

Affordable
Housing
Viability
Study

**CROYDON
COUNCIL**

Croydon Council

**Final Report
August 2010**

*f*ordham
RESEARCH

Executive summary

Introduction

- S1 Fordham Research was commissioned by Croydon 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 20% affordable housing, with the assumed grant levels, across the study area as a whole.
- S5 With our base assumptions, under present market conditions only 13 of the 22 sites were viable even with no affordable housing. However eight of those sites remain viable at 20% affordable, with two others being marginal. In our view, a 20% target is reasonable in December 2009 market conditions, whilst a 30% target would not be.

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 Croydon 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 Croydon the required guidance on viability would best be achieved by looking at a range of site sizes and at a combination of actual and notional sites. In discussion with the Council, it was decided that a total of nine representative actual sites should be examined, together with 13 notional sites and a further notional model site designed to explore viability below the current national guidance site size threshold of 15 dwellings.

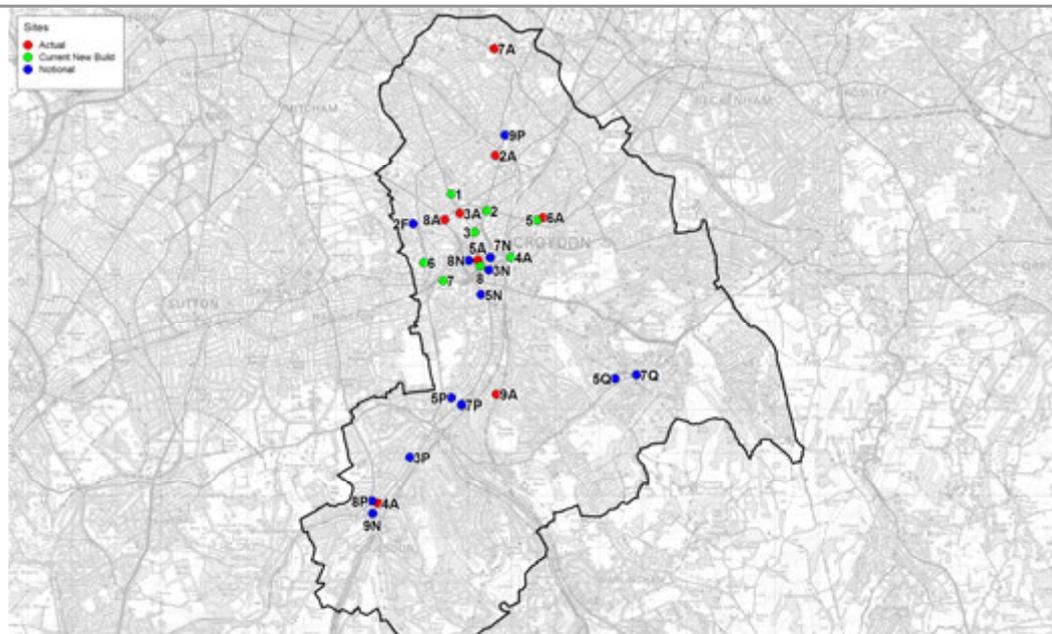
S8 The key features were:

- i) A final list of actual 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 reasonable geographical coverage across the Borough area
- ii) The sites ranged in size from ten to 360 dwellings. Only one was not previously developed
- iii) The sites were mostly consented although the one greenfield was a potential allocation.

S9 The actual sites total 1,058 dwellings on an area of 8.7 ha, at an average density of 121 dwellings per ha net. There is a good range of site size, including two sites under the national threshold guidance size of 15 dwellings. Seven of the sites are wholly residential, and two (Sites 3 and 5) are mixed use.

S10 In addition to these actual sites, a further twelve were examined. These were notional developments based on five of the actual sites, but relocated to an alternative location to explore more fully variations in market values across the Borough area.

Figure S1 Site locations

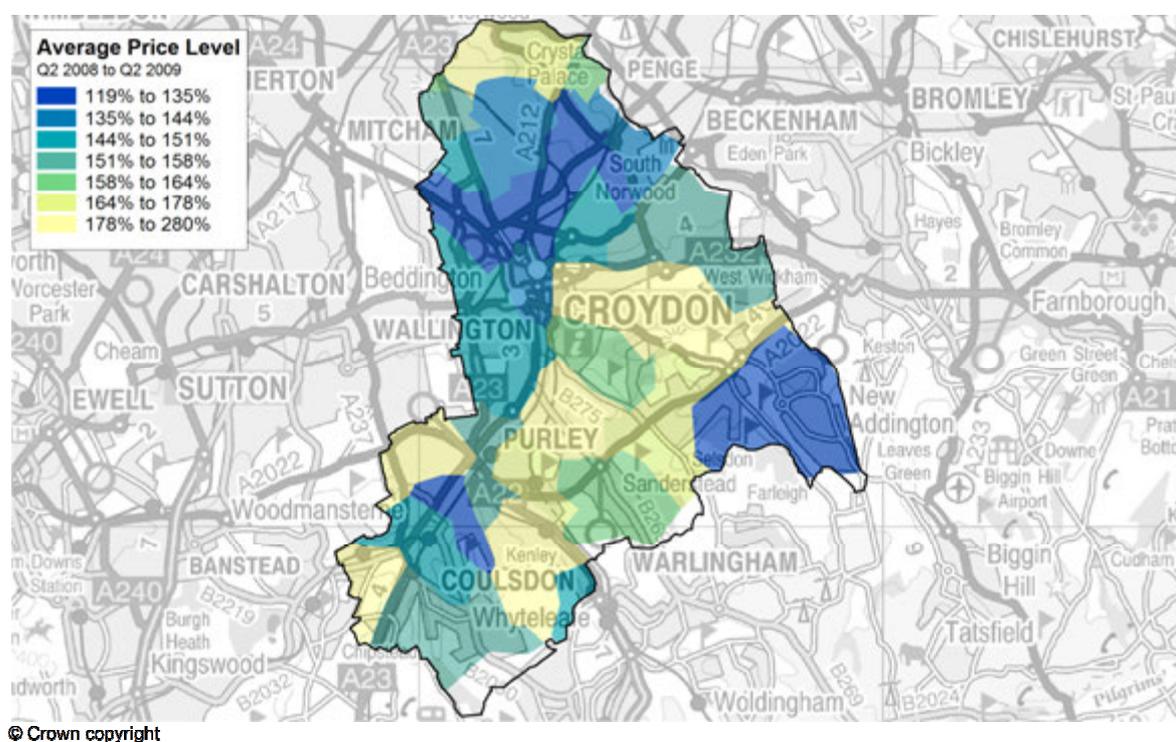


© Crown copyright

Source: Fordham Research 2010

- S11 A useful baseline development density for previously developed land across much of the country is 15,500 sq ft per acre (3,550 sq m per ha). However in London and other pressured housing markets most development is of a more urban built form which uses land more intensively, with many or the majority of dwellings provided as apartments, and comparatively few as two storey houses. All but one of the consented sites were in fact developed at a 'development density' higher than the standard benchmark, and a slightly higher density was also assumed for the one site where no development proposals were available to provide a basis for built form assumptions.
- S12 A wide range of data was collected about housing in Croydon: 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 2010

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 30%, 40%, and 50%
 - ii) Affordable housing split: 70% social rented and 30% 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) Social Housing Grant (SHG) would be available at rates of £30k per bedspace for social rented units and £14k for intermediate housing
 - v) The calculations consider levels of developer contributions ('planning gain') consistent with current policy at Borough level
 - vi) Level 4 of the Code for Sustainable Homes was assumed
 - 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 costs) and the second a return to conditions equivalent to the autumn 2007 market peak (prices rising 25% relative to costs). We also considered the impact of different assumptions for tenure split, grant support 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'. The structure of the analysis is designed to show what land value is likely to result from the development of each site. The calculation begins with the value of the asset to be created (such as a dwelling) and then subtracts the cost of producing it, apart from the land cost, in order to show what value the site may have. That is the residual land value. If it is a positive figure there is a further test: is the land value generated by housing (in this instance) higher than any alternative land use? These can vary for each site, but typically are 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, 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 or open space would have a value greater than agricultural but significantly less than industrial, unless it could feasibly be developed in an industrial or commercial use.
- S19 The level of the 'cushion' was set at £150,000 per acre – amounting to 20% of the industrial/warehousing benchmark value.
- S20 Applying this approach, the results for the 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%	50%
1A	Croydon Park Hotel	150	-5,519	-7,746	-8,859	-10,004	-11,140
		300	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
2A	Queens Hospital	618	972	682	534	385	235
		768	VIABLE	MARGINAL	NOT VIAB	NOT VIAB	NOT VIAB
2F	With family mix	618	840	678	596	513	428
		768	VIABLE	MARGINAL	NOT VIAB	NOT VIAB	NOT VIAB
3A	187-195 London Rd	1,500	3,425	1,645	756	-153	-1,118
		1,650	VIABLE	MARGINAL	NOT VIAB	NOT VIAB	NOT VIAB
3N	City Centre CR9 1	1,250	1,444	3	-766	-1,525	-1,512
		1,400	VIABLE	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
3P	Purley CR8 4	1,000	1,679	167	-618	-1,420	-2,231
		1,150	VIABLE	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
4A	Cane Hill Hospital	10	1,598	1,306	1,159	1,011	861
		160	VIABLE	VIABLE	VIABLE	VIABLE	VIABLE
5A	Waterworks Yard	1,750	2,513	1,967	1,691	1,410	1,127
		1,900	VIABLE	VIABLE	NOT VIAB	NOT VIAB	NOT VIAB
6A	Addiscombe Station	626	764	616	541	465	388
		776	MARGINAL	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
6N	edge of centre CR0 1	626	707	570	501	431	359
		800	MARGINAL	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
6P	Purley CR8 2	626	810	653	573	493	411
		800	VIABLE	MARGINAL	NOT VIAB	NOT VIAB	NOT VIAB
6Q	Selsdon CR2 8	626	958	771	677	583	437
		800	VIABLE	MARGINAL	MARGINAL	NOT VIAB	NOT VIAB
7A	68-70 Belulah Hill	1050	1,030	838	739	640	544
		1200	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
7N	City Centre CR0 1	910	1,060	862	760	658	556
		1060	MARGINAL	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
7P	Purley CR8 2	965	985	799	708	613	521
		1115	MARGINAL	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
7Q	Selsdon CR2 8	1050	1,105	897	792	685	577
		1200	MARGINAL	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB

Table S1 Appraisal outcomes: base appraisals, with grant							
No	Site	Alt use value	No affordable	Value £k per acre			
				20%	30%	40%	50%
8A	Sumner Gardens	468	821	774	746	717	687
		618	VIABLE	VIABLE	VIABLE	VIABLE	VIABLE
8N	City Centre CR0 1	783	1,058	956	906	854	809
		933	VIABLE	VIABLE	MARGINAL	MARGINAL	MARGINAL
8P	Coulsdon CR5 2	618	1,058	956	906	854	809
		768	VIABLE	VIABLE	VIABLE	VIABLE	VIABLE
9A	Nursery	100	834	720	662	604	544
		250	VIABLE	VIABLE	VIABLE	VIABLE	VIABLE
9N	Cane Hill	50	533	477	449	422	395
		200	VIABLE	VIABLE	VIABLE	VIABLE	VIABLE
9P	North Croydon	150	566	504	473	440	412
		300	VIABLE	VIABLE	VIABLE	VIABLE	VIABLE

Source: Affordable Housing Viability Study 2010

S21 The results can be summarised as follows:

- i) At 100% market housing, fifteen sites were fully viable, five marginal and two unviable. At 20% affordable housing eight sites were still viable, plus five marginal
- ii) At 30% six were viable, two marginal
- iii) At 40% six were viable. That remains the case at 50%.

S22 Sensitivity testing suggests that at conditions much closer to the peak viability level of autumn 2007, with prices 18% higher than those assumed in our study, and costs 6% lower, all of the 22 schemes would have been viable at the 30% target level with none marginal. Even at 50% there are still 13 viable sites and five marginals.

S23 Conversely, sensitivity testing also suggests that should prices fall by a further 10% relative to costs then only six schemes would be viable at the 30% level, with none marginal.

A two tier affordable housing target suggestion

S24 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 uncertainty about the future path of the housing market, but this can be addressed through the Dynamic Viability process discussed below.

S25 In Croydon's present housing market, it does not seem wise to set a broad-brush target (net of grant) above 20%. But it is clear that some sites even now could bear much higher targets. At the market peak a much higher broad-brush target would have been feasible, but not at present.

S26 Due to the further unknown of future public subsidy levels, we suggest that the LDF Core strategy should contain two targets. There is nothing in Guidance to prevent this, and it seems the sensible way to address the various uncertainties. We suggest the following structure:

Target A: Operational and deliverable affordable housing target

S27 This target is based on the analysis of sample sites listed above. It suggests that the current deliverable target is:

20%

S28 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

S29 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.

S30 The upper limit for the operation of the Dynamic Viability process is the SHMA; no plan wide 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:

50%

S31 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

- S32 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. It is necessary therefore to consider whether lower site sizes could be viable.
- S33 The 22 sites appraised in the study included two sites under 15 dwellings. Although both did quite well, they were of ten & 13 dwellings, and so provided only limited guidance. To provide further support we developed from one of these sites a suite of model 'notional' sites ranging from five to 15 dwellings. We used a notional site approach to modelling reductions in site size from 14 dwellings to five dwellings.
- S34 The findings of the analysis were that there is indeed scope for reducing thresholds. A target of 40% was achievable all the way through to five dwellings.

Dynamic Viability analysis

- S35 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%.
- S36 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).
- S37 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.
- S38 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 we suggest annually.

S39 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 Croydon that site is 6Q Selsdon (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.

S40 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.

S41 As can be seen from the illustration below, 20% (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 Croydon Coarse Matrix with base alternative use value

		Price Change HPI									
		%	-20%	-10%	0%	10%	20%	30%	40%	50%	60%
Cost Change BCIS Index	%		513.3	577.4	641.6	705.8	769.9	834.1	898.2	962.4	1026.6
	-20%	229.9	0%	50%	55%	55%	55%	55%	55%	55%	55%
	-10%	258.7	0%	15%	40%	55%	55%	55%	55%	55%	55%
	0%	287.4	0%	0%	20%	40%	50%	55%	55%	55%	55%
	10%	316.1	0%	0%	0%	20%	35%	45%	55%	55%	55%
	20%	344.9	0%	0%	0%	0%	20%	35%	45%	50%	55%
	30%	373.6	0%	0%	0%	0%	5%	20%	35%	40%	45%
	40%	402.4	0%	0%	0%	0%	0%	10%	25%	30%	40%
	50%	431.1	0%	0%	0%	0%	0%	0%	15%	25%	30%

Source: Affordable Housing Viability Study 2010

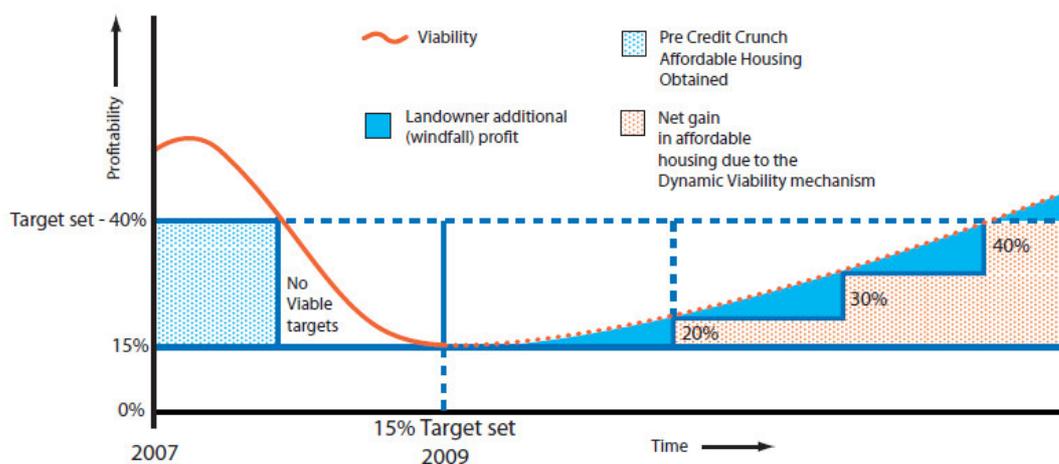
S42 For example if the Halifax price index rose in the next period (e.g. a year) to 706 or thereabouts, with no change in costs, then the target for the ensuing period would rise from 20% to 40%. If on the other hand prices did not rise at all, but costs (via the RICS index of building costs BCIS) to 316 or so, then the target for the ensuing period would fall to 0%.

S43 The full detail of this approach is set out in Chapter 9. It includes a 'fine matrix' which is in effect a close up of the one shown above, in order to allow more sensitive variations.

Conclusion

S44 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 S4 Gain of Affordable Housing from Dynamic Viability



The target percentage steps in this diagram are relatively large and are to illustrate the principle of target change rather than any specific proposal

Source: Fordham Research 2009: Affordable Housing Viability Study 2009.

- S45 This figure also shows that the landowners/developers will gain from any uplift in the market (again, the 40% pre-credit crunch target shown is general and not specific to Croydon). 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.
- S46 The Dynamic Viability procedure ensures that the maximum of deliverable affordable housing is achieved.

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	viii
Size thresholds	ix
Dynamic Viability analysis	ix
Conclusion.....	x
List of abbreviations	xvii
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
The Borough of Croydon	9
Identifying a range of sites	9
The sites.....	10
Development assumptions.....	13
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.....	25
Land values	26
Current and alternative use values.....	27
5. Assumptions for viability analysis	31
Introduction.....	31
Development costs	31
Financial and other appraisal assumptions.....	37
Site acquisition and disposal costs.....	39
Alternative use value comparison	39
6. Results of viability analysis.....	41
Introduction.....	41
Financial appraisal approach and assumptions	41
Appraisal results	41
Alternative use benchmarks	43
Comparison results.....	46
Sensitivity: price and cost levels.....	47
Sensitivity: the market peak	49
Sensitivity: tenure split.....	51
Sensitivity: reduced grant	51
Sensitivity: Code for Sustainable Homes	52
Sensitivity: other developer contributions.....	56
7. Threshold modelling: results	59
Introduction.....	59
Modelling variations in scheme size.....	59
Other assumptions	60
Viability results.....	61
Conclusions	62

8. Implications of the Stage 1 Results	63
Our approach	63
Basis for the affordable housing target	64
A two tier affordable housing target suggestion	65
Affordable target suggestion	66
The threshold for affordable housing	67
9. Dynamic Viability results	69
What Dynamic Viability does.....	69
Benchmark site.....	70
Coarse matrix	71
Coarse and Fine Matrices related	71
Revising the target	73
Implementing Dynamic Viability	73
Conclusion.....	74
Appendices	77
Appendix 1 Newbuild schemes	79
Appendix 2 House price variations	81
Appendix 3 Small plots for sale	83
Appendix 4 Construction cost calculation	85
Appendix 5 Proposed benchmark appraisal	87
Appendix 6 Financial appraisal summaries	95

List of abbreviations

£ k	thousand pounds
£ m	million pounds
CSH	Code for Sustainable Homes
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 Croydon Council to produce guidance on the financial viability implications of alternative targets and size thresholds for affordable housing provision within the Borough.

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. Typically a Strategic Housing Market Assessment (SHMA) is 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 Such SHMA advice is, essentially, based on an assessment of the balance between the need for market housing and the need for affordable housing. In doing so it does 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 Croydon. 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 decades 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. 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:

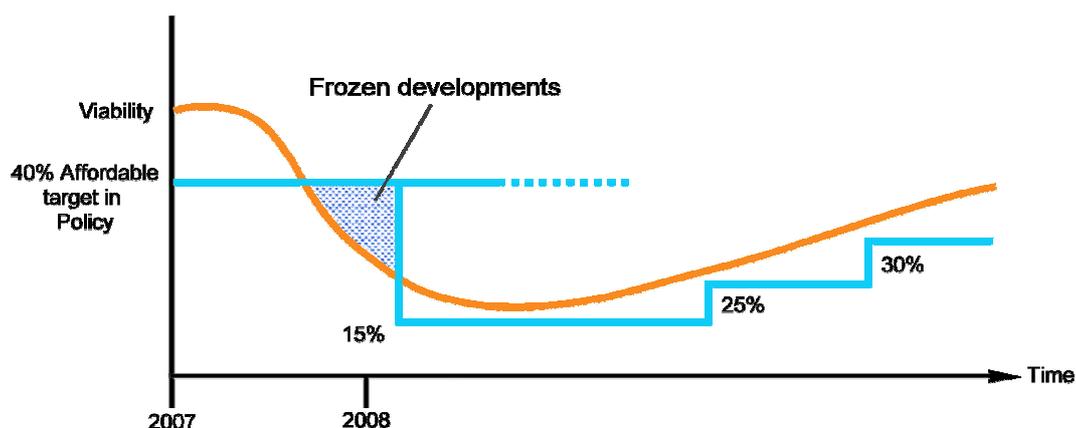
'reflect an assessment of the likely economic viability of land for housing within the area, taking account of the risks to delivery and drawing on informed assessments of the likely levels of finance available for affordable housing, including public subsidy and the level of developer contribution that 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 2010. Please note that this diagram is illustrative and does not relate directly to Croydon.

- 1.16 Figure 1.1 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 (the formal way in which developers can challenge council decisions), 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.

