is unviable, as an example of a dampening effect on development as compared with Kings Lynn and West Norfolk, where the target is deliverable, and where many new schemes are coming forward.

Policy wordings

- A7.21 We asked if anyone drafting one could circulate the group with draft policies. Helen Howie of Shropshire has already been kind enough to do this. At some stage we will hope to go through them and suggest some standard wordings.

Conclusion

- A7.22 This is the combined result of your discussion and our reflection on our notes. It certainly is not the last word on any of the topics involved. Do let us (and the group) have any further thoughts and experiences. We will hope to organise another meeting at some suitable future interval (e.g. six months?).

Richard Fordham
Geoff Taylor
Simon Drummond-Hay

26th March 2010