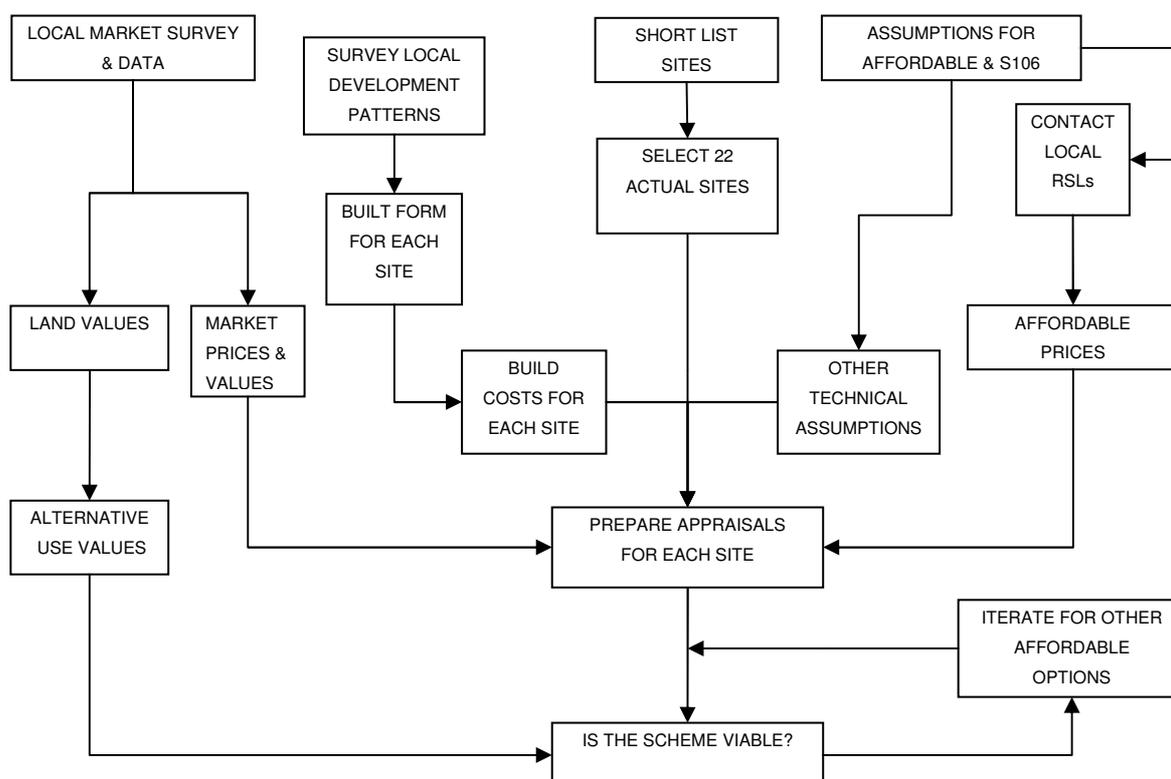
What this means for the study

- 1.21 This means that the study is in two stages: the first being the standard viability analysis (in Chapters 2 to 8) and then the second stage containing the Dynamic Viability analysis in the latter part of Chapter 9.

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 2010

- 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 9.

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, UDP, LDF 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 other 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 - Implications of viability results

Chapter 9 - Dynamic viability

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.

The Borough of Croydon

- 2.2 The London Borough of Croydon is located in south London, one of the outer London Boroughs. It is bounded by the London Borough of Bromley to the east, Lambeth to the north and Merton and Sutton to the west. To the south are the Surrey districts of Reigate & Banstead, and Tandridge. It is one of the largest boroughs in London, covering an area of 87 km², and is in fact the most populous, with a population of considerable diversity totalling 339,000.
- 2.3 The Borough location, astride major road and rail routes from London to the South Coast, makes it often a very busy place. The A23 (subsequently M23) is one of the principal routes out of London to the M25, to nearby Gatwick Airport ten miles to the south, and to Brighton. There are frequent and fast trains into and out of London. The Borough has a major centre in Croydon providing a wide range of facilities, and served by a network of tram routes.
- 2.4 Over a third of the Borough's total green space is protected green space, either Green Belt or Metropolitan Open Land, one of the highest proportions in London. Croydon Metropolitan Centre is identified as an Opportunity in the London Plan, with significant potential for new homes and for growth in jobs and businesses.

Identifying a range of sites

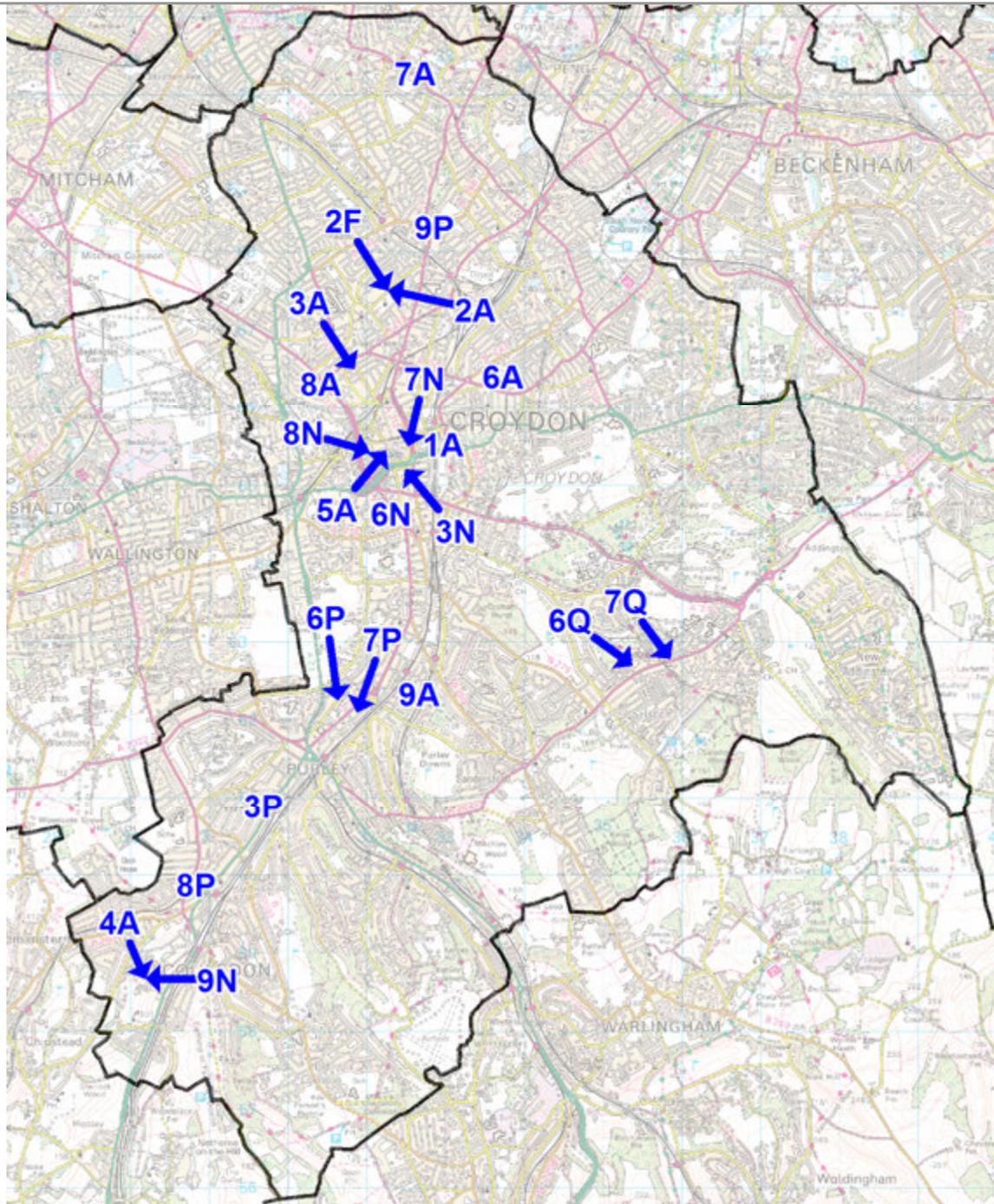
- 2.5 It was decided that, for Croydon, the required guidance on viability would best be achieved by looking at a range of site sizes and at a combination of actual and notional sites. In discussion with the Council it was decided to examine a total of nine representative 'actual' sites, supplemented with an additional 13 'notional' sites.
- 2.6 The use of 'actual' sites is desirable because these will more accurately reflect a realistic development situation. The notional sites repeated the actual sites, but with one exception were transplanted to a different location in order to test more fully the range of house prices across the Borough area.

- 2.7 In the remaining case the notional site repeated the actual site in the same location but with an alternative size mix, in order to explore the impact of a possible policy encouraging the provision of dwellings suitable for families.
- 2.8 We also used the 'notional' site approach when modelling threshold size reductions (Chapter 7), so as to explore the full range of site sizes below the national guidance size threshold of 15 dwellings.
- 2.9 A final list of sites, actual and notional, was established in discussion. The nine actual sites 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. They ranged in size from ten to 360 dwellings. All but one of the sites were on previously developed land.
- 2.10 All but one of the actual sites were subject to an approved planning application. Construction was under way on three of the permitted sites and the others were completed. The one remaining site was a potential allocation.
- 2.11 Information was available from the various planning applications to inform the appropriate development forms to use in our appraisals.

The sites

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

Figure 2.1 Site locations



© Crown copyright

Source: London Borough of Croydon, Fordham Research (2010), Ordnance Survey boundary and map data

2.13 Summary details of the actual sites identified by the Council are set out in the table below. The sites total 1,058 dwellings on a net area of 8.7 ha, at an average density of 121 dwellings per ha net. The list includes larger, medium and smaller sites, with two below the national guidance threshold of 15 dwellings.

Table 2.1 Site details: actual sites

No	Name	Net ha	No dwgs	Net dw ha	Planning status
1A	Croydon Metropolitan Centre (CMC) Tall building	0.51	236	461	Complete
2A	Big scheme suburban mixed family houses N Croydon	3.16	360	114	Permitted, under construction
3A	Urban location med flatted 5-6 storeys	0.29	150	514	Complete
4A	Greenfield big scheme	2.08	125	60.1	Allocation
5A	CMC mixed use site	0.40	75	187	Permitted, under construction
6A	Urban mixed town houses & flats N/C Croydon	1.26	65	51.6	Complete
7A	Urban N Croydon med site flatted 3-4 storey	0.37	24	65.6	Complete
8A	Suburban semi-detached 2 storey	0.18	13	72.2	Complete
9A	Small site under 10 dwgs	0.48	10	20.8	Permitted, under construction
<i>Total</i>		<i>8.73</i>	<i>1,058</i>	<i>121</i>	

Source: Fordham Research 2010

2.14 Two sites are mixed use, to be partly occupied by non-residential uses. Both are of a conventional mixed use nature, with commercial use on the ground floor of the block at the front of the site and apartments above. Site 5 has 13,050 sq ft (1,213 sq m) of ground floor and mezzanine space fronting Surrey St, in a retail location, whilst Site 3A provides some 4,442 sq ft (440 sq m) in a secondary location on the edge of the town centre.

2.15 The notional sites are shown in the table below.

Table 2.1 Site details: notional sites					
No	Name	Net ha	No dwgs	Net dwha	Planning status
Notional sites (as actual)					
3N	As Site 3A relocated to City Centre CR9 1	0.29	150	514	hypothetical
3P	As Site 3A relocated to Purley CR8 4	0.29	150	514	hypothetical
6N	As Site 6A relocated to edge of centre CR0 1	1.26	650	51.6	hypothetical
6P	As Site 6A relocated to Purley CR8 2	1.26	650	51.6	hypothetical
6Q	As Site 6A relocated to Selsdon CR2 8	1.26	650	51.6	hypothetical
7N	As Site 7A relocated to City Centre CR0 1	0.37	24	65.6	hypothetical
7P	As Site 7A relocated to Purley CR8 2	0.37	24	65.6	hypothetical
7Q	As Site 7A relocated to Selsdon CR2 8	0.37	24	65.6	hypothetical
8N	As Site 8A relocated to City Centre CR0 1	0.18	13	72.2	hypothetical
8P	As Site 8A relocated to Coulsdon CR5 2	0.18	13	72.2	hypothetical
9N	As Site 9A relocated to Cane Hill	0.48	10	20.8	hypothetical
9P	As Site 9A relocated to Croydon SE25 6	0.48	10	20.8	hypothetical
Notional sites (other)					
2F	As Site 2A but with alternative family mix	3.16	230	72.8	hypothetical
10	Threshold modelling site (derived from 9A)	0.48	15	31.5	Model scheme

Source: Fordham Research 2010

2.16 Of the 14 notional sites 12 (Sites 3N to 9P) are formed as hypothetical relocations of five of the actual sites to other locations where different market prices were expected to apply. Site 2F repeated Site 2A but with an alternative 'family' mix. A suite of model sites of 3-15 dwellings designed to test size thresholds, and loosely based on Site 9A, was designated Site 10.

Development assumptions

2.17 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 remained the best basis for carrying out appraisals.

- 2.18 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).
- 2.19 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 15-20% flats) in a mixture of two storey and two and a half to three storey form, with some rectangular emphasis to the layout.
- 2.20 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 100 dw per 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.
- 2.21 In pressured housing locations like London and the adjoining areas, this standard typology will often be less relevant 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.
- 2.22 In Croydon’s case there is a considerable market for high density apartments in blocks, and even where development is of mainly family housing, there is a focus on tight urban forms with rectangular layouts of mainly three storey or two and a half storey units. The standard built form typology is of limited direct relevance in Croydon, although it is helpful in providing a framework for considering the appropriate assumptions for each of the site. Accordingly, the typology 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 (10-25%) flats, limited garaging.
Urban	19,500 (4,480)	50	30% 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 2010

- 2.23 The above typology was used to develop model development assumptions for the sites where actual information on planning proposals was not available.
- 2.24 The resulting assumptions for residential development for each of the sites are set out in the table below. All except one of the actual sites is in fact above the baseline of 15,500 sq ft per acre (3,550 sq m per ha). The exception is Site 9A, an awkward small elongated site which has been developed with two storey semi-detached units in keeping with the adjoining development which comes in at only 10,250 sq ft per acre. (The unusually low site utilisation here has not been carried across to the model threshold Site 10, which is assumed to be developed at the 15,500 sq ft per acre baseline).
- 2.25 Even so, a number of the sites are developed at around or only a little above the next density category, 'Urban'. These include the alternative mix for Site 2. Site 8 forms part of a larger area of Council ownership and has an artificially tight site boundary; with the boundary drawn more conventionally it would probably fall into this group.
- 2.26 The two most dense developments are above the 'Very high' indicative figure of 50,000 sq ft per acre (11,500 sq m per ha) and the third, Site 5, would be so after the mixed use floorspace was included.
- 2.27 The emphasis on medium and high density development forms is nevertheless 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	
1A	City Centre	Very high+	122,500	28,100	655 (61)
2A	suburban S Croydon	High	29,100	6,700	631 (59)
3A	London Rd Croydon	Very high+	115,500	26,500	552 (51)
4A	South Greenfield	Urban	21,000	4,825	866 (80)
5A	Town Centre	Very high	54,000	12,400	539 (50)
6A	North Central Croydon	Urban	18,000	4,150	865 (80)
7A	N Croydon	Urban+	22,900	5,250	873 (81)
8A	W Croydon	(Urban)	(33,500)	7,700	1,148 (107)
9A	Sanderstead/Purley	Low	10,250	2,350	1,216 (113)
2F	Notional	Urban+	24,300	5,600	826 (77)
10	Notional	Base	15,500	3,550	1,216 (113)

Source: Fordham Research 2010

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
- 30% affordable
- 40% affordable
- 50% affordable

- 3.4 The Council's current policy provides for target proportions of 40% on small sites and 50% sites of 1.0 ha or 30 dwellings plus.

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

(ii) Tenure split

- 3.6 The Council currently seeks a mixture of social rented and intermediate housing, though with a majority provided as social rented. The present policy has been to seek 70%:30% on larger sites – consistent with the London Plan – and closer to 60%:40% on small sites. We prepared base appraisals with 70:30 split

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 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.

(iv) Financial terms

3.9 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.

3.10 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. However in Croydon, as in most parts of London, grant is generally available. It was decided that appraisals should be produced assuming that Social Housing Grant would be available at £30k per bedspace for social rented dwellings and £14k per bedspace for intermediate units.

3.11 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. It should be noted that the prices paid to the developer for social rented and intermediate units are at the same level.

Table 3.1 Selling prices: with grant basis				
	£ per sq ft (sq m)			
	Social rented		Intermediate	
	Flat	House	Flat	House
Purchase price with grant	215 (2,315)	215 (2,315)	215 (2,315)	215 (2,315)

Source: Fordham Research 2010

Other developer contributions

- 3.12 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.
- 3.13 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 at a rate of £2,500 per dwelling for sites of 15 plus dwellings, and £1,800 for smaller sites. This is based on consideration of past Section 106 contributions.
- 3.14 These are relatively modest amounts by comparison with experience elsewhere, and we undertook to test sensitivity to a higher rate of £7,500 per dwelling across all sites.
- 3.15 It must be emphasised that the proposed approach is simply intended to treat the various 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 Croydon, providing a basis for the assumptions on house prices and costs to be used in financial appraisals for the nine 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 downland landscape, both within the Borough and providing leisure opportunities within easy reach of the Borough in Surrey
- A busy town centre containing a wide range of retail, leisure, cultural and education facilities and accessible by tram and bus links
- A considerable mix of residential areas, providing relatively affordable private housing
- An area of considerable cultural richness and diversity
- Excellent rail services into London and south to Gatwick Airport
- A good range of local employment opportunities in the Borough
- Other employment opportunities within very easy reach northwards in central London and southwards at Crawley/Gatwick
- Good access in the southern half of the Borough southwards to the national motorway network.

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 December 2009, is provided in Appendix 1.

4.10 Table 4.1 shows average prices in Croydon for the latest quarter available from Land Registry, Q3 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 Q3 2009: comparison with England & Wales average					
Area		Ave price (% index)			
		Detached	Semi	Terrace	Flat
Q3 09	Price	£492,700	£263,400	£212,300	£153,100
	No of sales	111	201	282	282
	Index	172%	151%	142%	119%

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 Croydon area are between 40% and 70% above the average (median Local Authority area), though somewhat less for flats (19%), which along with terraced housing is 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 for flats and terraced properties particularly. (Sales are seasonally low in the first quarter).

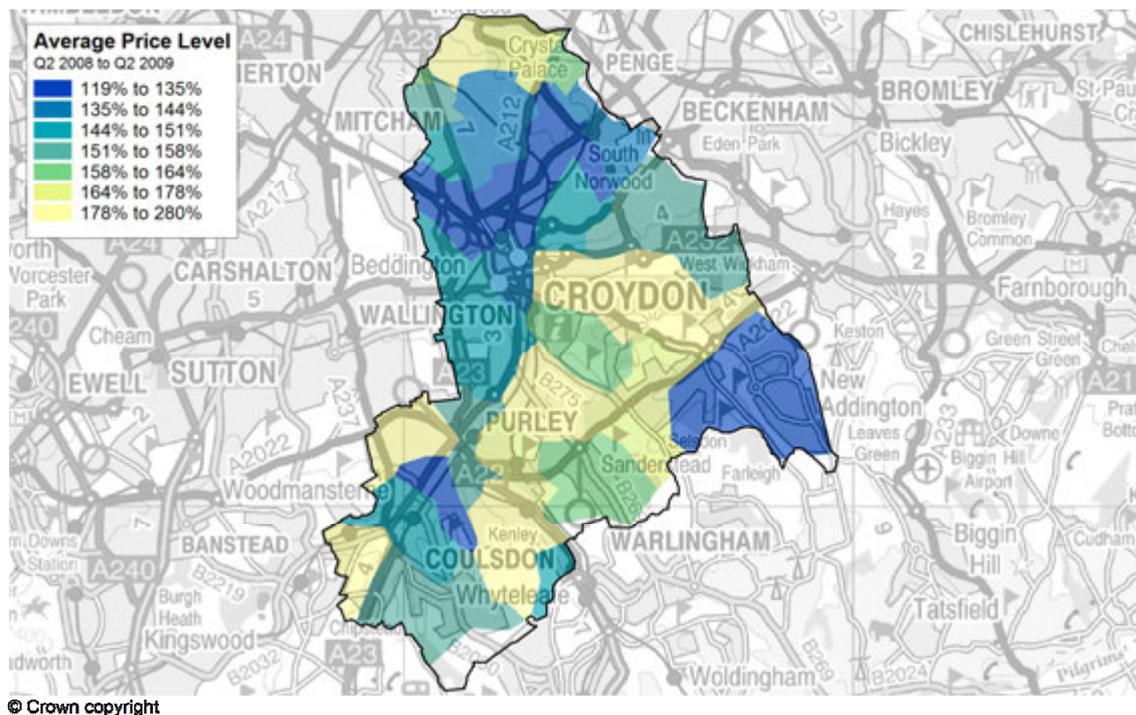
Table 4.2 Average house prices in previous quarters					
Quarter		Ave price £k			
		Detached	Semi	Terrace	Flat
Q3/09	ave £	£492,700	£263,400	£212,300	£153,100
	no of sales	111	201	282	282
Q2/09	ave £	£443,100	£261,100	£200,200	£155,400
	no of sales	63	163	198	224
Q1/09	ave £	£510,000	£260,500	£209,300	£172,600
	no of sales	54	89	181	162
Q4/08	ave £	£476,100	£287,600	£219,600	£173,600
	no of sales	67	120	211	215
Q3/08	ave £	£525,500	£307,300	£232,900	£177,100
	no of sales	96	150	242	260
Q2/08	ave £	£532,400	£305,900	£241,000	£175,900
	no of sales	105	192	358	394
Q1/08	ave £	£518,900	£318,500	£245,600	£179,100
	no of sales	87	200	378	462

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 over 64% above the national average level. Prices are highest on the northernmost edge of the Borough, and in a large belt running from east of Croydon Town Centre, southwards to the Borough boundary but excluding Coulsdon town centre. Prices are lowest immediately north of Croydon Town Centre, and in a pocket on the eastern edge, around New Addington.

Figure 4.1 Postcode price indices



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

Source: Land Registry

Price assumptions for financial appraisals

4.17 It is necessary to form a view about the appropriate prices for the nine 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'.

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 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. The number of newbuild schemes currently active was somewhat limited but provided a useful basis to inform the market assessment and produce guidance for a number of sites. The specific details are set out within Appendix 1 of the report.
- 4.21 The site figures resulting from our type-specific assumptions are set out in the table below.

Table 4.3 Price bands							
No	Site/location	Price £ per		No	Site/location	Price £ per	
		Sq ft	Sq m			Sq ft	Sq m
1A	City Centre	385	4,143	7A	N Croydon	299	3,217
2A	suburban S Croydon	317	3,411	7N	City Centre CR0 1	301	3,239
2F	family mix	288	3,099	7P	Purley CR8 2	296	3,185
3A	London Rd Croydon	365	3,927	7Q	Selsdon CR2 8	304	3,271
3N	City Centre CR9 1	340	3,658	8A	W Croydon	250	2,690
3P	Purley CR8 4	345	3,712	8N	City Centre CR0 1	265	2,851
4A	South Greenfield	346	3,723	8P	Coulsdon CR5 2	265	2,851
5A	City Centre	350	3,766	9A	Sanderstead/Purley	320	3,443
6A	North Central Croydon	299	3,217	9N	Cane Hill	275	2,959
6N	edge of centre CR0 1	294	3,163	9P	North Croydon SE25 6	280	3,013
6P	Purley CR8 2	303	3,260	10	Sanderstead/Purley	320	3,443
6Q	Selsdon CR2 8	316	3,400				

Source: Fordham Research 2010

- 4.22 The figures cover a range from the cheapest, £250 per sq ft (£2,518 per sq m) at West Croydon, to £385 per sq ft (£3,432 per sq m) for the apartments immediately east of Croydon Town Centre.
- 4.23 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

- 4.24 We also have to consider the likely income arising from non-residential uses on the two mixed use sites – Sites 3 and 5.

- 4.25 Site 3A provides ground floor space for retail/commercial and community facilities. We assumed achieved rent of £25 per sq ft (£269 per sq m). This is capitalised at 6.5% yield. The capital value is discounted by 7.5% to allow for letting and disposal costs and a letting/rent free/disposal period. The resulting capital value, rounded, is £355 per sq ft (£3,820 per sq m).
- 4.26 Site 5 is broadly similar but with higher values; we assumed £30 per sq ft (£323 per sq m) leading to a sale value of £425 per sq ft or £4,575 per sq m.
- 4.27 Comparable figures for notionals 3N & 3P are set out below.

Table 4.4 Commercial space: capital values				
No	Rent £ per		Capital value £ per	
	Sq ft	Sq m	Sq ft	Sq m
3N	20	215	285	3,066
3P	18	194	256	2,755

Source: Fordham Research

Land values

- 4.28 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.
- 4.29 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 – but no information for individual locations.
- 4.30 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 4.5 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
Ealing (Hanwell)	£5,530,000	£5,530,000	£6,250,000
Ruislip	£4,850,000	£5,100,000	£5,500,000
Greenwich – Bexley	£4,500,000	£4,250,000	£4,500,000
Sutton	£4,150,000	£4,250,000	£4,225,000
Morden (Wimbledon)	£4,590,000	£4,225,000	£4,975,000

Source: VOA Property Market Report Jul 2010

- 4.31 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.
- 4.32 There are a small number of sites for residential development currently available in the immediate and adjacent areas. A more detailed schedule of residential land available is set out in Appendix 3.

Current and alternative use values

- 4.33 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.
- 4.34 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.
- 4.35 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.

4.36 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 or say open space would have a value greater than agricultural but significantly less than industrial, unless it could feasibly be developed in an industrial or commercial use.

4.37 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 4.6 Industrial land values			
Area	Land value £k per hectare (acre)		
	Low	High	Typical
London	£650k (£265k)	£3,468k (£1,405k)	£1,942k (£785k)
Greenwich	£1,300k (£525k)	£2,700k (£1,090k)	£1,800k (£730k)
Southwark	£870k (£350k)	£2,722k (£1,100k)	£1,981k (£800k)
Croydon	£1,100k (£445k)	£1,700k (£690k)	£1,500k (£605k)
Merton/Mitcham	£690k (£280k)	£2,635k (£1,065k)	£1,360k (£550k)

Source: VOA Property Market Report July 2010

4.38 Although across London as a whole there is quite a spread of values, the figures for individual locations south of the river are less variable, with typical values mostly between £600-800k per acre (£1,500-£1,975k per ha).

4.39 These values arose during the first half of 2009 and we looked at see what there is only limited market evidence to suggest what current values might be. Our view is that an appropriate benchmark value would be just a little higher than the VOA July 2009 figure, at around £650k per acre or £1,600 per ha.

4.40 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. However the value of nursery land is considered to be somewhat greater in the central part of Croydon, and a figure of £100k per acre (£245k per ha) is assumed.

- 4.41 In Croydon, these two benchmarks lead directly to alternative use values for four of the sites – sites 2A, 4A, 6A and 9A. A fifth, Site 7A, involves the demolition of two existing residential properties. These have been assumed to have indicative values totalling £950k. Site 8A also contained residential units, though these were Council owned, and we understand had reached the end of their useful life. It is difficult to establish an existing or alternative use for the site, with well used roads on two sides and adjoining Local Authority housing on the other two sides. We took the view that the land was worth a little less than the industrial benchmark, and valued it at £500k per acre (£1,235k per ha). The equivalent notional site at Coulsdon, 8P, was given full industrial value, and that in the City Centre, 8N, a premium over industrial value.
- 4.42 On the other hand, Sites 3 and 5 were felt to have values above the industrial benchmark. Site 3A was a former cinema and we ascribed a value of £1,500k per acre for this. Site 5A previously comprised retail property together with an open area. This was given a combined value of £1,750k per acre (£4,325k per ha).
- 4.43 Finally, Site 1A utilised open garden land surrounding the Croydon Park Hotel. This was considered to have a value as open space in excess of agricultural value, and a figure of £150k per acre (£370k per ha) was chosen.
- 4.44 The value for each individual site that results from the foregoing analysis is summarised in the table below.

Table 4.7 Alternative use value bases				
	Site	Basis	£k per acre	£k per ha
1A	City Centre	Garden land	150	370
2A	suburban S Croydon	Industrial/warehouse	650	1,600
2F	family mix	Industrial/warehouse	650	1,600
3A	London Rd Croydon	Commercial	1,500	3,710
3N	City Centre	Commercial	1,250	3,090
3P	Purley	Commercial	1,000	2,470
4A	South Greenfield	Agricultural	10	25
5A	Town Centre	Commercial	1,750	4,325
6A	North Central Croydon	Industrial/warehouse	650	1,600
6N	edge of centre	Industrial/warehouse	650	1,600
6P	Purley	Industrial/warehouse	650	1,600
6Q	Selsdon	Industrial/warehouse	650	1,600
7A	N Croydon	Residential property	1,050	2,600
7N	City Centre	Residential property	910	2,250
7P	Purley	Residential property	965	2,385
7Q	Selsdon	Residential property	1,050	2,600
8A	W Croydon	Industrial/warehouse less discount	500	1,235
8N	City Centre	Industrial/warehouse plus premium	815	2,015
8P	Coulsdon	Industrial/warehouse	650	1,605
9A	Sanderstead/Purley	Nursery land	100	245
9N	Cane Hill	Nursery land	50	125
9P	North Croydon	Nursery land	150	370
10	Sanderstead/Purley	Garden land	150	370

Source: Fordham Research 2010

- 4.45 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.
- 4.46 The costs arising from development or redevelopment of the nine 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 actual and notional 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 Croydon at a base date of December 2009.
- 5.3 The question arises as to what extent these baseline costs need to be adjusted to reflect any enhanced specification that would apply generally for housing to be built in Croydon at the present time. There are two respects in which this might arise – the Code for Sustainable Homes (CSH), and Lifetime Homes/Wheelchair Housing – and these are dealt with in turn below.
- 5.4 Whilst from April 2008 the CSH Code 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, and then the energy efficiency parts of CSH higher levels (Level 4 then 6) intended to be triggered from 2013 onwards. For the present study the Council asked us to assume that Level 4 applies to both market and affordable housing on the sites being appraised.
- 5.5 Guidance on the impact of Level 4 on construction costs is available from analysis by Cyril Sweett for DCLG (*Cost Analysis of the Code For Sustainable Homes, 2008*). The re-analysed figures were provided to us by the Council. The analysis provides guidance under various scenarios; the additional cost of newbuild to Level 4, over the build cost for existing base Part L new homes is as set out in the table below for five model house types.

Table 5.1 Construction cost adjustment: Code for Sustainable Homes						
		<i>Detached</i>	<i>End terrace</i>	<i>Mid terrace</i>	<i>Flat - infill</i>	<i>Flat – city centre</i>
Floor area	Sq ft	1,098	818	818	646	646
	(sq m)	(102)	(76)	(76)	(60)	(60)
Additional build cost of Code Level 4	£ Total	10,101	10,393	9,293	7,423	8,053
	£ per sq ft gross	9.2	12.7	11.4	9.8	10.6
	(£ per sq m)	99	137	122	124	134

Source: Croydon Council derived from analysis of Cyril Sweet cost data

- 5.6 The table expresses the additional cost as a £per sq ft (sq m) loading, ranging for the five model types from £9.2 to £12.7 per sq ft (£99-137 per sq m). For the purpose of our appraisals detached homes are probably less representative than the other four types. It is possible that the combination of our base build costs and BCIS indexing from the base date does allow for some uplift in spec from the basic Part L standard. Nevertheless, after consideration it was felt appropriate to accept the full uplift, producing average loadings in our appraisals of £12 per sq ft (£129 per sq m) for houses, and £10.50 per sq ft (£113 per sq m) for flats. A corresponding calculation for Level 3 would produce figures of £6.5 per sq ft or £70 per sq m for both houses and flats.
- 5.7 Turning to the Council’s requirements for Lifetime Homes and Wheelchair Housing, the physical implications upon built form of Wheelchair Homes have already been allowed for, to a considerable extent. Almost all of the sites are permitted, and details of the permitted scheme have strongly informed the appraisals’ built form assumptions. For both categories it is primarily the additional spec costs – fittings, door widths, additional bathroom fittings, hoist support etc– that would need to be taken into account.
- 5.8 After further consideration, and bearing in mind (paragraph 5.6) that the full Cyril Sweett uplift had been used to produce the Level 4 allowance, an increase of 1% applied across all housing types was felt to be sufficient.
- 5.9 Taking into account the above, 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 5.2 Baseline construction costs					
Build cost £ per sq ft/sq m					
Site	Sq ft	(Sq m)	Site	Sq ft	(Sq m)
1	208.9	2,247.3	7	119.6	1,286.7
2	133.2	1,433.6	8	114.5	1,231.7
3	159.3	1,714.0	9	111.2	1,197.0
4	121.2	1,304.4			
5	159.3	1,714.0	10	111.2	1,197.0
6	123.1	1,324.5	2F	124.3	1,337.6

Source: Fordham Research derived from analysis of BCIS cost data

(ii) Construction costs: site specific adjustments

- 5.10 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.
- 5.11 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.
- 5.12 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.
- 5.13 In the present study only two 'actual' sites are considered to fall into the 'small site' category – those with less than 15 dwellings, i.e. Sites 8 & 9. However a suite of notional sites (Site 10) is to be separately appraised with sizes from five to 15 dwellings. It is felt necessary to make some allowance for the economics of these actual and notional sites in preparing financial appraisals. A range of cost premiums has been estimated for each specific site size. 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.

Table 5.3 Construction costs: small site size cost premium			
<i>Build cost premium</i>			
<i>No of dwgs</i>	<i>Premium %</i>	<i>No of dwgs</i>	<i>Premium %</i>
15	0%	9	6.00%
14	1.00%	8	7.25%
13	2.00%	7	8.50%
12	3.00%	6	10.00%
11	4.00%	5	12.00%
10	5.00%		

Source: Fordham Research derived from analysis of BCIS cost data

5.14 In addition to the scale adjustment, we considered that Sites 1, 3, and 5 would be built to a slightly higher specification than the other sites. To cover this, an allowance of an additional 2.5% was assumed for Site 1, and 1.5% for the other two sites.

(iii) Construction costs: affordable dwellings and final figures

5.15 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.

5.16 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 7 is provided at Appendix 4.

Table 5.4 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	214.0	2,305	7	119.5	1,285
2	133.0	1,435	8	117.0	1,255
3	161.5	1,740	9	117.0	1,255
4	121.0	1,305			
5	161.5	1,740	10	111.0	1,195
6	123.0	1,325	2F	124.5	1,340

Source: Fordham Research derived from analysis of BCIS cost data

(iv) Other normal development costs

- 5.17 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.
- 5.18 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.
- 5.19 In the light of these considerations we have developed a scale of allowances, ranging from 16.0% of build costs for the greenfield land at Site 4, down to 7.5% for the highest density schemes at Sites 3 and 5. The table below sets out the individual site assumptions.

Table 5.5 Development cost allowances		
No	Site/location	% of build costs
1	CMC Tall building	9.0%
2	Big scheme suburban mixed family houses	10.0%
3	Urban med flatted 5-6 storeys	7.5%
4	Greenfield big scheme	16.0%
5	CMC mixed use site	7.5%
6	urban mixed town houses & flats	11.5%
7	urban site flatted 3-4 storey	11.5%
8	suburban semi detached 2 storey	10.0%
9	small site	12.5%
10	Threshold model site	12.0%
2F	As 2 with family mix	11.0%

Source: Fordham Research 2010

(v) Abnormal development costs

- 5.20 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.

5.21 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 (paragraph 4.45) some abnormal costs could also arise in the event of the site's redevelopment with an alternative use.

5.22 The schedule below sets out the abnormal costs considered to apply in each case where they arise:

Table 5.6 Abnormal development costs				
<i>No</i>	<i>Item</i>	<i>Residential: cost</i>		<i>Industrial: cost</i>
		<i>Total £k</i>	<i>£k per acre</i>	<i>£k per acre</i>
1	Basement car park	£1,750k	£1,383k	-
2	Demolition/remediation, Listed Building	£450k	£58k	£32k
3	Demolition, sloping site	£200k	£277k	-
4	None	-	-	-
5	Demolition, footbridge	£300k	£303k	-
6	Demolition/remediation	£150k	£48k	£24k
7	Demolition, sloping site	£100k	£111k	-
8	Demolition	£20k	£32k	£32k
9	None	-	-	-
10	None	-	-	-
2F	As 2A	£450k	£58k	£32k

Source: Fordham Research 2010

5.23 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.

(vi) Fees

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

(vii) Contingency

5.25 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 greenfield Sites 4, 9, and 10.

Financial and other appraisal assumptions

(i) VAT

5.26 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

5.27 Our appraisals assume 7.5% pa for debits and credits. This may seem high given the very low base rate figure (MLR 0.5% January 2010) but has to reflect banks' recent view of risk for housing developers.

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

(iii) Developers' profit

5.29 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.

5.30 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.

<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 2010

5.31 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

- 5.32 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.
- 5.33 For the purpose of the present study a three month void period is assumed for all sites.

(v) Phasing and timetable

- 5.34 The appraisals are assumed to have been prepared using prices and costs at a base date of December 2009 with an immediate start on-site.
- 5.35 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, 2, 3, and 5. Each dwelling is assumed to be built over a nine month period except on Sites 1, 3 and 5.
- 5.36 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 5.8 below:

Table 5.8 Market pace assumptions		
Site	Dwgs	
	Total	Ceiling rate per qtr
1A	236	20
2A	360	20
2F	230	15
3A	150	20
4A	125	12
5A	75	16
6A	65	8
7A	24	5
8A	13	4
9A	10	3
10	15-13	4
10	7-12	3
10	5-6	2

Source: Fordham Research 2010

Site acquisition and disposal costs

(i) Site holding costs and receipts

- 5.37 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

- 5.38 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

- 5.39 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

- 5.40 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.
- 5.41 After considering each of the sites with abnormal costs (as detailed in Table 5.6 above) we concluded that in some cases abnormal cost would need to be incurred in order to realise the alternative use.

Table 5.9 Alternative use value bases

No	Site	Alternative use value £k per acre		
		Gross	Abnormal cost	Net
1A	City Centre	150	0	150
2A	suburban S Croydon	650	32	618
2F	family mix	650	32	618
3A	London Rd Croydon	1,500	0	1,500
3N	City Centre	1,250	0	1,250
3P	Purley	1,000	0	1,000
4A	South Greenfield	10	0	10
5A	Town Centre	1,750	0	1,750
6A	North Central Croydon	650	24	626
6N	edge of centre	650	24	626
6P	Purley	650	24	626
6Q	Selsdon	650	24	626
7A	N Croydon	1,050	0	1,050
7N	City Centre	910	0	910
7P	Purley	965	0	965
7Q	Selsdon	1,050	0	1,050
8A	W Croydon	500	32	468
8N	City Centre	815	32	783
8P	Coulsdon	650	32	618
9A	Sanderstead/Purley	100	0	100
9N	Cane Hill	50	0	50
9P	North Croydon	150	0	150
10	Sanderstead/Purley	150	0	150

Source: Fordham Research 2010

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, appraisals were produced for three options for the amount and type of affordable housing provision plus a zero affordable option. Additional appraisals for a 20% option were added at a later stage in the work.

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 aff	20%	30%	40%	50%
1A	City Centre	-5,519	-7,746	-8,859	-10,004	-11,140
2A	suburban S Croydon	972	682	534	385	235
2F	family mix	840	678	596	513	428
3A	London Rd Croydon	3,425	1,645	756	-153	-1,118
3N	City Centre	1,444	3	-766	-1,525	-1,512
3P	Purley	1,679	167	-618	-1,420	-2,231
4A	South Greenfield	1,598	1,306	1,159	1,011	861
5A	Town Centre	2,513	1,967	1,691	1,410	1,127
6A	North Central Croydon	764	616	541	465	388
6N	edge of centre	707	570	501	431	359
6P	Purley	810	653	573	493	411
6Q	Selsdon	958	771	677	583	437
7A	N Croydon	1,030	838	739	640	544
7N	City Centre	1,060	862	760	658	556
7P	Purley	985	799	708	613	521
7Q	Selsdon	1,105	897	792	685	577
8A	W Croydon	821	774	746	717	687
8N	City Centre	1,058	956	906	854	809
8P	Coulsdon	1,058	956	906	854	809
9A	Sanderstead/Purley	834	720	662	604	544
9N	Cane Hill	533	477	449	422	395
9P	North Croydon	566	504	473	440	412

Source: Fordham Research 2010

- 6.8 Table 6.1 shows that, with no requirement for affordable housing, all the sites except one deliver a positive land value. The bulk of these lie in the range £700k-£1,100k per acre (£1.73m-£2.72m per ha). A further group, all in high value sites mainly in the City Centre, are more valuable, and two, on the poorly utilised Site 9, generate a lower value.
- 6.9 Allowing for additional development costs and our planning gain assumptions, values on the remaining sites are mostly below what the available information suggests for 'oven ready' land in Croydon. This confirms that our appraisal assumptions are, taken as a whole, unlikely to be unduly optimistic.

- 6.10 Table 6.1 shows 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, 50%, there are eighteen 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, highest value sites – Croydon Park Hotel, London Rd, Surrey St – 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 5.9 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, £50k per acre might be perfectly sufficient in some cases, whilst in a particular case it might need to be many times that figure.
- 6.17 After consideration we took the view that a broad average figure of £150k per acre (£370k 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 20% on the industrial benchmark land value.
- 6.18 The figures are set out below and combined with the net alternative use values from Table 5.9 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				
No	Site	£k per acre		
		Alternative use value	Cushion	Viability threshold value
1A	City Centre	150	150	300
2A	suburban S Croydon	618	150	768
2F	family mix	618	150	768
3A	London Rd Croydon	1,500	150	1,650
3N	City Centre	1,250	150	1,400
3P	Purley	1,000	150	1,150
4A	South Greenfield	10	150	160
5A	Town Centre	1,750	150	1,900
6A	North Central Croydon	626	150	776
6N	edge of centre	626	150	776
6P	Purley	626	150	776
6Q	Selsdon	626	150	776
7A	N Croydon	1,050	150	1,200
7N	City Centre	910	150	1,060
7P	Purley	965	150	1,115
7Q	Selsdon	1,050	150	1,200
8A	W Croydon	468	150	618
8N	City Centre	783	150	933
8P	Coulsdon	618	150	768
9A	Sanderstead/Purley	100	150	250
9N	Cane Hill	50	150	200
9P	North Croydon	150	150	300

Source: Affordable Housing Viability Study 2010

6.20 These threshold values are applied to the appraisal results in the table below. The viability outcome is described as VIABLE where the residual value covers the alternative use value, plus the whole of the cushion. Where the residual value covers alternative use value plus only part of the cushion, the outcome is shown as MARGINAL. Where the residual value is below alternative use value, the scheme is, quite clearly, NOT VIABLE.

Table 6.3 Appraisal outcomes: base appraisals, with grant							
No	Site	Alt use value	Value £k per acre				
			No affordable	20%	30%	20%	30%
1A	Croydon Park Hotel	150	-5,519	-7,746	-8,859	-10,004	-11,140
		300	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
2A	Queens Hospital	618	972	682	534	385	235
		768	VIABLE	MARGINAL	NOT VIAB	NOT VIAB	NOT VIAB
2F	with family mix	618	840	678	596	513	428
		768	VIABLE	MARGINAL	NOT VIAB	NOT VIAB	NOT VIAB
3A	187-195 London Rd	1,500	3,425	1,645	756	-153	-1,118
		1,650	VIABLE	MARGINAL	NOT VIAB	NOT VIAB	NOT VIAB
3N	City Centre CR9 1	1,250	1,444	3	-766	-1,525	-1,512
		1,400	VIABLE	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
3P	Purley CR8 4	1,000	1,679	167	-618	-1,420	-2,231
		1,150	VIABLE	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
4A	Cane Hill Hospital	10	1,598	1,306	1,159	1,011	861
		160	VIABLE	VIABLE	VIABLE	VIABLE	VIABLE
5A	Waterworks Yard	1,750	2,513	1,967	1,691	1,410	1,127
		1,900	VIABLE	VIABLE	NOT VIAB	NOT VIAB	NOT VIAB
6A	Addiscombe Station	626	764	616	541	465	388
		776	MARGINAL	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
6N	edge of centre CR0 1	626	707	570	501	431	359
		800	MARGINAL	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
6P	Purley CR8 2	626	810	653	573	493	411
		800	VIABLE	MARGINAL	NOT VIAB	NOT VIAB	NOT VIAB
6Q	Selsdon CR2 8	626	958	771	677	583	437
		800	VIABLE	MARGINAL	MARGINAL	NOT VIAB	NOT VIAB
7A	68-70 Belulah Hill	1050	1,030	838	739	640	544
		1200	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
7N	City Centre CR0 1	910	1,060	862	760	658	556
		1060	MARGINAL	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
7P	Purley CR8 2	965	985	799	708	613	521
		1115	MARGINAL	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
7Q	Selsdon CR2 8	1050	1,105	897	792	685	577
		1200	MARGINAL	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB

Table 6.3 Appraisal outcomes: base appraisals, with grant

No	Site	Alt use value	Value £k per acre				
			No affordable	20%	30%	20%	30%
8A	Sumner Gardens	468	821	774	746	717	687
		618	VIABLE	VIABLE	VIABLE	VIABLE	VIABLE
8N	City Centre CR0 1	783	1,058	956	906	854	809
		933	VIABLE	VIABLE	MARGINAL	MARGINAL	MARGINAL
8P	Coulsdon CR5 2	618	1,058	956	906	854	809
		768	VIABLE	VIABLE	VIABLE	VIABLE	VIABLE
9A	Nursery	100	834	720	662	604	544
		250	VIABLE	VIABLE	VIABLE	VIABLE	VIABLE
9N	Cane Hill	50	533	477	449	422	395
		200	VIABLE	VIABLE	VIABLE	VIABLE	VIABLE
9P	North Croydon	150	566	504	473	440	412
		300	VIABLE	VIABLE	VIABLE	VIABLE	VIABLE

Source: Affordable Housing Viability Study 2010

Comparison results

- 6.21 With zero affordable housing 15 of the 22 sites are viable, and five 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 we have assumed a significant additional cost burden through CSH Level 4. Consequently there are a couple of sites which could not proceed at present — even as 100% market housing.
- 6.22 Turning to the various levels of affordable contribution; at 20% eight sites are still viable, and five others are marginal. At 30%, six sites are still viable, with two others being marginal. At 40% one of the marginal sites becomes unviable. The situation is unchanged at 50%, leaving six sites still viable.
- 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	15	8	6	6	6
Marginal	5	5	2	1	1
Not viable	2	9	14	15	15
Total	22	22	22	22	22

Source: Affordable Housing Viability Study 2010

- 6.24 We will consider the implications of these results for future policy in Chapter 8. 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 Since the spring of 2009 the decline in prices has halted, and indeed reversed; nationally prices rose by over 9% (Halifax Price Index) between April-December 2009. However there is as yet no consensus that the decline in prices is over. The view has been commonly expressed that a limited supply of properties onto the market, rather than an increase in demand, was responsible for a 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 by 10% relative to costs, before a clear and enduring recovery gets under way.
- 6.28 As an alternative to this, we assessed how viability might have looked around the market peak in August 2007, essentially reflecting newbuild market prices 18% higher than currently – which may be a conservative view – and costs 6% 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	Alt use value	Value £k per acre	
			Base option	Prices down costs up
			30% affordable	30% affordable
1A	Croydon Park Hotel	150	-8,859	-10,857
		300	NOT VIAB	NOT VIAB
2A	Queens Hospital	618	534	119
		768	NOT VIAB	NOT VIAB
2F	with family mix	618	596	369
		768	NOT VIAB	NOT VIAB
3A	187-195 London Rd	1,500	756	-1,039
		1,650	NOT VIAB	NOT VIAB
3N	City Centre CR9 1	1,250	-766	-2,481
		1,400	NOT VIAB	NOT VIAB
3P	Purley CR8 4	1,000	-618	-2,341
		1,150	NOT VIAB	NOT VIAB
4A	Cane Hill Hospital	10	1,159	836
		160	VIABLE	VIABLE
5A	Waterworks Yard	1,750	1,691	1,065
		1,900	NOT VIAB	NOT VIAB
6A	Addiscombe Station	626	541	300
		776	NOT VIAB	NOT VIAB
6N	edge of centre CR0 1	626	501	261
		776	NOT VIAB	NOT VIAB
6P	Purley CR8 2	626	573	332
		776	NOT VIAB	NOT VIAB
6Q	Selsdon CR2 8	626	677	421
		776	MARGINAL	NOT VIAB
7A	68-70 Belulah Hill	1050	739	428
		1200	NOT VIAB	NOT VIAB
7N	City Centre CR0 1	910	760	448
		1060	NOT VIAB	NOT VIAB
7P	Purley CR8 2	965	708	396
		1115	NOT VIAB	NOT VIAB
7Q	Selsdon CR2 8	1050	792	481
		1200	NOT VIAB	NOT VIAB
8A	Sumner Gardens	468	746	465
		618	VIABLE	NOT VIAB
8N	City Centre CR0 1	783	906	622
		933	MARGINAL	NOT VIAB
8P	Coulson CR5 2	618	906	620
		768	VIABLE	MARGINAL

Table 6.5 Sensitivity test: short term market fall scenario				
No	Site	Alt use value	Value £k per acre	
			Base option	Prices down costs up
			30% affordable	30% affordable
9A	Nursery	100	662	510
		250	VIABLE	VIABLE
9N	Cane Hill	50	449	449
		200	VIABLE	VIABLE
9P	North Croydon	150	473	343
		300	VIABLE	VIABLE

Source: Affordable Housing Viability Study 2010

- 6.29 A fall in prices from December 2007 does affect the results, rendering Sites 6Q and 8A unviable. Site 9 remains viable throughout though with much reduced surpluses.

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 at late summer 2007. In this case we believe that prices would have been at least 18% higher and costs 6% lower than those assumed in the base appraisals (effectively equivalent to a 25% 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% aff	30% aff	40% aff	50% aff
1A	Croydon Park Hotel	150	-8,859	3,816	-5,652	-7,510
		300	NOT VIAB	VIABLE	NOT VIAB	NOT VIAB
2A	Queens Hospital	618	534	1,463	1,184	903
		768	NOT VIAB	VIABLE	VIABLE	VIABLE
2F	with family mix	618	596	1,441	1,239	1,036
		768	NOT VIAB	VIABLE	VIABLE	VIABLE
3A	187-195 London Rd	1,500	756	5,180	3,676	2,117
		1,650	NOT VIAB	VIABLE	VIABLE	VIABLE
3N	City Centre CR9 1	1,250	-766	3,403	2,096	780
		1,400	NOT VIAB	VIABLE	VIABLE	NOT VIAB
3P	Purley CR8 4	1,000	-618	3,605	2,238	880
		1,150	NOT VIAB	VIABLE	VIABLE	NOT VIAB

Table 6.6 Sensitivity test: market peak						
No	Site	Alt use value	Value £k per acre			
			Base option	Prices up costs down		
			30% aff	30% aff	40% aff	50% aff
4A	Cane Hill Hospital	10	1,159	1,955	1,695	1,433
		160	VIABLE	VIABLE	VIABLE	VIABLE
5A	Waterworks Yard	1,750	1,691	3,257	2,755	2,250
		1,900	NOT VIAB	VIABLE	NOT VIAB	NOT VIAB
6A	Addiscombe Station	626	541	1,135	976	815
		776	NOT VIAB	VIABLE	VIABLE	VIABLE
6N	edge of centre CR0	626	501	1,086	934	780
		800	NOT VIAB	VIABLE	VIABLE	MARGINAL
6P	Purley CR8 2	626	573	1,183	1,017	850
		800	NOT VIAB	VIABLE	VIABLE	VIABLE
6Q	Selsdon CR2 8	626	677	1,312	1,128	943
		800	MARGINAL	VIABLE	VIABLE	VIABLE
7A	68-70 Belulah Hill	1050	739	1,528	1,318	1,106
		1200	NOT VIAB	VIABLE	VIABLE	MARGINAL
7N	City Centre CR0 1	910	760	1,549	1,336	1,122
		1060	NOT VIAB	VIABLE	VIABLE	MARGINAL
7P	Purley CR8 2	965	708	1,486	1,282	1,076
		1115	NOT VIAB	VIABLE	VIABLE	MARGINAL
7Q	Selsdon CR2 8	1050	792	1,601	1,382	1,160
		1200	NOT VIAB	VIABLE	VIABLE	MARGINAL
8A	Sumner Gardens	468	746	1,440	1,312	1,187
		618	VIABLE	VIABLE	VIABLE	VIABLE
8N	City Centre CR0 1	783	906	1,643	1,488	1,332
		933	MARGINAL	VIABLE	VIABLE	VIABLE
8P	Coulson CR5 2	618	906	1,642	1,488	1,331
		768	VIABLE	VIABLE	VIABLE	VIABLE
9A	Nursery	100	662	1,042	930	818
		250	VIABLE	VIABLE	VIABLE	VIABLE
9N	Cane Hill	50	449	775	701	627
		200	VIABLE	VIABLE	VIABLE	VIABLE
9P	North Croydon	150	473	803	726	647
		300	VIABLE	VIABLE	VIABLE	VIABLE

Source: Affordable Housing Viability Study 2010

6.32 The results confirm that at the market peak level of prices viability would be dramatically improved. Now all 22 sites are viable at 30%. Twenty remain viable at 40%. Even at 50% there are thirteen viable sites, plus five which are marginal.

Sensitivity: tenure split

6.33 The base appraisals were prepared using a 70:30 tenure split for affordable housing. It is appropriate to consider the impact of changing the tenure split, to an alternative split of say 80:20 or 60:40. However the purchase prices we assumed are identical for social rented and intermediate dwellings. There will therefore be no change to the results we have shown if the tenure split varies.

Sensitivity: reduced grant

6.34 We also considered the impact of reduction in the assumed level of grant, from £30k per bedspace for social rent to a lower figure of £20k per bedspace (with corresponding reduction in the intermediate figure).

No	Site	Alt use value	Value £k per acre	
			Base option 30% aff	Reduced grant 30% aff
1A	Croydon Park Hotel	150	-8,859	-9,793
		300	NOT VIAB	NOT VIAB
2A	Queens Hospital	618	534	318
		768	NOT VIAB	NOT VIAB
2F	with family mix	618	596	414
		768	NOT VIAB	NOT VIAB
3A	187-195 London Rd	1,500	756	-110
		1,650	NOT VIAB	NOT VIAB
3N	City Centre CR9 1	1,250	-766	-1,666
		1,400	NOT VIAB	NOT VIAB
3P	Purley CR8 4	1,000	-618	-1,531
		1,150	NOT VIAB	NOT VIAB
4A	Cane Hill Hospital	10	1,159	996
		160	VIABLE	VIABLE
5A	Waterworks Yard	1,750	1,691	1,373
		1,900	NOT VIAB	NOT VIAB
6A	Addiscombe Station	626	541	399
		776	NOT VIAB	NOT VIAB
6N	edge of centre CR0 1	626	501	358
		776	NOT VIAB	NOT VIAB
6P	Purley CR8 2	626	573	431
		776	NOT VIAB	NOT VIAB
6Q	Selsdon CR2 8	626	677	536
		776	MARGINAL	NOT VIAB

Table 6.7 Sensitivity test: reduced grant				
No	Site	Alt use value	Value £k per acre	
			Base option	Reduced grant
			30% aff	30% aff
7A	68-70 Belulah Hill	1050	739	554
		1200	NOT VIAB	NOT VIAB
7N	City Centre CR0 1	910	760	574
		1060	NOT VIAB	NOT VIAB
7P	Purley CR8 2	965	708	526
		1115	NOT VIAB	NOT VIAB
7Q	Selsdon CR2 8	1050	792	605
		1200	NOT VIAB	NOT VIAB
8A	Sumner Gardens	468	746	543
		618	VIABLE	MARGINAL
8N	City Centre CR0 1	783	906	713
		933	MARGINAL	NOT VIAB
8P	Coulson CR5 2	618	906	713
		768	VIABLE	MARGINAL
9A	Nursery	100	662	578
		250	VIABLE	VIABLE
9N	Cane Hill	50	449	367
		200	VIABLE	VIABLE
9P	North Croydon	150	473	391
		300	VIABLE	VIABLE

Source: Affordable Housing Viability Study 2010

6.35 The reduced grant contribution adversely affects land values, by £150k per acre or so on the lower density sites and by very more on the high density apartment block sites. Site 6Q becomes unviable at 30% and Sites 8A, 8N and 8P all change status.

Sensitivity: Code for Sustainable Homes

6.36 We investigated the appraisals' sensitivity to the assumed Level 4. In moving from Level 3 to Level 4 there was assumed to be a small reduction in grant which partially offset the saving in costs, although this of course only applied to the affordable units.

Table 6.8 Sensitivity test: CSH Level 3						
No	Site	Alt use value	Value £k per acre			
			Base option	CSH Level 3		
			30% aff	20% aff	30% aff	40% aff
1A	Croydon Park Hotel	150	-8,859	-7,035	-8,196	-9,355
		300	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
2A	Queens Hospital	618	534	861	705	551
		768	NOT VIAB	VIABLE	MARGINAL	NOT VIAB
2F	with family mix	618	596	769	680	591
		768	NOT VIAB	VIABLE	MARGINAL	NOT VIAB
3A	187-195 London Rd	1,500	756	2,248	1,337	398
		1,650	NOT VIAB	VIABLE	NOT VIAB	NOT VIAB
3N	City Centre CR9 1	1,250	-766	621	-155	-949
		1,400	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
3P	Purley CR8 4	1,000	-618	772	-17	-846
		1,150	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
4A	Cane Hill Hospital	10	1,159	1,411	1,257	1,102
		160	VIABLE	VIABLE	VIABLE	VIABLE
5A	Waterworks Yard	1,750	1,691	2,194	1,907	1,618
		1,900	NOT VIAB	VIABLE	VIABLE	NOT VIAB
6A	Addiscombe Station	626	541	709	629	548
		776	NOT VIAB	MARGINAL	MARGINAL	NOT VIAB
6N	edge of centre CR0	626	501	663	588	513
		800	NOT VIAB	MARGINAL	NOT VIAB	NOT VIAB
6P	Purley CR8 2	626	573	746	661	575
		800	NOT VIAB	MARGINAL	MARGINAL	NOT VIAB
6Q	Selsdon CR2 8	626	677	865	766	665
		800	MARGINAL	VIABLE	MARGINAL	MARGINAL
7A	68-70 Belulah Hill	1050	739	962	857	751
		1200	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
7N	City Centre CR0 1	910	760	1,022	878	796
		1060	NOT VIAB	MARGINAL	NOT VIAB	NOT VIAB
7P	Purley CR8 2	965	708	926	825	724
		1115	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
7Q	Selsdon CR2 8	1050	792	1,022	910	797
		1200	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
8A	Sumner Gardens	468	746	881	850	815
		618	VIABLE	VIABLE	VIABLE	VIABLE
8N	City Centre CR0 1	783	906	1,074	1,016	958
		933	MARGINAL	VIABLE	VIABLE	VIABLE
8P	Coulson CR5 2	618	906	1,074	1,016	958
		768	VIABLE	VIABLE	VIABLE	VIABLE

Table 6.8 Sensitivity test: CSH Level 3						
No	Site	Alt use value	Value £k per acre			
			Base option	CSH Level 3		
			30% aff	20% aff	30% aff	40% aff
9A	Nursery	100	662	769	708	647
		250	VIABLE	VIABLE	VIABLE	VIABLE
9N	Cane Hill	50	449	527	495	464
		200	VIABLE	VIABLE	VIABLE	VIABLE
9P	North Croydon	150	473	555	521	487
		300	VIABLE	VIABLE	VIABLE	VIABLE

Source: Affordable Housing Viability Study 2010

6.37 Even with the partial offset, dropping to Level 3 does improve viability. Twelve schemes are now viable at 20%, with a further four marginal. Eight schemes remain viable at 30%, with five marginal.

6.38 A further test was carried out without Level 3, reducing build costs to the base of 2006 Building Regulations though including the Lifetime Homes/Wheelchair allowance. The results are provided below.

Table 6.9 Sensitivity test: CSH No Level 3						
No	Site	Alt use	Value £k per acre			
			Base option	CSH Level 3		
			30% aff	20% aff	30% aff	40% aff
1A	Croydon Park Hotel	150	-8,859	-5,811	-6,933	-8,050
		300	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
2A	Queens Hospital	618	534	1,071	923	724
		768	NOT VIAB	VIABLE	VIABLE	MARGINAL
2F	with family mix	618	596	991	909	825
		768	NOT VIAB	VIABLE	VIABLE	VIABLE
3A	187-195 London Rd	1,500	756	3,254	2,354	1,448
		1,650	NOT VIAB	VIABLE	VIABLE	NOT VIAB
3N	City Centre CR9 1	1,250	-766	1,587	872	141
		1,400	NOT VIAB	VIABLE	NOT VIAB	NOT VIAB
3P	Purley CR8 4	1,000	-618	1,771	1,006	244
		1,150	NOT VIAB	VIABLE	MARGINAL	NOT VIAB
4A	Cane Hill Hospital	10	1,159	1,641	1,494	1,345
		160	VIABLE	VIABLE	VIABLE	VIABLE
5A	Waterworks Yard	1,750	1,691	2,562	2,282	2,005
		1,900	NOT VIAB	VIABLE	VIABLE	VIABLE

Table 6.9 Sensitivity test: CSH No Level 3						
No	Site	Value £k per acre				
		Alt use	Base option	CSH Level 3		
			30% aff	20% aff	30% aff	40% aff
6A	Addiscombe Station	626	541	875	799	723
		776	NOT VIAB	VIABLE	VIABLE	MARGINAL
6N	edge of centre CR0	626	501	829	759	688
		800	NOT VIAB	VIABLE	MARGINAL	MARGINAL
6P	Purley CR8 2	626	573	911	831	750
		800	NOT VIAB	VIABLE	VIABLE	MARGINAL
6Q	Selsdon CR2 8	626	677	1,030	936	840
		800	MARGINAL	VIABLE	VIABLE	VIABLE
7A	68-70 Belulah Hill	1050	739	1,170	1,071	971
		1200	NOT VIAB	MARGINAL	MARGINAL	NOT VIAB
7N	City Centre CR0 1	910	760	1,194	1,092	989
		1060	NOT VIAB	VIABLE	VIABLE	MARGINAL
7P	Purley CR8 2	965	708	1,133	1,039	944
		1115	NOT VIAB	VIABLE	MARGINAL	NOT VIAB
7Q	Selsdon CR2 8	1050	792	1,230	1,124	1,017
		1200	NOT VIAB	VIABLE	MARGINAL	NOT VIAB
8A	Sumner Gardens	468	746	1,094	1,066	1,037
		618	VIABLE	VIABLE	VIABLE	VIABLE
8N	City Centre CR0 1	783	906	1,282	1,230	1,178
		933	MARGINAL	VIABLE	VIABLE	VIABLE
8P	Coulston CR5 2	618	906	1,282	1,230	1,178
		768	VIABLE	VIABLE	VIABLE	VIABLE
9A	Nursery	100	662	861	804	747
		250	VIABLE	VIABLE	VIABLE	VIABLE
9N	Cane Hill	50	449	620	592	563
		200	VIABLE	VIABLE	VIABLE	VIABLE
9P	North Croydon	150	473	647	615	583
		300	VIABLE	VIABLE	VIABLE	VIABLE

Source: Affordable Housing Viability Study 2010

6.39 'No Level 3' improves viability further, quite considerably. There are now 20 viable sites at 20%. At 30% there are still fifteen, with five marginals. Ten sites are still viable at 40%.

Sensitivity: other developer contributions

6.40 We looked at the impact upon viability of a higher level of Planning Gain contribution. A contribution of £7,500 per dwelling for all sites was assumed. The results for the 20% and 30% options are shown, together with a parallel set of figures combining the higher Planning Gain contribution with a drop to Level 3.

Table 6.10 Sensitivity test: increased developer contributions						
No	Site	Alt use value	Value £k per acre			
			PG £7.5k Level 4		PG £7.5k Level 3	
			20% aff	30% aff	30% aff	40% aff
1A	Croydon Park Hotel	150	-8,514	-9,638	-7,809	-8,953
		300	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
2A	Queens Hospital	618	503	356	682	529
		768	NOT VIAB	NOT VIAB	MARGINAL	NOT VIAB
2F	with family mix	618	560	480	653	564
		768	NOT VIAB	NOT VIAB	MARGINAL	NOT VIAB
3A	187-195 London Rd	1,500	779	-111	1,396	457
		1,650	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
3N	City Centre CR9 1	1,250	-902	-1,668	-261	-1,066
		1,400	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
3P	Purley CR8 4	1,000	-733	-1,533	-87	-897
		1,150	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
4A	Cane Hill Hospital	10	1,205	1,057	1,311	1,157
		160	VIABLE	VIABLE	VIABLE	VIABLE
5A	Waterworks Yard	1,750	1,639	1,361	1,866	1,578
		1,900	NOT VIAB	NOT VIAB	MARGINAL	NOT VIAB
6A	Addiscombe Station	626	528	454	622	542
		776	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
6N	edge of centre CR0 1	626	484	414	576	501
		800	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
6P	Purley CR8 2	626	564	487	658	574
		800	NOT VIAB	NOT VIAB	MARGINAL	NOT VIAB
6Q	Selsdon CR2 8	626	684	589	778	678
		800	MARGINAL	NOT VIAB	VIABLE	MARGINAL
7A	68-70 Belulah Hill	1050	722	629	849	745
		1200	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
7N	City Centre CR0 1	910	746	647	873	765
		1060	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
7P	Purley CR8 2	965	686	597	813	712
		1115	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB
7Q	Selsdon CR2 8	1050	781	679	909	796
		1200	NOT VIAB	NOT VIAB	NOT VIAB	NOT VIAB

Table 6.10 Sensitivity test: increased developer contributions						
No	Site	Alt use value	Value £k per acre			
			PG £7.5k Level 4		PG £7.5k Level 3	
			20% aff	30% aff	30% aff	40% aff
8A	Sumner Gardens	468	666	638	786	851
		618	VIABLE	VIABLE	VIABLE	VIABLE
8N	City Centre CR0 1	783	853	807	970	910
		933	MARGINAL	MARGINAL	VIABLE	MARGINAL
8P	Coulsdon CR5 2	618	853	807	970	910
		768	VIABLE	VIABLE	VIABLE	VIABLE
9A	Nursery	100	878	663	727	667
		250	VIABLE	VIABLE	VIABLE	VIABLE
9N	Cane Hill	50	436	410	484	453
		200	VIABLE	VIABLE	VIABLE	VIABLE
9P	North Croydon	150	462	431	513	479
		300	VIABLE	VIABLE	VIABLE	VIABLE

Source: Affordable Housing Viability Study 2010

6.41 A more demanding contributions regime will impair viability. The results are summarised below.

Table 6.11 Viability results: PG options			
	Base PG Level 4	Higher PG Level 3	Higher PG Level 4
<i>No of sites in category with affordable at 20%:</i>			
Viable	8	8	6
Marginal	5	4	2
Not viable	9	10	14
<i>No of sites in category with affordable at 30%:</i>			
Viable	6	6	6
Marginal	2	2	1
Not viable	14	14	15
Total	22	22	22

Source: Affordable Housing Viability Study 2010

6.42 Higher developer contributions have a significant impact upon the 20% option, leaving fourteen sites unviable with Level 4. However for the 30% option the impact is less dramatic.

7. Threshold modelling: results

Introduction

- 7.1 This chapter sets out how viability assessments of model sites were prepared to provide guidance on the threshold issue, and presents the results of the model appraisals. PPS3 encourages local authorities to do this:

'Local Planning Authorities can set lower minimum thresholds, where viable and practicable, including in rural areas. This could include setting different proportions of affordable housing to be sought for a series of site-side thresholds over the plan area. Local Planning Authorities will need to make an informed assessment of the economic viability of [this]' (PPS3: Housing (2006) para 29)

- 7.2 This chapter contains such an assessment

Modelling variations in scheme size

- 7.3 The main appraisals included two sites, 8 and 9, below the national guidance threshold of 15 dwellings. These two sites performed well, suggesting that there could be scope for some reduction from 15. However the two sites contained 13 and 10 dwellings respectively. To provide further support for a size threshold reduction we prepared appraisals for a suite of model sites based upon Site 9A, but with a more efficient utilisation of space to provide a more typical development situation.
- 7.4 The base notional site was assumed to be 15 dwellings on 0.476 ha of land previously garden land, with no significant development constraints. The land was assumed to be developed at 15,500 sq ft per acre (3,550 sq m per ha).
- 7.5 In order to provide a full picture of how viability varied below the national size threshold of 15 dwellings, we created a suite of model sites, ranging in size from five to 15 dwellings.
- 7.6 It was felt that, in general, appraisal assumptions from the base (15 dwelling) site could reasonably be applied to smaller model sites. However we considered that there were several aspects of the assessment where this rule might not apply as size diminished:

- i) 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 decline, 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 quite vary pro rata with dwelling numbers)
- ii) We built in loadings for the build cost in line with those explained at paragraph 5.12
- iii) We considered whether the developer contribution assumption should vary. In fact the main contributions threshold in Croydon appears to be 15 dwellings. We decided to apply the standard contribution assumption all the way down to the least number of dwellings. This could be regarded as something of a ‘worst case’.

7.7 Finally, we considered whether values might improve to reflect a ‘non-estate’ type of location. In practice they might, but to be conservative we did not make any 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</i>		
<i>No of dwgs</i>	<i>Sq ft per acre</i>	<i>Build cost £ per sq ft</i>
15	15,500	111.00
14	15,480	112.50
13	15,458	113.50
12	15,433	114.50
11	15,405	115.50
10	15,375	117.00
9	15,340	118.00
8	15,300	119.50
7	15,255	120.50
6	15,205	122.50
5	15,147	124.50

Source: Fordham Research derived from analysis of BCIS cost data

Other assumptions

7.9 The sites were assumed to have sales values at £320 per sq ft. Development costs were assumed to be 12.0% of build costs. Sales rates were given at Table 5.8.

7.10 Using the above assumptions, appraisals were prepared for the suite of model sites.

Viability results

7.11 Using the above assumptions, the following results were generated:

Table 7.2 Appraisal outcomes: zero grant notional threshold sites						
No of dwgs	Site	Alt use value	Value £k per acre			
			No Affordable	20%	30%	40%
15	Notional site	150	1,370	1,108	1,019	929
		300	VIABLE	VIABLE	VIABLE	VIABLE
14	Notional site	150	1,338	1,079	989	900
		300	VIABLE	VIABLE	VIABLE	VIABLE
13	Notional site	150	1,313	1,054	966	878
		300	VIABLE	VIABLE	VIABLE	VIABLE
12	Notional site	150	1,307	1,047	958	869
		300	VIABLE	VIABLE	VIABLE	VIABLE
11	Notional site	150	1,286	1,026	938	848
		300	VIABLE	VIABLE	VIABLE	VIABLE
10	Notional site	150	1,251	993	906	817
		300	VIABLE	VIABLE	VIABLE	VIABLE
9	Notional site	150	1,223	967	880	792
		300	VIABLE	VIABLE	VIABLE	VIABLE
8	Notional site	150	1,218	958	870	787
		300	VIABLE	VIABLE	VIABLE	VIABLE
7	Notional site	150	1,190	933	853	763
		300	VIABLE	VIABLE	VIABLE	VIABLE
6	Notional site	150	1,148	900	812	725
		300	VIABLE	VIABLE	VIABLE	VIABLE
5	Notional site	150	1,134	874	786	698
		300	VIABLE	VIABLE	VIABLE	VIABLE

Source: Affordable Housing Viability Study 2009

7.12 It can be seen that as site size declines from 15 to five dwellings, land value drops by about £250k per acre (£620k per ha). However on a greenfield site like the one assessed, this does not impair residual value sufficiently to make the scheme unviable.

Conclusions

- 7.13 The main appraisals include two sites under 15 dwellings, and the results from these suggest that in Croydon sites under the national guidance threshold of 15 dwellings can potentially deliver significant affordable housing contributions without becoming unviable in consequence.
- 7.14 We looked in more detail at a suite of model sites between five and 15 dwellings. The results indicated that with allowances for increased costs and reduced space utilisation on smaller sites, such sites can indeed contribute affordable housing.
- 7.15 We therefore suggest that there is potential to reduce the size threshold from the national guidance figure of 15 dwellings, to a figure of 10 to match the London Spatial Strategy proposal, or indeed further.

8. Implications of the Stage 1 Results

Our approach

- 8.1 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 one site. A bespoke financial appraisal package has been used to produce residual valuations for each site under a series of affordable housing options.
- 8.2 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.
- 8.3 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:
- i) 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.
 - ii) The impact of relatively challenging sustainability requirements i.e. building to Level 4 of the Sustainability Code, for both market and affordable homes, without any offsetting uplift in values

- 8.4 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.
- 8.5 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 (other things 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.
- 8.6 The appraisals tested various proportions of affordable housing – combined with a proposed tenure split of 70:30 social rented: intermediate housing, with intermediate housing represented by shared ownership at 25% share. It was decided to assume that grant would, reflecting recent experience in the Borough, 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.
- 8.7 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

- 8.8 The results from the appraisals indicate that at current market values and costs it would be possible to sustain a target of 20% affordable housing, with the assumed levels of grant and developer contributions, across the study area as a whole.

8.9 With our base assumptions, under present market conditions only 15 of the 22 sites could produce 100% market housing and remain viable. A majority, eight, of those sites remain viable at 20% affordable. Additionally, five others are marginal, two of which only narrowly miss the full viability threshold. Between 20% and 30%, four of the marginals and one other become unviable, leaving only six viable sites (plus two marginal). In our view, on the base assumptions used in the appraisals a 20% target is reasonable in the present (December 2009) market, whilst a 30% target would be difficult to sustain.

A two tier affordable housing target suggestion

8.10 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 ignorance of the future path of the housing market, but this can be addressed through the Dynamic Viability process discussed below.

8.11 The viability evidence suggests that a 20% target would be the highest that would be reasonable to put forward in present circumstances. Only six of the 22 sites are viable at 30%. However, we would acknowledge that these represent a majority of the sites that are clearly viable with no affordable housing. And it is clear that some sites are viable at 50% affordable. If, as is expected, the housing market recovers in due course, then it will in time become possible to achieve a target higher than 20%.

8.12 Due to the unknown future of public subsidy levels, we suggest that the LDF Core strategy should contain two targets. There is nothing in Guidance to prevent this, and it seems the sensible way to address the various uncertainties. We suggest the following structure:

Target A: Operational and deliverable affordable housing target

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

20%

8.14 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

8.15 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.

8.16 The upper limit for the operation of the Dynamic Viability process is the SHMA; no Plan-wide 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:

50%

8.17 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.

Affordable target suggestion

8.18 In the past the Borough may well have been able to negotiate significantly more than 20% affordable housing, with grant, on privately developed sites. However the fall in house prices, combined with the additional cost of sustainable development (Level 4), has, in our view, made seeking a target as high as 30% affordable, unrealistic in the current market circumstances.

8.19 Sensitivity tests show how responsive viability is to changes in present market conditions, i.e. price and cost levels. Were we facing price and cost levels as they might have been in autumn 2007, a higher target, of 40% if not 50%, could have been proposed and defended (although we have to acknowledge that in practice some alternative use values might then have been a little higher).

8.20 It is also clear that viability is considerably impaired by the Code for Sustainable Housing. We have assumed that developers will not be able to retrieve any of the additional cost of building to Level 4. This may be felt to be an unduly pessimistic assumption; properties built to the Code should enjoy reduced running costs. At this stage however there is no evidence that developers selling such properties in a mass market and competing with the second-hand stock, will be able to secure an appreciable price premium. In a few locations with high prices and restricted supply, it may be possible, but it would be unwise to assume that this applies to Croydon at the present time.

8.21 In Chapter 9 we consider possible approaches to target setting in response to the likelihood of an eventual significant improvement in viability. Before moving on to this, however, we need to consider the size threshold issue.

The threshold for affordable housing

- 8.22 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.
- 8.23 The two smallest actual sites in the study (with 10 and 13 dwellings) were included in order to provide guidance on the scope for reducing the size threshold from 15 dwellings. Both of these sites are viable at 20% and indeed at 30%, in any of the locations we tested. However the smallest site tested had ten dwellings. Separate analysis on a suite of model sites showed that as site size steps down from 15 to five dwellings, the additional costs assumed were not sufficient to render the model site incapable of delivering the target level of affordable housing.
- 8.24 There is therefore scope for a reduction in the threshold.

9. Dynamic Viability results

- 9.1 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

- 9.2 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 its Inspector can consider and decide on the level of target setting for the whole plan period. The target cannot be left to supplementary guidance, and the alternative would be a costly re-opening of the Core Strategy Examination at each change in the housing market.
- 9.3 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.
- 9.4 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.
- 9.5 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) - though others are available
 - **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 commonly it is the Valuation Office Agency's Industrial Land index
- 9.6 The specific values used and sources for these indexes are provided below:

Table 9.1 Indices for automatic updating of Dynamic Viability		
Variable	Proposed index	Starting value
House Price	Halifax House Price Index Regional Greater London (Seasonally Adjusted)	Q4 2009 = 641.6
	Halifax House Price Index (free, monthly) http://www.lloydsbankinggroup.com/media1/research/halifax_hpi.asp	
Build cost	BCIS General Building Cost Index	Dec 2009 = 287.4
	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) Value of Industrial Land for London Outer (Croydon)	January 2010 = figure is £2.00 m per ha
	Valuation Office Agency: Property Market Reports (free, annual) http://www.voa.gov.uk/publications/index.htm	

Source: Fordham Research 2010: Affordable Housing Viability Study 2010

9.7 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.

Benchmark site

9.8 For purposes of Dynamic Viability it is necessary to select a single site that best represents the type of site which will be developed in future in Croydon. After some consideration the most appropriate site we have used an amended version of Site 6Q: Selsdon. The minor adjustment to the site was to ensure that it was exactly viable at the chosen current target level of 20%. Its alternative use value is industrial/warehousing land.

Coarse matrix

- 9.9 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 6.
- 9.10 As will be noticed, the table below focussed upon the 20% target discussed as being deliverable in the previous chapter: the zero/zero point when looking at the percentage version of the indexes.

Figure 9.1 Coarse Matrix with base alternative use value

		Price Change HPI									
		%	-20%	-10%	0%	10%	20%	30%	40%	50%	60%
Cost Change BCIS Index	%	513.3	577.4	641.6	705.8	769.9	834.1	898.2	962.4	1026.6	
	-20%	229.9	0%	50%	55%	55%	55%	55%	55%	55%	55%
	-10%	258.7	0%	15%	40%	55%	55%	55%	55%	55%	55%
	0%	287.4	0%	0%	20%	40%	50%	55%	55%	55%	55%
	10%	316.1	0%	0%	0%	20%	35%	45%	55%	55%	55%
	20%	344.9	0%	0%	0%	0%	20%	35%	45%	50%	55%
	30%	373.6	0%	0%	0%	0%	5%	20%	35%	40%	45%
	40%	402.4	0%	0%	0%	0%	0%	10%	25%	30%	40%
	50%	431.1	0%	0%	0%	0%	0%	0%	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 2010: Draft Croydon Viability Study

Coarse and Fine Matrices related

- 9.11 There is a 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 three). 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%.

9.12 Figure 9.2 shows the *Fine Matrix* outputs that relate to the Figure 9.1 *Coarse Matrix*. Again the full set of tables will be found in Appendix 5. As will be seen from Figure 9.2, the intervals in the targets around the base case of 20% are smaller than in Figure 9.1. They permit more sensitive adjustments of the target as the index numbers change in future.

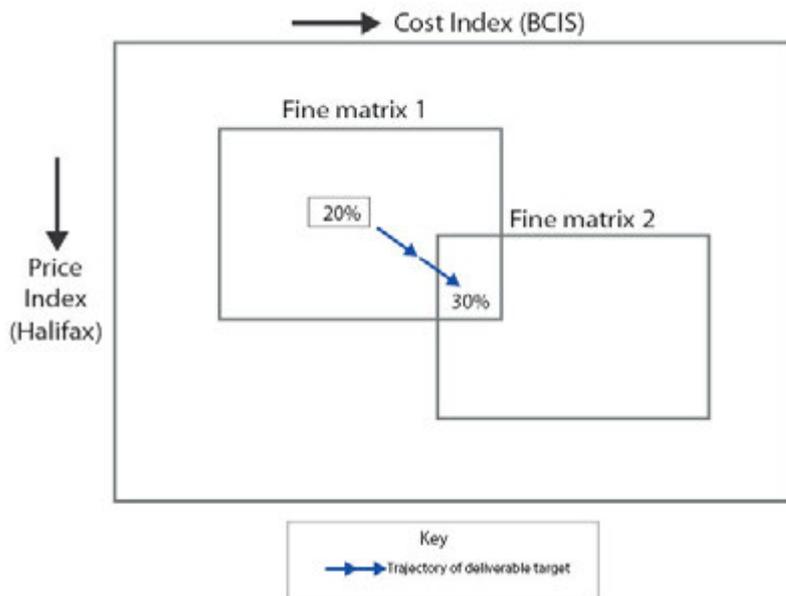
Figure 9.2 Fine Matrix with base alternative use value

		Price Change HPI								
%		-8%	-4%	0%	4%	8%	12%	16%	20%	24%
		590.3	615.9	641.6	667.3	692.9	718.6	744.3	769.9	795.6
Cost Change BCIS Index	-8%	264.4	15%	25%	35%	45%	50%	55%	55%	55%
	-4%	275.9	0%	15%	25%	35%	40%	45%	50%	55%
	0%	287.4	0%	5%	20%	25%	35%	40%	45%	50%
	4%	298.9	0%	0%	10%	20%	25%	35%	40%	45%
	8%	310.4	0%	0%	0%	10%	20%	25%	35%	40%
	12%	321.9	0%	0%	0%	0%	10%	20%	25%	35%
	16%	333.4	0%	0%	0%	0%	5%	15%	20%	25%
	20%	344.9	0%	0%	0%	0%	0%	5%	15%	20%

Source: Fordham Research 2010: Affordable Housing Viability Study 2010

9.13 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 9.3 Coarse and Fine Matrices related



Source: Fordham Research 2010: Affordable Housing Viability Study 2010

- 9.14 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.

Revising the target

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

Figure 9.4 Checking the indexes in future

Step 1

The starting point is the alternative use value. This will determine which of the eight tables 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 tables 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.

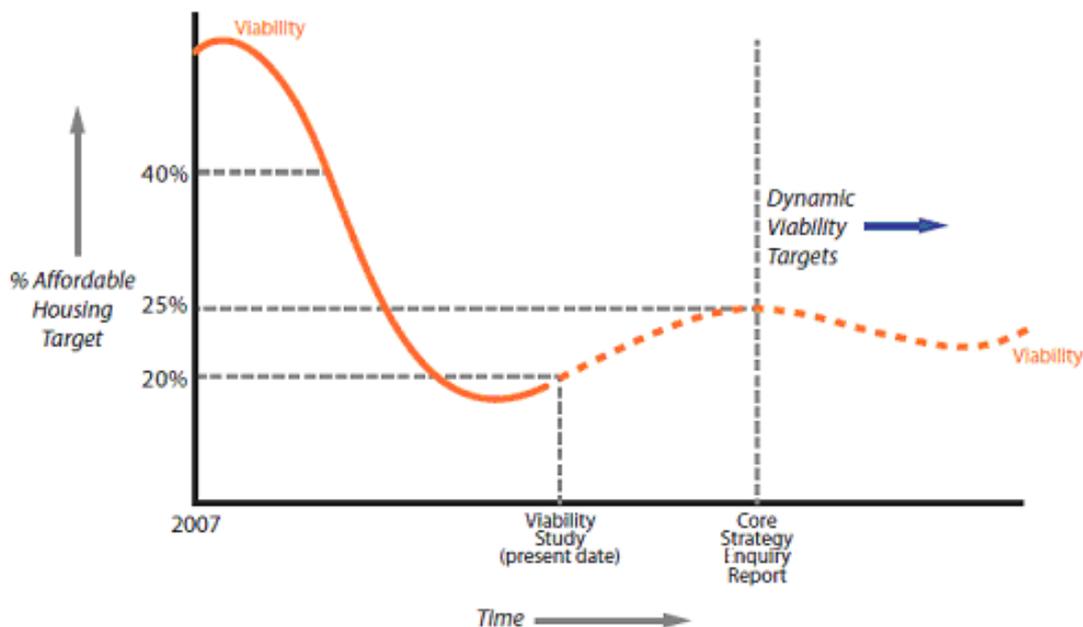
Step 4

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

Implementing Dynamic Viability

- 9.16 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. Thus it is likely to be necessary to redo the base viability analysis at the time of the Core Strategy Examination to ensure that the Dynamic Viability process starts from the period of the Examination.
- 9.17 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 9.5 indicates this process schematically.

Figure 9.5 Implementing Dynamic Viability



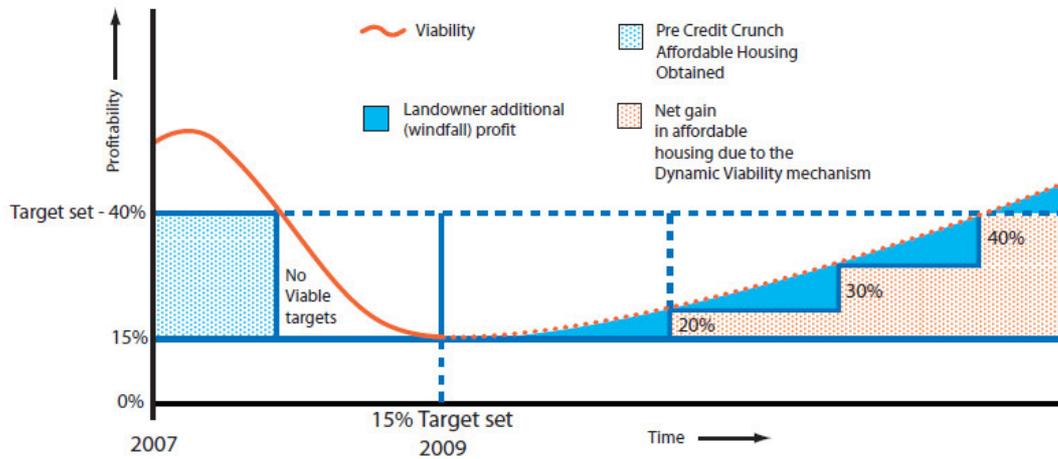
Source: Fordham Research 2010: Affordable Housing Viability Study 2010

- 9.18 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.
- 9.19 The indexes used for updating are listed in Table 9.1 above.

Conclusion

- 9.20 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 9.6 Gain of Affordable Housing from Dynamic Viability



Source: Fordham Research 2009: Affordable Housing Viability Study 2009

- 9.21 The figure above 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.
- 9.22 The Dynamic Viability procedure ensures that the maximum of deliverable affordable housing is achieved.

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 scheme details					
<i>Site</i>	<i>Location</i>	<i>Builder</i>	<i>No. of dwgs</i>	<i>Range of dwgs</i>	<i>Prices</i>
Building	London Road	Countryside	n/a	1 & 2 bed flats	£133k-£195k
Altitude 25	Fairfield Road	Howard Holdings	236	1 2 & 3 bed flats	£260k-£570k
The Exchange	Scarbrook Rd	Howard Holdings	66	2 & 3 bed flats	£545kn/a
Fusion	London Road	Fairview	n/a	1 2 & 3 bed flats	n/a
lylo	Wellesley Rd	Phoenix	184	1 & 2 bed flats	£200k-£435k
New South Quarter	Purley Way	Barratt	700	1 & 2 bed flats	£179k-£235k
Westmount	Duppas Hill Rd	Carlton Developments	10	1 & 2 bed flats	£199k-£285k
Bauhaus	Masons Avenue	Durkan Estates	125	1 2 & 3 bed flats 2 & 3 bed houses	£190k-£285k
Woodall Court	Whitestone Way	n/a		1 2 & 3 bed flats	£182k-£213k
793 London Road	London Road	Taylor Wimpey	32	1 & 2 bed flats	£149k-£199k

Source: Fordham Research Local Market Survey 2010

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 08</i>	<i>Q4 08</i>	<i>Q2 09</i>	<i>Ave</i>
CR0 0	New Addington	119%	113%	126%	119%
SE25 5	Selhurst North	137%	127%	102%	122%
CR0 3	Broad Green	129%	124%	114%	123%
CR0 2	Selhurst South	137%	131%	117%	128%
CR8 4	Reedham, Purley South	157%	97%	139%	131%
CR0 9	Forestdale	128%	130%	140%	133%
SE25 6	Upper Norwood South	151%	128%	126%	135%
CR7 7	Thornton Heath South	137%	132%	138%	136%
CR7 8	Thornton Heath North	144%	146%	127%	139%
SE25 4	South Norwood	149%	135%	139%	141%
CR0 1	Central Croydon	147%	153%	127%	142%
CR3 0	Kenley	140%	151%	141%	144%
CR0 4	Waddon	140%	138%	157%	145%
CR2 6	South Croydon	153%	144%	144%	147%
CR0 6	NE Central Croydon	150%	146%	148%	148%
CR5 2	Coulsdon	125%	153%	167%	148%
CR7 6	NW Croydon	145%	152%	n/a	148%
CR8 2	Purley Russell Hill	171%	147%	136%	151%
CR0 8	Spring Park	150%	153%	155%	152%
SW16 4	Norbury West	164%	147%	158%	156%
CR5 1	Old Coulsdon	139%	169%	165%	158%
CR0 7	Addiscombe	162%	158%	154%	158%
SE19 2	Upper Norwood	148%	194%	144%	162%
CR2 7	Croham Hurst	167%	170%	150%	162%
CR2 9	Sanderstead Kings Wood	153%	177%	162%	164%
SE19 3	Norwood New Town	173%	164%	155%	164%
CR2 8	Selsdon	179%	161%	155%	165%

Table A2.1 Price variations by postcode sector					
Postcode sector	Areas covered in sector	Q2 08	Q4 08	Q2 09	Ave
CR8 1	Purley Downs	160%	173%	176%	170%
SE19 1	Crystal Palace	198%	149%	183%	176%
CR2 0	SE Croydon	164%	199%	172%	178%
CR0 5	East Central Croydon	184%	201%	156%	180%
CR5 3	Cane Hill [+ Chipstead]	185%	183%	177%	182%
CR8 5	Kenley Common [+ Whiteleaf]	186%	216%	151%	184%
SW16 3	Streatham Common	219%	183%	206%	203%
CR8 3	Woodcote	328%	241%	270%	279%

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 CR0 4 at Q2 2009					
	Land Registry data Q2 2009				
	Detached	Semi	Terraced	Flat	Total
England & Wales — median price	£255,666	£158,333	£136,927	£142,266	
England & Wales — no of sales	28,017	35,283	34,299	19,600	117,199
CR0 4 — ave price	£545,000	£238,558	£200,000	£150,600	
CR0 4 price as % E & W median value	213.2%	150.7%	146.1%	105.9%	
Weighted average index for CR0 4 =	$\frac{[(28017 \times 213.2\%) + (35283 \times 150.7\%) + (34299 \times 146.1\%) + (19600 \times 105.9\%)]}{117,259}$ <p style="text-align: center;">= 156.7%</p>				

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
10 Cedars Avenue CR4 1EA	5	0.30 (0.12)	£440k	£1.467m	£3.67m
Gardners Arms CR4 2JA	n/a	0.08 (0.034)	£250k	£3.125m	£7.35m
Land for sale with residential permission no address	6	0.17 (0.068)	£400k	£2.353m	£5.93m
Land at Brighton Rd Purley	n/a	0.67 (0.27)	£2.00m	£3.000m	£7.41m

Source: Fordham Research Local Market Survey 2010

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 December 2009 using BCIS General Cost Index value of 287.4 for December 2009.

Table A4.1 Example of construction cost calculation Site 7			
	Adjustment	Build cost £ per	
		Sq ft	Sq m
Base cost England & Wales at Dec 2009 for scheme of 32% 3 storey flats, 34% 2 storey house, 34% 3 storey house	Base cost	88.33	950.4
Rebase to Croydon	+21.0%	106.88	1,150.0
CSH Level 4	+[(68% \times £12)+(32% \times £10.50)]	118.40	1,274.0
Lifetime Homes/Wheelchair	+1.0%	119.58	1,286.7
Higher spec	+0.0%	119.58	1,286.7
Small site loading	+0.0%	119.58	1,286.7
Rounded figure	round to £0.50 per sq ft, £5.0 per sq m	119.50	1,285

Source: Fordham Research data & BCIS indices

Appendix 5 Proposed benchmark appraisal

- A5.1 This appendix sets out the detailed index number sets used in Chapter 9 above. It is based on the Benchmark Site discussed in that chapter (an amended version of Site 6Q). The amendment is necessary to ensure it is just viable at the proposed target level of 20%. The alternative use value for Site 6Q is industrial/warehousing land.
- A5.2 For reference the index numbers (also shown in Chapter 9) 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 provides the range of alternative use values.

Table A5.1 Indices for automatic updating of Dynamic Viability		
Variable	Proposed index	Starting value
House Price	Halifax House Price Index Regional Greater London (Seasonally Adjusted)	Q4 2009 = 641.6
	Halifax House Price Index (free, monthly) http://www.lloydsbankinggroup.com/media1/research/halifax_hpi.asp	
Build cost	BCIS General Building Cost Index	Dec 2009 = 287.4
	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) Value of Industrial Land for London Outer (Croydon)	January 2010 = figure is £2.00 m per ha
	Valuation Office Agency: Property Market Reports (free, six annual) http://www.voa.gov.uk/publications/index.htm	

Sources: As shown in the boxes of the table

Croydon Benchmark Site Appraisal

Coarse Matrix

Table C1 Base alternative use value: 0% Change £626,000 Per Acre

		<i>Price Change HPI</i>								
		-20%	-10%	0%	10%	20%	30%	40%	50%	60%
Cost Change BCIS Index	%	513.3	577.4	641.6	705.8	769.9	834.1	898.2	962.4	1026.6
	-20%	229.9	0%	50%	55%	55%	55%	55%	55%	55%
	-10%	258.7	0%	15%	40%	55%	55%	55%	55%	55%
	0%	287.4	0%	0%	20%	50%	55%	55%	55%	55%
	10%	316.1	0%	0%	0%	20%	35%	45%	55%	55%
	20%	344.9	0%	0%	0%	0%	20%	35%	45%	50%
	30%	373.6	0%	0%	0%	0%	5%	20%	35%	40%
	40%	402.4	0%	0%	0%	0%	0%	10%	25%	30%
	50%	431.1	0%	0%	0%	0%	0%	0%	15%	25%

Table C2 Base alternative use value: 60% Change £250,000 Per Acre

		<i>Price Change HPI</i>								
		-20%	-10%	0%	10%	20%	30%	40%	50%	60%
Cost Change BCIS Index	%	513.3	577.4	641.6	705.8	769.9	834.1	898.2	962.4	1026.6
	-20%	229.9	55%	55%	55%	55%	55%	55%	55%	55%
	-10%	258.7	15%	55%	55%	55%	55%	55%	55%	55%
	0%	287.4	0%	20%	45%	55%	55%	55%	55%	55%
	10%	316.1	0%	0%	25%	40%	55%	55%	55%	55%
	20%	344.9	0%	0%	0%	25%	40%	50%	55%	55%
	30%	373.6	0%	0%	0%	5%	25%	35%	45%	50%
	40%	402.4	0%	0%	0%	0%	10%	25%	35%	45%
	50%	431.1	0%	0%	0%	0%	0%	15%	25%	35%

Table C3 Alternative use value: 40% Change £376,000 Per Acre

		Price Change HPI								
%		-20%	-10%	0%	10%	20%	30%	40%	50%	60%
Cost Change BCIS Index		513.3	577.4	641.6	705.8	769.9	834.1	898.2	962.4	1026.6
	-20%	229.9	55%	55%	55%	55%	55%	55%	55%	55%
	-10%	258.7	0%	40%	55%	55%	55%	55%	55%	55%
	0%	287.4	0%	5%	35%	55%	55%	55%	55%	55%
	10%	316.1	0%	0%	15%	35%	45%	55%	55%	55%
	20%	344.9	0%	0%	0%	15%	35%	45%	50%	55%
	30%	373.6	0%	0%	0%	0%	20%	30%	40%	50%
	40%	402.4	0%	0%	0%	0%	5%	20%	30%	40%
	50%	431.1	0%	0%	0%	0%	0%	10%	20%	30%

Table C4 Alternative use value: 20% Change £501,000 Per Acre

		Price Change HPI								
%		-20%	-10%	0%	10%	20%	30%	40%	50%	60%
Cost Change BCIS Index		513.3	577.4	641.6	705.8	769.9	834.1	898.2	962.4	1026.6
	-20%	229.9	30%	55%	55%	55%	55%	55%	55%	55%
	-10%	258.7	0%	30%	50%	55%	55%	55%	55%	55%
	0%	287.4	0%	0%	25%	45%	55%	55%	55%	55%
	10%	316.1	0%	0%	5%	30%	40%	50%	55%	55%
	20%	344.9	0%	0%	0%	10%	25%	40%	45%	55%
	30%	373.6	0%	0%	0%	0%	15%	25%	35%	45%
	40%	402.4	0%	0%	0%	0%	0%	15%	25%	35%
	50%	431.1	0%	0%	0%	0%	0%	5%	15%	25%

Table C5 Alternative use value: + 20% Change £751,000 Per Acre

		Price Change HPI								
%		-20%	-10%	0%	10%	20%	30%	40%	50%	60%
Cost Change BCIS Index		513.3	577.4	641.6	705.8	769.9	834.1	898.2	962.4	1026.6
	-20%	229.9	0%	35%	55%	55%	55%	55%	55%	55%
	-10%	258.7	0%	0%	30%	50%	55%	55%	55%	55%
	0%	287.4	0%	0%	10%	30%	45%	55%	55%	55%
	10%	316.1	0%	0%	0%	15%	30%	40%	50%	55%
	20%	344.9	0%	0%	0%	0%	15%	30%	40%	45%
	30%	373.6	0%	0%	0%	0%	0%	20%	30%	35%
	40%	402.4	0%	0%	0%	0%	0%	5%	20%	30%
	50%	431.1	0%	0%	0%	0%	0%	0%	10%	20%

Table C6 Alternative use value: + 20% Change £876,000 Per Acre										
		Price Change HPI								
%		-20%	-10%	0%	10%	20%	30%	40%	50%	60%
		513.3	577.4	641.6	705.8	769.9	834.1	898.2	962.4	1026.6
Cost Change BCIS Index	-20%	229.9	0%	20%	45%	55%	55%	55%	55%	55%
	-10%	258.7	0%	0%	20%	40%	50%	55%	55%	55%
	0%	287.4	0%	0%	0%	25%	40%	50%	55%	55%
	10%	316.1	0%	0%	0%	5%	25%	35%	45%	50%
	20%	344.9	0%	0%	0%	0%	10%	25%	35%	40%
	30%	373.6	0%	0%	0%	0%	0%	15%	25%	35%
	40%	402.4	0%	0%	0%	0%	0%	0%	15%	25%
	50%	431.1	0%	0%	0%	0%	0%	0%	5%	15%

Table C7 Alternative use value: + 60% Change £1,002,000 Per Acre										
		Price Change HPI								
%		-20%	-10%	0%	10%	20%	30%	40%	50%	60%
		513.3	577.4	641.6	705.8	769.9	834.1	898.2	962.4	1026.6
Cost Change BCIS Index	-20%	229.9	0%	5%	35%	50%	55%	55%	55%	55%
	-10%	258.7	0%	0%	10%	35%	45%	55%	55%	55%
	0%	287.4	0%	0%	0%	15%	30%	45%	50%	55%
	10%	316.1	0%	0%	0%	0%	20%	30%	40%	50%
	20%	344.9	0%	0%	0%	0%	5%	20%	30%	40%
	30%	373.6	0%	0%	0%	0%	0%	10%	20%	30%
	40%	402.4	0%	0%	0%	0%	0%	0%	10%	20%
	50%	431.1	0%	0%	0%	0%	0%	0%	0%	15%

Table C8 Alternative use value: + 80% Change £1,127,000 Per Acre										
		Price Change HPI								
%		-20%	-10%	0%	10%	20%	30%	40%	50%	60%
		513.3	577.4	641.6	705.8	769.9	834.1	898.2	962.4	1026.6
Cost Change BCIS Index	-20%	229.9	0%	0%	25%	45%	55%	55%	55%	55%
	-10%	258.7	0%	0%	0%	25%	40%	50%	55%	55%
	0%	287.4	0%	0%	0%	10%	25%	40%	45%	55%
	10%	316.1	0%	0%	0%	0%	10%	25%	35%	45%
	20%	344.9	0%	0%	0%	0%	0%	15%	25%	35%
	30%	373.6	0%	0%	0%	0%	0%	5%	15%	25%
	40%	402.4	0%	0%	0%	0%	0%	0%	5%	20%
	50%	431.1	0%	0%	0%	0%	0%	0%	0%	10%

Croydon Benchmark Site Appraisal

Fine Matrix

Table F1 Base alternative use value: 0% Change £626,000 Per Acre										
		Price Change HPI								
%		-8%	-4%	0%	4%	8%	12%	16%	20%	24%
Cost Change BCIS Index		590.3	615.9	641.6	667.3	692.9	718.6	744.3	769.9	795.6
	-8%	264.4	15%	25%	35%	45%	50%	55%	55%	55%
	-4%	275.9	0%	15%	25%	35%	40%	45%	50%	55%
	0%	287.4	0%	5%	20%	25%	35%	40%	45%	50%
	4%	298.9	0%	0%	10%	20%	25%	35%	40%	45%
	8%	310.4	0%	0%	0%	10%	20%	25%	35%	40%
	12%	321.9	0%	0%	0%	0%	10%	20%	25%	35%
	16%	333.4	0%	0%	0%	0%	5%	15%	20%	25%
	20%	344.9	0%	0%	0%	0%	0%	5%	15%	20%

Table F2 Base alternative use value: 30% Change £438,000 Per Acre										
		Price Change HPI								
%		-8%	-4%	0%	4%	8%	12%	16%	20%	24%
Cost Change BCIS Index		590.3	615.9	641.6	667.3	692.9	718.6	744.3	769.9	795.6
	-8%	264.4	35%	45%	50%	55%	55%	55%	55%	55%
	-4%	275.9	20%	35%	40%	50%	55%	55%	55%	55%
	0%	287.4	10%	20%	30%	40%	45%	50%	55%	55%
	4%	298.9	0%	10%	25%	30%	40%	45%	50%	55%
	8%	310.4	0%	0%	15%	25%	30%	40%	45%	45%
	12%	321.9	0%	0%	5%	15%	25%	30%	35%	40%
	16%	333.4	0%	0%	0%	5%	15%	25%	30%	35%
	20%	344.9	0%	0%	0%	0%	10%	15%	25%	30%

Table F3 Alternative use value: 20% Change £501,000 Per Acre										
		Price Change HPI								
%		-8%	-4%	0%	4%	8%	12%	16%	20%	24%
		<i>Cost Change BCIS Index</i>		590.3	615.9	641.6	667.3	692.9	718.6	744.3
-8%	264.4	30%	40%	45%	55%	55%	55%	55%	55%	55%
-4%	275.9	15%	30%	35%	45%	50%	55%	55%	55%	55%
0%	287.4	0%	15%	25%	35%	40%	45%	50%	55%	55%
4%	298.9	0%	5%	20%	25%	35%	40%	45%	50%	55%
8%	310.4	0%	0%	10%	20%	25%	35%	40%	45%	50%
12%	321.9	0%	0%	0%	10%	20%	25%	35%	40%	45%
16%	333.4	0%	0%	0%	0%	10%	20%	25%	35%	40%
20%	344.9	0%	0%	0%	0%	5%	15%	20%	25%	30%

Table F4 Alternative use value: 10% Change £563,000 Per Acre										
		Price Change HPI								
%		-8%	-4%	0%	4%	8%	12%	16%	20%	24%
		<i>Cost Change BCIS Index</i>		590.3	615.9	641.6	667.3	692.9	718.6	744.3
-8%	264.4	20%	35%	40%	50%	55%	55%	55%	55%	55%
-4%	275.9	10%	20%	30%	40%	45%	50%	55%	55%	55%
0%	287.4	0%	10%	25%	30%	40%	45%	50%	55%	55%
4%	298.9	0%	0%	15%	25%	30%	35%	40%	45%	50%
8%	310.4	0%	0%	5%	15%	25%	30%	35%	40%	45%
12%	321.9	0%	0%	0%	5%	15%	25%	30%	35%	40%
16%	333.4	0%	0%	0%	0%	10%	15%	25%	30%	35%
20%	344.9	0%	0%	0%	0%	0%	10%	20%	25%	30%

Table F5 Alternative use value: + 10% Change £689,000 Per Acre										
		Price Change HPI								
%		-8%	-4%	0%	4%	8%	12%	16%	20%	24%
		<i>Cost Change BCIS Index</i>		590.3	615.9	641.6	667.3	692.9	718.6	744.3
-8%	264.4	5%	20%	30%	40%	45%	50%	55%	55%	55%
-4%	275.9	0%	10%	20%	30%	40%	45%	50%	50%	55%
0%	287.4	0%	0%	15%	25%	30%	35%	40%	45%	50%
4%	298.9	0%	0%	5%	15%	25%	30%	35%	40%	45%
8%	310.4	0%	0%	0%	5%	15%	25%	30%	35%	40%
12%	321.9	0%	0%	0%	0%	10%	15%	25%	30%	35%
16%	333.4	0%	0%	0%	0%	0%	10%	20%	25%	30%
20%	344.9	0%	0%	0%	0%	0%	5%	10%	20%	25%

Table F6 Alternative use value: + 20% Change £751,000 Per Acre

		Price Change HPI								
%		-8%	-4%	0%	4%	8%	12%	16%	20%	24%
Cost Change BCIS Index		590.3	615.9	641.6	667.3	692.9	718.6	744.3	769.9	795.6
	-8%	264.4	0%	15%	25%	35%	40%	45%	50%	55%
	-4%	275.9	0%	5%	15%	25%	35%	40%	45%	50%
	0%	287.4	0%	0%	10%	20%	25%	35%	40%	45%
	4%	298.9	0%	0%	0%	10%	20%	25%	35%	40%
	8%	310.4	0%	0%	0%	0%	10%	20%	25%	30%
	12%	321.9	0%	0%	0%	0%	5%	15%	20%	25%
	16%	333.4	0%	0%	0%	0%	0%	5%	15%	20%
	20%	344.9	0%	0%	0%	0%	0%	0%	10%	15%

Table F7 Alternative use value: + 30% Change £814,000 Per Acre

		Price Change HPI								
%		-8%	-4%	0%	4%	8%	12%	16%	20%	24%
Cost Change BCIS Index		590.3	615.9	641.6	667.3	692.9	718.6	744.3	769.9	795.6
	-8%	264.4	0%	10%	20%	30%	40%	45%	50%	55%
	-4%	275.9	0%	0%	10%	25%	30%	35%	40%	45%
	0%	287.4	0%	0%	5%	15%	25%	30%	35%	40%
	4%	298.9	0%	0%	0%	5%	15%	25%	30%	35%
	8%	310.4	0%	0%	0%	0%	10%	15%	25%	30%
	12%	321.9	0%	0%	0%	0%	0%	10%	20%	25%
	16%	333.4	0%	0%	0%	0%	0%	5%	10%	20%
	20%	344.9	0%	0%	0%	0%	0%	0%	5%	15%

Table F8 Alternative use value: + 40% Change £876,000 Per Acre

		Price Change HPI								
%		-8%	-4%	0%	4%	8%	12%	16%	20%	24%
Cost Change BCIS Index		590.3	615.9	641.6	667.3	692.9	718.6	744.3	769.9	795.6
	-8%	264	0%	5%	15%	25%	35%	40%	45%	50%
	-4%	276	0%	0%	5%	20%	25%	35%	40%	45%
	0%	287	0%	0%	0%	10%	20%	25%	35%	40%
	4%	299	0%	0%	0%	0%	10%	20%	25%	30%
	8%	310	0%	0%	0%	0%	5%	15%	20%	25%
	12%	322	0%	0%	0%	0%	0%	5%	15%	20%
	16%	333	0%	0%	0%	0%	0%	0%	10%	15%
	20%	345	0%	0%	0%	0%	0%	0%	0%	10%

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 1A Croydon Park Hotel

Input assumptions		Scenario & option		Affordable 30% = 70% social rented 30% intermediate WITH GRANT							
Croydon site viability study											
Site details				Dwellings							
Site	1A Croydon Park Hotel			Dwellings	% of dwgs	% of units	<i>ave floor space</i>		<i>build cost</i>	<i>build index =</i>	<i>sales value</i>
Location	Central Croydon			Market housing	165.2	70.00%	70.00%	<i>gross sq ft</i>	<i>net sq ft</i>	<i>per sq ft</i>	<i>per sq ft</i>
Area	ha	0.51		Affordable soc rent	49.6	21.00%	21.0%	800	655	215.50	215.50
	acres	1.27								0.0%	385.00
No dwgs	236			Affordable sh oship	21.2	9.00%	9.0%	800	655	215.50	215.50
Density dw/ha	460.9									0.0%	215.00
				Total dwgs	236.0	100.00%	100.0%				
								0	0	0.00	0.00
								0	0	0.00	0.00
				Total units	236.0	100.0%		188,800	154,580		£40,686,400
				Floorspace density	= 122,183 net sq ft per acre						
				<div style="background-color: red; height: 20px; width: 100%;"></div>							
Contingency				Other costs							
	allowance	5.00%	2,034	Planning	521.9	£ per dwelling					
<div style="background-color: red; height: 20px; width: 100%;"></div>				Survey	500	£ per dwelling					
<div style="background-color: red; height: 20px; width: 100%;"></div>				<div style="background-color: red; height: 20px; width: 100%;"></div>							
Development costs				Marketing	0	£ per dwelling					
	standard % build	9.00%	3,845	Interest							
<div style="background-color: red; height: 20px; width: 100%;"></div>				% per annum	7.50%						
	plus abnormals	4.1%	1,750	Notes							
<div style="background-color: red; height: 20px; width: 100%;"></div>											
Total	13%										
Design fees											
	on build costs	10.0%	4,272								
<div style="background-color: red; height: 20px; width: 100%;"></div>											
	on dev costs	8%									
Planning gain & Grant contributions											
PG £ per dwg	2,500	590									
Grant £ per dwg	0	0									
FLAG PG ALL											

SITE 1A LAND COST & PHASING

Land		Iterate to achieve 20.0% profit			
		Affordable		No affordable	
		£		Hectare	
				Affordable	No affordable
Land purchase price	£	-11,207,935	-6,978,707		
RV per acre	£	-8,858,963	-5,516,102	-£21,890,498	-£13,630,288
Dev profit	£	8,052,427	9,915,983		
Total costs	£	43,578,868	49,598,892		
profit as % of costs		18.48%	19.99%		

Programme	Year 1				Year 2				Year 3				Year 4				Year 5				Year 6				TOTALS
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Units started																									
Market housing			0.0	11.2	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	165.2
Affordable soc rent			0.0	3.4	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	49.6
Affordable sh oship			0.0	1.4	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.2
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	0.0	0.0	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	16	20	20	20	20	20	20	20	20	20	20	20	0	0	0	0	0	0	0	0	0	236.0
Units 'built'																									
Market housing					0	11	14		14	14	14	14	14	14	14	14	14	14	0	0	0	0	0	0	165
+2Q Affordable soc rent					0	3	4		4	4	4	4	4	4	4	4	4	4	0	0	0	0	0	0	50
+2Q Affordable sh oship					0	1	2		2	2	2	2	2	2	2	2	2	2	0	0	0	0	0	0	21
0					0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	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																									
Market housing							0		11	14	14	14	14	14	14	14	14	14	14	14	14	0	0	0	165
+3Q Affordable soc rent							0		3	4	4	4	4	4	4	4	4	4	4	4	4	0	0	0	50
+3Q Affordable sh oship							0		1	2	2	2	2	2	2	2	2	2	2	2	2	0	0	0	21
0							0		0	0	0	0	0	0	0	0	0	0	0	0	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																									
Market housing									0	11	14	14	14	14	14	14	14	14	14	14	14	0	0	0	165
+4Q Affordable soc rent									0	3	4	4	4	4	4	4	4	4	4	4	4	0	0	0	50
+4Q Affordable sh oship									0	1	2	2	2	2	2	2	2	2	2	2	2	0	0	0	21
0									0	0	0	0	0	0	0	0	0	0	0	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 1A CASH FLOW AFFORDABLE

	rate	Year 1	Q2	Q3	Q4	Year 2	Q2	Q3	Q4	Year 3	Q2	Q3	Q4	Year 4	Q2	Q3	Q4	Year 5	Q2	Q3	Q4	Year 6	Q2	Q3	Q4	TOTALS
INCOME																										
Housing sales																										
Market housing		0	0	0	0	0	0	0	0	0	2,824	3,530	3,530	3,530	3,530	3,530	3,530	3,530	3,530	3,530	3,530	3,530	0	0	0	41,659
Affordable soc rent		0	0	0	0	0	0	0	0	0	473	591	591	591	591	591	591	591	591	591	591	591	0	0	0	6,979
Affordable sh oship		0	0	0	0	0	0	0	0	0	203	253	253	253	253	253	253	253	253	253	253	253	0	0	0	2,991
0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	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	-104	-130	-130	-130	-130	-130	-130	-130	-130	-130	-130	-130	0	0	0	-1,538
Total income		0	0	0	0	0	0	0	0	0	3,500	4,375	4,375	4,375	4,375	4,375	4,375	4,375	4,375	4,375	4,375	4,375	0	0	0	51,630
COSTS																										
Land																										
Land acquisition		-11,208																								-11,208
Stamp duty		0																								0
Purchase fees		-308																								-308
Total																										-11,516
Build costs																										
Market housing		0	0	0	0	0	0	1,931	2,414	2,414	2,414	2,414	2,414	2,414	2,414	2,414	2,414	2,414	2,414	0	0	0	0	0	0	28,480
Affordable soc rent		0	0	0	0	0	0	579	724	724	724	724	724	724	724	724	724	724	724	0	0	0	0	0	0	8,544
Affordable sh oship		0	0	0	0	0	0	248	310	310	310	310	310	310	310	310	310	310	310	0	0	0	0	0	0	3,662
0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	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	138	172	172	172	172	172	172	172	172	172	172	172	0	0	0	0	0	0	2,034
Total																										42,721
Dev costs																										
Upfront	4.5%	481	481	481	481																					1,922
Build related	4.5%	0	0	0	0	130	163	163	163	163	163	163	163	163	163	163	163	0	0	0	0	0	0	0	0	1,922
Abnormals	4%	875	875																							1,750
Total																										5,595
Fees																										
Fees on build costs	10.0%	0	0	0	0	0	0	290	362	362	362	362	362	362	362	362	362	362	362	0	0	0	0	0	0	4,272
Fees on dev costs	8.0%	108	108	38	38	10	13	13	13	13	13	13	13	13	13	13	13	0	0	0	0	0	0	0	0	448
Total																										4,720
PG																										
Planning gain				0	40	50	50	50	50	50	50	50	50	50	50	0	0	0	0	0	0	0	0	0	0	590
Total																										590
Grant																										
Grant				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
Other																										
Planning	£522	41	41	41																						123
Survey	£500	118																								118
Marketing	£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																										241
Sales fees	b/forward from above	0	0	0	0	0	0	0	0	0	104	130	130	130	130	130	130	130	130	130	130	130	0	0	0	1,538
Total costs		-9,893	1,505	560	559	191	226	3,412	4,208	4,208	4,313	4,339	4,339	4,339	4,339	4,339	4,289	4,113	4,113	130	130	130	0	0	0	43,888
Net profit/loss from quarter		9,893	-1,505	-560	-559	-191	-226	-3,412	-4,208	-4,208	-812	37	37	37	37	37	87	263	263	4,245	4,245	4,245	0	0	0	7,741
Profit/loss bf from last quarter		0	10,078	8,734	8,327	7,914	7,868	7,785	4,456	252	-4,031	-4,934	-4,989	-5,045	-5,102	-5,160	-5,219	-5,229	-5,059	-4,887	-653	3,659	8,052	8,052	8,052	
Cumulative profit/loss		9,893	8,573	8,174	7,768	7,723	7,642	4,374	247	-3,956	-4,843	-4,897	-4,952	-5,008	-5,065	-5,123	-5,133	-4,966	-4,797	-641	3,592	7,904	8,052	8,052	8,052	
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%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	0.00%	0.00%	0.00%	
Total		185	161	153	146	145	143	82	5	-74	-91	-92	-93	-94	-95	-96	-96	-93	-90	-12	67	148	0	0	0	310
Cumulative developer profit carried forward to RV calc		10,078	8,734	8,327	7,914	7,868	7,785	4,456	252	-4,031	-4,934	-4,989	-5,045	-5,102	-5,160	-5,219	-5,229	-5,059	-4,887	-653	3,659	8,052	8,052	8,052	8,052	8,051

SITE 2A Queens Hospital

Input assumptions		Scenario & option		Affordable 30% = 70% social rented 30% intermediate WITH GRANT									
Croydon site viability study				Dwellings									
Site details				Dwellings		<i>ave floor space</i>		<i>build cost</i>		<i>build index =</i>		<i>sales value</i>	
Site	2A Queen Hospital				% of	% of	<i>gross</i>	<i>net</i>	<i>per sq ft</i>				
Location	Croydon				dwgs	units	<i>sq ft</i>	<i>sq ft</i>	<i>per sq ft</i>				<i>per sq ft</i>
Area	ha	3.16		Market housing	252.0	70.00%	70.00%	726	631	134.50	134.50	134.50	317.00
	acres	7.81		Affordable soc rent	75.6	21.00%	21.0%	726	631	134.50	134.50	134.50	215.00
No dwgs	360			Affordable sh oship	32.4	9.00%	9.0%	726	631	134.50	134.50	134.50	215.00
Density dw/ha	113.9			Total dwgs	360.0	100.00%	100.0%						
								0	0	0.00	0.00	0.00	0.00
								0	0	0.00	0.00	0.00	0.00
Contingency				Total units		360.0	100.0%	261,360	227,160			£35,152,920	£65,058,624
				Floorspace density		= 29,092 net sq ft per acre							
				Other costs									
allowance 5.00% 1,758				Planning		547.1	£ per dwelling						
				Survey		500	£ per dwelling						
Development costs				Marketing		0	£ per dwelling						
standard % build 10.00% 3,691				Interest									
				% per annum		7.50%							
plus abnormal 1.2% 450													
Total 11%													
Design fees													
on build costs 10.00% 3,691													
on dev costs 8%													
Planning gain & Grant contributions													
PG £ per dwg 2,500 900													
Grant £ per dwg 0 0													
PG ALL													
Notes													
<div style="border: 1px solid black; height: 40px;"></div>													

SITE 2A LAND COST & PHASING

Land		Iterate to achieve 20.0% profit			
		Affordable		No affordable	
		Hectare			
		Affordable	No affordable	Affordable	No affordable
Land purchase price	£	4,169,500	7,601,000	£1,319,462	£2,405,380
RV per acre	£	533,979	973,444		
Dev profit	£	10,168,058	12,012,541		
Total costs	£	54,892,366	59,998,979		
profit as % of costs		18.52%	20.02%		

Programme	Year 1				Year 2				Year 3				Year 4				Year 5				Year 6				TOTALS
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Units started																									
Market housing			14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	0.0	0.0	0.0	0.0	252.0
Affordable soc rent			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	4.2	4.2	4.2	0.0	0.0	0.0	0.0	75.6
Affordable sh oship			1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	0.0	0.0	0.0	0.0	32.4
0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	0	0	0	0	360.0
Units 'built'																									
Market housing					14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	0	0	252
+2Q Affordable soc rent					4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	0	0	76
+2Q Affordable sh oship					2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	0	0	32
0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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																									
Market housing					14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	0	252
+3Q Affordable soc rent					4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	0	76
+3Q Affordable sh oship					2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	0	32
0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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																									
Market housing					14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	252
+4Q Affordable soc rent					4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	76
+4Q Affordable sh oship					2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	32
0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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 2A CASH FLOW AFFORDABLE

	rate	Year 1				Year 2				Year 3				Year 4				Year 5				Year 6				TOTALS
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	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	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	50,407
	Market housing	0	0	0	0	0	0	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	2,800	
	Affordable soc rent	0	0	0	0	0	0	570	570	570	570	570	570	570	570	570	570	570	570	570	570	570	570	570	570	10,256
	Affordable sh oship	0	0	0	0	0	0	244	244	244	244	244	244	244	244	244	244	244	244	244	244	244	244	244	244	4,396
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	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	-105	-105	-105	-105	-105	-105	-105	-105	-105	-105	-105	-105	-105	-105	-105	-105	-105	-105	-1,881
Total income		0	0	0	0	0	0	3,614	3,614	3,614	3,614	3,614	3,614	3,614	3,614	3,614	3,614	3,614	3,614	3,614	3,614	3,614	3,614	3,614	3,614	65,059
COSTS																										
Land		4,170																								4,170
	Land acquisition	167																								167
	Stamp duty	115																								115
	Purchase fees																									
	Total																									4,451
Build costs		0	0	0	0	1,367	1,367	1,367	1,367	1,367	1,367	1,367	1,367	1,367	1,367	1,367	1,367	1,367	1,367	1,367	1,367	1,367	1,367	0	0	24,607
	Market housing	0	0	0	0	410	410	410	410	410	410	410	410	410	410	410	410	410	410	410	410	410	410	0	0	7,382
	Affordable soc rent	0	0	0	0	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	0	0	3,164
	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	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	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	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	0	0	1,758
	Total																									36,911
Dev costs		5.0%	461	461	461	461																				1,846
	Upfront	5.0%	0	0	103	103																				1,846
	Build related	1%	225	225																						450
	Abnormals																									
	Total																									4,141
Fees		10.0%	0	0	0	205	205	205	205	205	205	205	205	205	205	205	205	205	205	205	205	205	205	0	0	3,691
	Fees on build costs	8.0%	55	55	45	45																				331
	Fees on dev costs																									
	Total																									4,022
PG					50	50																				900
	Planning gain																									900
	Total																									900
Grant					0	0																				0
	Grant																									0
	Total																									0
Other		£547	66	66	66																					197
	Planning	£500	180																							180
	Survey	£0																								0
	Marketing																									0
	Total																									377
Sales fees	b/forward from above		0	0	0	0	0	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	1,881
Total costs		5,438	807	725	659	2,416	2,416	2,521	2,521	2,521	2,521	2,521	2,521	2,521	2,521	2,521	2,521	2,521	2,521	2,521	2,521	2,360	2,360	105	105	52,684
Net profit/loss from quarter		-5,438	-807	-725	-659	-2,416	-2,416	1,093	1,093	1,093	1,093	1,093	1,093	1,093	1,093	1,093	1,093	1,093	1,093	1,093	1,093	1,254	1,254	3,510	3,510	12,375
Profit/loss bf from last quarter		0	-5,540	-6,466	-7,325	-8,134	-10,748	-13,411	-12,549	-11,670	-10,775	-9,863	-8,934	-7,987	-7,023	-6,040	-5,040	-4,020	-2,981	-1,923	-845	253	1,535	2,842	6,471	
Cumulative profit/loss		-5,438	-6,347	-7,191	-7,984	-10,550	-13,165	-12,318	-11,455	-10,577	-9,681	-8,769	-7,840	-6,894	-5,929	-4,947	-3,946	-2,927	-1,888	-830	248	1,507	2,790	6,352	9,981	
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%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	
	Total		-102	-119	-135	-150	-198	-247	-231	-215	-198	-182	-164	-147	-129	-111	-93	-74	-55	-35	-16	5	28	52	119	187
Cumulative developer profit carried forward to RV calc		-5,540	-6,466	-7,325	-8,134	-10,748	-13,411	-12,549	-11,670	-10,775	-9,863	-8,934	-7,987	-7,023	-6,040	-5,040	-4,020	-2,981	-1,923	-845	253	1,535	2,842	6,471	10,168	10,166

SITE 3A 187-195 London Rd

Input assumptions		Scenario & option		Affordable 30% = 70% social rented 30% intermediate WITH GRANT								
Croydon site viability study				Dwellings								
Site details				Dwellings			<i>ave floor space</i>					
Site	3A 187-195 London Rd				% of	% of	<i>gross</i>	<i>net</i>	<i>build</i>	<i>build</i>	<i>sales</i>	
Location	Central Croydon				dwgs	units	<i>sq ft</i>	<i>sq ft</i>	<i>cost</i>	<i>index =</i>	<i>value</i>	
Area	ha	0.29		Market housing	105.0	70.00%	69.54%	649	552	163.00	163.00	365.00
	acres	0.72		Affordable soc rent	31.5	21.00%	20.9%	649	552	163.00	163.00	215.00
No dwgs		150		Affordable sh oship	13.5	9.00%	8.9%	649	552	163.00	163.00	215.00
Density dw/ha		513.7		Total dwgs	150.0	100.00%	99.3%					
Contingency				Commercial space		1	0.7%	4,442	4,442	110.00	110.00	355.00
allowance	5.00%	818	£k				0.0%	0	0	0.00	0.00	0.00
Development costs				Total units		151.0	100.0%	101,792	87,242		£16,356,670	£28,072,910
standard % build	7.50%	1,288		Floorspace density = 120,912 net sq ft per acre								
plus abnormals	1.2%	200										
Total	9%			Other costs								
Design fees				Planning		480.0		£ per dwelling				
on build costs	10.0%	1,717		Survey		500		£ per dwelling				
on dev costs	8%			Marketing		0		£ per dwelling				
Planning gain & Grant contributions				Interest				% per annum				
PG £ per dwg	2,500	378		% per annum		7.50%						
Grant £ per dwg	0	0		Notes								
FLAG PG ALL												

SITE 3A LAND COST & PHASING

Land		Iterate to achieve 20.0% profit			
		Affordable		No affordable	
		£		Hectare	
Land purchase price		545,771	2,463,091	Affordable	No affordable
RV per acre		756,405	3,413,696	£1,869,078	£8,435,243
Dev profit		£ 4,383,245	5,300,238		
Total costs		£ 23,690,940	26,499,947		
profit as % of costs		18.50%	20.00%		

Programme	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	Q2	Q3	Q4	
Units started																					
Market housing			0.0	7.6	13.9	13.9	13.9	13.9	13.9	13.9	13.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	105.0
Affordable soc rent			0.0	2.3	4.2	4.2	4.2	4.2	4.2	4.2	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	31.5
Affordable sh oship			0.0	1.0	1.8	1.8	1.8	1.8	1.8	1.8	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.5
Commercial space			0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	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
TOTAL	0	0	0	11	20	20	20	20	20	20	20	0	0	0	0	0	0	0	0	0	151.0
Units 'built'																					
Market housing					0	8	14	14	14	14	14	14	14	14	0	0	0	0	0	0	105
+2Q Affordable soc rent					0	2	4	4	4	4	4	0	0	0	0	0	0	0	0	0	32
+2Q Affordable sh oship					0	1	2	2	2	2	2	0	0	0	0	0	0	0	0	0	14
+2Q Commercial space					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
+2Q 0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Units completed																					
Market housing							0	8	14	14	14	14	14	14	14	14	0	0	0	0	105
+3Q Affordable soc rent							0	2	4	4	4	4	4	4	4	4	0	0	0	0	32
+3Q Affordable sh oship							0	1	2	2	2	2	2	2	2	2	0	0	0	0	14
+3Q Commercial space							0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
+3Q 0							0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Units purchased																					
Market housing								0	8	14	14	14	14	14	14	14	14	0	0	0	105
+4Q Affordable soc rent								0	2	4	4	4	4	4	4	4	4	0	0	0	32
+4Q Affordable sh oship								0	1	2	2	2	2	2	2	2	2	0	0	0	14
+4Q Commercial space								0	0	0	0	0	0	0	0	0	0	0	0	0	1
+4Q 0								0	0	0	0	0	0	0	0	0	0	0	0	0	0

SITE 3A CASH FLOW AFFORDABLE

	rate	Year 1	Q2	Q3	Q4	Year 2	Q2	Q3	Q4	Year 3	Q2	Q3	Q4	Year 4	Q2	Q3	Q4	Year 5	Q2	Q3	Q4	TOTALS	
		Q1				Q1				Q1				Q1				Q1					
INCOME																							
Housing sales	Market housing	0	0	0	0	0	0	0	0	0	1,541	2,802	2,802	2,802	2,802	2,802	2,802	2,802	0	0	0	21,155	
	Affordable soc rent	0	0	0	0	0	0	0	0	0	272	495	495	495	495	495	495	495	0	0	0	3,738	
	Affordable sh oship	0	0	0	0	0	0	0	0	0	117	212	212	212	212	212	212	212	0	0	0	1,602	
	Commercial space	0	0	0	0	0	0	0	0	0	115	209	209	209	209	209	209	209	0	0	0	1,577	
	0	0	0	0	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	-60	-109	-109	-109	-109	-109	-109	-109	0	0	0	-823	
Total income																							
		0	0	0	0	0	0	0	0	0	2,045	3,718	3,718	3,718	3,718	3,718	3,718	3,718	0	0	0	28,073	
COSTS																							
Land	Land acquisition	546																				546	
	Stamp duty	22																				22	
	Purchase fees	15																				15	
	Total																					583	
Build costs	Market housing	0	0	0	0	0	0	809	1,471	1,471	1,471	1,471	1,471	1,471	1,471	0	0	0	0	0	0	0	11,108
	Affordable soc rent	0	0	0	0	0	0	243	441	441	441	441	441	441	441	0	0	0	0	0	0	0	3,332
	Affordable sh oship	0	0	0	0	0	0	104	189	189	189	189	189	189	189	0	0	0	0	0	0	0	1,428
	Commercial space	0	0	0	0	0	0	36	65	65	65	65	65	65	65	0	0	0	0	0	0	0	489
	0	0	0	0	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	60	108	108	108	108	108	108	108	0	0	0	0	0	0	0	818
	Total																					17,175	
Dev costs	Upfront	3.8%	161	161	161	161				85	85	85	85	0	0	0	0	0	0	0	0	644	
	Build related	3.8%	0	0	0	0	47	85	85	85	85	85	85	0	0	0	0	0	0	0	0	644	
	Abnormals	1%	100	100																		200	
	Total																					1,488	
Fees	Fees on build costs	10.0%	0	0	0	0	0	0	125	227	227	227	227	227	227	0	0	0	0	0	0	0	1,717
	Fees on dev costs	8.0%	21	21	13	13	4	7	7	7	7	7	7	0	0	0	0	0	0	0	0	119	
	Total																					1,836	
PG	Planning gain				28	50	50	50	50	50	50	50	0	0	0	0	0	0	0	0	0	0	378
	Total																					378	
Grant	Grant				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Total																					0	
Other	Planning	£480	24	24																		72	
	Survey	£500	75																			75	
	Marketing	£0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Total																					147	
Sales fees	b/forward from above				0	0	0	0	0	0	60	109	109	109	109	109	109	109	0	0	0	823	
Total costs			963	306	198	201	101	142	1,518	2,644	2,644	2,704	2,753	2,703	2,611	2,611	109	109	0	0	0	22,428	
Net profit/loss from quarter																							
		-963	-306	-198	-201	-101	-142	-1,518	-2,644	-2,644	-659	965	1,015	1,107	1,107	3,609	3,609	3,609	0	0	0	5,645	
Profit/loss bf from last quarter			0	-981	-1,311	-1,537	-1,771	-1,907	-2,087	-3,673	-6,436	-9,250	-10,095	-9,301	-8,442	-7,472	-6,484	-2,929	693	4,383	4,383	4,383	
Cumulative profit/loss			-963	-1,287	-1,509	-1,738	-1,872	-2,049	-3,606	-6,317	-9,080	-9,910	-9,130	-8,287	-7,335	-6,365	-2,875	680	4,302	4,383	4,383	4,383	
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%	7.50%	0.00%	0.00%	0.00%		
	Total		-18	-24	-28	-33	-35	-38	-68	-118	-170	-186	-171	-155	-138	-119	-54	13	81	0	0	-1,263	
Cumulative developer profit carried forward to RV calc			-981	-1,311	-1,537	-1,771	-1,907	-2,087	-3,673	-6,436	-9,250	-10,095	-9,301	-8,442	-7,472	-6,484	-2,929	693	4,383	4,383	4,383	4,383	

SITE 4A Cane Hill Hospital



Input assumptions		Scenario & option		Affordable 30% = 70% social rented 30% intermediate WITH GRANT									
Croydon site viability study				Dwellings									
Site details				Dwellings		<i>ave floor space</i>		<i>build cost</i>		<i>build index =</i>		<i>sales value</i>	
Site	4A Cane Hill Hospital				% of dwgs	% of units	<i>gross sq ft</i>	<i>net sq ft</i>	<i>per sq ft</i>	<i>per sq ft</i>	<i>per sq ft</i>	<i>per sq ft</i>	<i>per sq ft</i>
Location	Coulsdon			Market housing	87.5	70.00%	70.00%	908	866	124.00	124.00	1.000	346.00
Area	ha	2.08		Affordable soc rent	26.3	21.00%	21.0%	908	866	124.00	124.00		215.00
	acres	5.14		Affordable sh oship	11.3	9.00%	9.0%	908	866	124.00	124.00		215.00
No dwgs	125			Total dwgs	125.0	100.00%	100.0%						
Density dw/ha	60.1							0	0	0.00	0.00		0.00
Contingency								0	0	0.00	0.00		0.00
allowance	2.50%	352		Total units	125.0	100.0%	100.0%	113,500	108,250			£14,074,000	£33,200,275
Development costs				Floorspace density = 21,062 net sq ft per acre									
standard % build	16.00%	2,308											
plus abnormals	0.0%	0											
Total	16%												
Design fees				Other costs									
on build costs	10.0%	1,443		Planning	457.0			£ per dwelling					
on dev costs	8%			Survey	200			£ per dwelling					
Planning gain & Grant contributions				Marketing	0			£ per dwelling					
PG £ per dwg	2,500	313		Interest	7.50%			% per annum					
Grant £ per dwg	0	0		Notes									
PG ALL													

SITE 4A LAND COST & PHASING

Land		Iterate to achieve 20.0% profit		Hectare	
		Affordable	No affordable	Affordable	No affordable
Land purchase price	£	5,957,000	8,215,581		
RV per acre	£	1,159,022	1,598,462	£2,863,942	£3,949,799
Dev profit	£	5,188,519	6,244,881		
Total costs	£	28,013,031	31,210,894		
profit as % of costs		18.52%	20.01%		

Programme	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	Q2	Q3	Q4		
Units started																						
Market housing			3.5	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	0.0	0.0	0.0	0.0	87.5
Affordable soc rent			1.1	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.3
Affordable sh oship			0.5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.3
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	0.0	0.0	0.0	0.0
0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	5	12	12	12	12	12	12	12	12	12	12	0	0	0	0	0	0	0	0	125.0
Units 'built'																						
Market housing					4	8	8	8	8	8	8	8	8	8	8	0	0	0	0	0	0	88
+2Q					1	3	3	3	3	3	3	3	3	3	3	0	0	0	0	0	0	26
Affordable soc rent					0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	11
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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Units completed																						
Market housing						4	8	8	8	8	8	8	8	8	8	8	0	0	0	0	0	88
+3Q						1	3	3	3	3	3	3	3	3	3	0	0	0	0	0	0	26
Affordable soc rent						0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	11
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	0	0	0	0	0	0	0	0	0	0	0	0
Units purchased																						
Market housing						4	8	8	8	8	8	8	8	8	8	8	0	0	0	0	0	88
+4Q																						
Affordable soc rent							1	3	3	3	3	3	3	3	3	0	0	0	0	0	0	26
Affordable sh oship							0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	11
0							0	0	0	0	0	0	0	0	0	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 4A CASH FLOW AFFORDABLE

	rate	Year 1 Q1	Q2	Q3	Q4	Year 2 Q1	Q2	Q3	Q4	Year 3 Q1	Q2	Q3	Q4	Year 4 Q1	Q2	Q3	Q4	Year 5 Q1	Q2	Q3	Q4	TOTALS		
INCOME																								
Housing sales		0	0	0	0	0	0	1,049	2,517	2,517	2,517	2,517	2,517	2,517	2,517	2,517	2,517	2,517	0	0	0	0	26,218	
	Market housing	0	0	0	0	0	0	1,049	2,517	2,517	2,517	2,517	2,517	2,517	2,517	2,517	2,517	2,517	0	0	0	0	26,218	
	Affordable soc rent	0	0	0	0	0	0	195	469	469	469	469	469	469	469	469	469	469	0	0	0	0	4,887	
	Affordable sh oship	0	0	0	0	0	0	84	201	201	201	201	201	201	201	201	201	201	0	0	0	0	2,095	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	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	-39	-93	-93	-93	-93	-93	-93	-93	-93	-93	-93	0	0	0	0	-973	
Total income																								
0 0 0 0 0 0 0 1,328 3,187 3,187 3,187 3,187 3,187 3,187 3,187 3,187 3,187 3,187 0 0 0 0 33,200																								
COSTS																								
Land		5,957																					5,957	
	Land acquisition	5,957																					5,957	
	Stamp duty	238																					238	
	Purchase fees	164																					164	
	Total																						6,359	
Build costs		0	0	0	0	394	946	946	946	946	946	946	946	946	946	946	0	0	0	0	0	0	0	9,852
	Market housing	0	0	0	0	394	946	946	946	946	946	946	946	946	946	946	0	0	0	0	0	0	0	9,852
	Affordable soc rent	0	0	0	0	118	284	284	284	284	284	284	284	284	284	284	0	0	0	0	0	0	0	2,956
	Affordable sh oship	0	0	0	0	51	122	122	122	122	122	122	122	122	122	122	0	0	0	0	0	0	0	1,267
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Build contingency	2.5%	0	0	0	14	34	34	34	34	34	34	34	34	34	34	0	0	0	0	0	0	0	352
	Total																						14,426	
Dev costs		289	289	289	289	111	111	111	111	111	111	111	111	111	0	0	0	0	0	0	0	0	0	1,154
	Upfront	8.0%	289	289	289	111	111	111	111	111	111	111	111	111	0	0	0	0	0	0	0	0	0	1,154
	Build related	8.0%	0	0	46	111																		0
	Abnormals	0%	0	0																				0
	Total																							2,308
Fees		0	0	0	0	58	138	138	138	138	138	138	138	138	138	138	0	0	0	0	0	0	0	1,443
	Fees on build costs	10.0%	0	0	0	58	138	138	138	138	138	138	138	138	138	138	0	0	0	0	0	0	0	1,443
	Fees on dev costs	8.0%	23	23	27	32	9	9	9	9	9	9	9	9	0	0	0	0	0	0	0	0	0	185
	Total																							1,627
PG				13	30	30	30	30	30	30	30	30	30	30	0	0	0	0	0	0	0	0	0	313
	Planning gain			13	30	30	30	30	30	30	30	30	30	30	0	0	0	0	0	0	0	0	0	313
	Total																							313
Grant				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Grant			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total																							0
Other		19	19	19																				57
	Planning	£457	19	19																				57
	Survey	£200	25																					25
	Marketing	£0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total																							82
Sales fees	b/forward from above	0	0	0	0	0	0	39	93	93	93	93	93	93	93	93	93	93	0	0	0	0	0	973
Total costs																								
6,715 331 393 461 784 1,673 1,712 1,766 1,766 1,766 1,766 1,766 1,766 1,766 1,617 1,617 93 93 0 0 0 0 26,088																								
Net profit/loss from quarter																								
-6,715 -331 -393 -461 -784 -1,673 -384 1,421 1,421 1,421 1,421 1,421 1,570 1,570 3,094 3,094 0 0 0 0 7,112																								
Profit/loss bf from last quarter																								
0 -6,841 -7,306 -7,843 -8,460 -9,417 -11,298 -11,901 -10,677 -9,430 -8,159 -6,864 -5,546 -4,202 -2,681 -1,131 1,999 5,189 5,189 5,189 5,189																								
Cumulative profit/loss																								
-6,715 -7,171 -7,699 -8,304 -9,244 -11,090 -11,682 -10,480 -9,256 -8,009 -6,738 -5,444 -4,125 -2,632 -1,111 1,962 5,093 5,189 5,189 5,189																								
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%	7.50%	7.50%	7.50%	7.50%	7.50%	0.00%	0.00%	0.00%	0.00%	0	
	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%	7.50%	0.00%	0.00%	0.00%	0.00%	0	
	Total																						-1,925	
Cumulative developer profit carried forward to RV calc																								
-6,841 -7,306 -7,843 -8,460 -9,417 -11,298 -11,901 -10,677 -9,430 -8,159 -6,864 -5,546 -4,202 -2,681 -1,131 1,999 5,189 5,189 5,189 5,189 5,187																								

SITE 5A Surrey St

Input assumptions		Scenario & option		Affordable 30% = 70% social rented 30% intermediate WITH GRANT								
Croydon site viability study				Dwellings								
Site details				Dwellings			<i>ave floor space</i>					
Site	5A Surrey St				% of	% of	<i>gross</i>	<i>net</i>	<i>build</i>	<i>build</i>	<i>sales</i>	
Location	Central Croydon				dwgs	units	<i>sq ft</i>	<i>sq ft</i>	<i>cost</i>	<i>index =</i>	<i>value</i>	
Area	ha	0.40		Market housing	52.5	70.00%	69.08%	642	539	163.00	163.00	350.00
	acres	0.99		Affordable soc rent	15.8	21.00%	20.7%	642	539	163.00	163.00	215.00
No dwgs		75		Affordable sh oship	6.8	9.00%	8.9%	642	539	163.00	163.00	215.00
Density dw/ha		187.0		Total dwgs	75.0	100.00%	98.7%					
Contingency				Commercial space								
allowance	5.00%	464	£k		1	1.3%		13,050	13,050	110.00	110.00	425.00
						0.0%		0	0	0.00	0.00	0.00
Development costs				Total units								
standard % build	7.50%	731			76.0	100.0%		61,200	53,475		£9,283,950	£18,057,788
plus abnormals	1.2%	113		Floorspace density			= 53,968 net sq ft per acre					
Total	9%											
Design fees				Other costs								
on build costs	10.0%	975		Planning	365.0							
on dev costs	8%			Survey	500							
Planning gain & Grant contributions				Marketing			0 £ per dwelling					
PG £ per dwg	2,500	190		Interest								
Grant £ per dwg	0	0		% per annum	7.50%							
FLAG PG ALL				Notes								
												

SITE 5A LAND COST & PHASING

Land		Iterate to achieve 20.0% profit			
				Hectare	
		Affordable	No affordable	Affordable	No affordable
Land purchase price	£	1,675,835	2,450,321		
RV per acre	£	1,691,275	2,472,896	£4,179,139	£6,110,526
Dev profit	£	2,820,110	3,282,657		
Total costs	£	15,238,727	16,413,393		
profit as % of costs		18.51%	20.00%		

Programme	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	Q2	Q3	Q4		
Units started																						
Market housing			0.0	8.3	11.1	11.1	11.1	11.1	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	52.5
Affordable soc rent			0.0	2.5	3.3	3.3	3.3	3.3	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	15.8
Affordable sh oship			0.0	1.1	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8
Commercial space			0.0	0.2	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	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	0.0
TOTAL	0	0	0	12	16	16	16	16	0	0	0	0	0	0	0	0	0	0	0	0	0	76.0
Units 'built'																						
Market housing					0	8	11		11	11	11	0	0	0	0	0	0	0	0	0	0	53
+2Q Affordable soc rent					0	2	3		3	3	3	0	0	0	0	0	0	0	0	0	0	16
+2Q Affordable sh oship					0	1	1		1	1	1	0	0	0	0	0	0	0	0	0	0	7
+2Q Commercial space					0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	1
+2Q 0					0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0
Units completed																						
Market housing								0	8	11	11	11	11	0	0	0	0	0	0	0	0	53
+3Q Affordable soc rent								0	2	3	3	3	3	0	0	0	0	0	0	0	0	16
+3Q Affordable sh oship								0	1	1	1	1	1	0	0	0	0	0	0	0	0	7
+3Q Commercial space								0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
+3Q 0								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Units purchased																						
Market housing									0	8	11	11	11	11	0	0	0	0	0	0	0	53
+4Q Affordable soc rent									0	2	3	3	3	3	0	0	0	0	0	0	0	16
+4Q Affordable sh oship									0	1	1	1	1	1	0	0	0	0	0	0	0	7
+4Q Commercial space									0	0	0	0	0	0	0	0	0	0	0	0	0	1
+4Q 0									0	0	0	0	0	0	0	0	0	0	0	0	0	0

SITE 5A CASH FLOW AFFORDABLE

	rate	Year 1	Q2	Q3	Q4	Year 2	Q2	Q3	Q4	Year 3	Q2	Q3	Q4	Year 4	Q2	Q3	Q4	Year 5	Q2	Q3	Q4	TOTALS
		Q1				Q1				Q1				Q1				Q1				
INCOME																						
Housing sales	Market housing	0	0	0	0	0	0	0	0	0	1,564	2,085	2,085	2,085	2,085	0	0	0	0	0	0	9,904
	Affordable soc rent	0	0	0	0	0	0	0	0	0	288	384	384	384	384	0	0	0	0	0	0	1,825
	Affordable sh oship	0	0	0	0	0	0	0	0	0	124	165	165	165	165	0	0	0	0	0	0	782
	Commercial space	0	0	0	0	0	0	0	0	0	876	1,168	1,168	1,168	1,168	0	0	0	0	0	0	5,546
	0	0	0	0	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	-80	-107	-107	-107	-107	0	0	0	0	0	0	-506
Total income																						
		0	0	0	0	0	0	0	0	0	2,851	3,802	3,802	3,802	3,802	0	0	0	0	0	0	18,058
COSTS																						
Land	Land acquisition	1,676																				1,676
	Stamp duty	67																				67
	Purchase fees	46																				46
	Total																					1,789
Build costs	Market housing	0	0	0	0	0	0	867	1,157	1,157	1,157	1,157	0	0	0	0	0	0	0	0	0	5,494
	Affordable soc rent	0	0	0	0	0	0	260	347	347	347	347	0	0	0	0	0	0	0	0	0	1,648
	Affordable sh oship	0	0	0	0	0	0	112	149	149	149	149	0	0	0	0	0	0	0	0	0	706
	Commercial space	0	0	0	0	0	0	227	302	302	302	302	0	0	0	0	0	0	0	0	0	1,436
	0	0	0	0	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	73	98	98	98	98	0	0	0	0	0	0	0	0	0	464
	Total																					9,748
Dev costs	Upfront	3.8%	91	91	91	91				77	0	0	0	0	0	0	0	0	0	0	0	366
	Build related	3.8%	0	0	0	0	58	77	77	77	0	0	0	0	0	0	0	0	0	0	0	366
	Abnormals	1%	57	57																		113
	Total																					844
Fees	Fees on build costs	10.0%	0	0	0	0	0	0	154	205	205	205	0	0	0	0	0	0	0	0	0	975
	Fees on dev costs	8.0%	12	12	7	7	5	6	6	6	0	0	0	0	0	0	0	0	0	0	0	68
	Total																					1,042
PG	Planning gain			0	30	40	40	40	40	0	0	0	0	0	0	0	0	0	0	0	0	190
	Total																					190
Grant	Grant			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total																					0
Other	Planning	£365	9	9	9																	27
	Survey	£500	38																			38
	Marketing	£0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total																					65
Sales fees	b/forward from above		0	0	0	0	0	0	0	0	80	107	107	107	107	0	0	0	0	0	0	506
Total costs			1,995	169	108	129	102	123	1,816	2,381	2,341	2,337	2,364	107	107	107	0	0	0	0	0	14,185
Net profit/loss from quarter			-1,995	-169	-108	-129	-102	-123	-1,816	-2,381	-2,341	514	1,438	3,695	3,695	3,695	0	0	0	0	0	3,873
Profit/loss bf from last quarter			0	-2,033	-2,243	-2,395	-2,571	-2,723	-2,900	-4,804	-7,319	-9,841	-9,502	-8,215	-4,605	-927	2,820	2,820	2,820	2,820	2,820	2,820
Cumulative profit/loss			-1,995	-2,202	-2,351	-2,524	-2,673	-2,846	-4,716	-7,185	-9,660	-9,327	-8,064	-4,520	-910	2,768	2,820	2,820	2,820	2,820	2,820	2,820
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%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	Total		-37	-41	-44	-47	-50	-53	-88	-135	-181	-175	-151	-85	-17	52	0	0	0	0	0	-1,054
Cumulative developer profit carried forward to RV calc			-2,033	-2,243	-2,395	-2,571	-2,723	-2,900	-4,804	-7,319	-9,841	-9,502	-8,215	-4,605	-927	2,820	2,820	2,820	2,820	2,820	2,820	2,819

SITE 6A Addiscombe Station

Input assumptions		Scenario & option		Affordable 30% = 70% social rented 30% intermediate WITH GRANT									
Croydon site viability study				Dwellings									
Site details				Dwellings		<i>ave floor space</i>		<i>build cost</i>		<i>build index =</i>		<i>sales value</i>	
Site	6A Addiscombe Station				% of	% of	<i>gross</i>	<i>net</i>					
Location	East Croydon				dwgs	units	<i>sq ft</i>	<i>sq ft</i>	<i>per sq ft</i>				<i>per sq ft</i>
Area	ha	1.26		Market housing	45.5	70.00%	70.00%	934	865	124.00	124.00	124.00	299.00
	acres	3.11		Affordable soc rent	13.7	21.00%	21.0%	934	865	124.00	124.00	124.00	215.00
No dwgs	65			Affordable sh oship	5.9	9.00%	9.0%	934	865	124.00	124.00	124.00	215.00
Density dw/ha	51.6			Total dwgs	65.0	100.00%	100.0%						
								0	0	0.00	0.00	0.00	0.00
								0	0	0.00	0.00	0.00	0.00
Contingency				Total units		65.0	100.0%	60,710	56,225			£7,528,040	£15,394,405
	allowance	5.00%	£k	Floorspace density		= 18,059 net sq ft per acre							
			376										
Development costs				Other costs									
	standard % build	11.50%	909	Planning	329.6	£ per dwelling							
				Survey	500	£ per dwelling							
	plus abnormal	1.9%	150	Marketing	0	£ per dwelling							
				Interest	7.50%	% per annum							
Total	13%			Notes									
Design fees													
	on build costs	10.0%	790										
	on dev costs	8%											
Planning gain & Grant contributions													
	PG £ per dwg	2,500	163										
	Grant £ per dwg	0	0										
PG ALL													

SITE 6A LAND COST & PHASING

Land		Iterate to achieve 20.0% profit			
		Affordable		No affordable	
		Hectare			
		Affordable	No affordable	Affordable	No affordable
Land purchase price	£	1,684,000	2,379,445		
RV per acre	£	540,877	764,245	£1,336,508	£1,888,448
Dev profit	£	2,406,017	2,808,189		
Total costs	£	12,989,513	14,004,211		
profit as % of costs		18.52%	20.05%		

Programme	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	Q2	Q3	Q4	
Units started																					
Market housing			0.7	5.6	5.6	5.6	5.6	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	45.5
Affordable soc rent			0.2	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.7
Affordable sh oship			0.1	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9
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	0.0	0.0	0.0	0.0
0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	8	0	0	0	0	0	0	0	0	0	65.0
Units 'built'																					
Market housing					1	6	6	6	6	6	6	6	6	0	0	0	0	0	0	0	46
+2Q					0	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0	14
Affordable soc rent					0	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	6
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	0	0	0	0	0	0	0	0	0	0	0	0
Units completed																					
Market housing					1	6	6	6	6	6	6	6	6	6	0	0	0	0	0	0	46
+3Q					0	2	2	2	2	2	2	2	2	2	0	0	0	0	0	0	14
Affordable soc rent					0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	6
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	0	0	0	0	0	0	0	0	0	0	0	0
Units purchased																					
Market housing					1	6	6	6	6	6	6	6	6	6	0	0	0	0	0	0	46
+4Q					0	2	2	2	2	2	2	2	2	2	0	0	0	0	0	0	14
Affordable soc rent					0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	6
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	0	0	0	0	0	0	0	0	0	0	0	0

SITE 6A 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	Q2	Q3	Q4	
INCOME																						
Housing sales	<i>Market housing</i>	0	0	0	0	0	0	181	1,448	1,448	1,448	1,448	1,448	1,448	1,448	1,448	0	0	0	0	11,768	
	<i>Affordable soc rent</i>	0	0	0	0	0	0	39	312	312	312	312	312	312	312	312	0	0	0	0	2,539	
	<i>Affordable sh oship</i>	0	0	0	0	0	0	17	134	134	134	134	134	134	134	134	0	0	0	0	1,088	
	<i>0</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	<i>0</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	<i>Sales fees</i>	0	0	0	0	0	0	-7	-54	-54	-54	-54	-54	-54	-54	-54	0	0	0	0	-441	
Total income																						15,394
COSTS																						
Land	<i>Land acquisition</i>	1,684																			1,684	
	<i>Stamp duty</i>	67																			67	
	<i>Purchase fees</i>	46																			46	
	Total																				1,798	
Build costs	<i>Market housing</i>	0	0	0	0	81	649	649	649	649	649	649	649	649	0	0	0	0	0	0	5,270	
	<i>Affordable soc rent</i>	0	0	0	0	24	195	195	195	195	195	195	195	195	0	0	0	0	0	0	1,581	
	<i>Affordable sh oship</i>	0	0	0	0	10	83	83	83	83	83	83	83	83	0	0	0	0	0	0	678	
	<i>0</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	<i>0</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	<i>Build contingency</i>	5.0%	0	0	0	6	46	46	46	46	46	46	46	46	0	0	0	0	0	0	376	
	Total																				7,904	
Dev costs	<i>Upfront</i>	5.8%	114	114	114	114															455	
	<i>Build related</i>	5.8%	0	0	7	56	56	56	56	56	56	56	0	0	0	0	0	0	0	0	455	
	<i>Abnormals</i>	2%	75	75																	150	
	Total																				1,059	
Fees	<i>Fees on build costs</i>	10.0%	0	0	0	12	97	97	97	97	97	97	97	97	0	0	0	0	0	0	790	
	<i>Fees on dev costs</i>	8.0%	15	15	10	14	4	4	4	4	4	4	0	0	0	0	0	0	0	0	85	
	Total																				875	
PG	<i>Planning gain</i>			3	20	20	20	20	20	20	20	0	0	0	0	0	0	0	0	0	163	
	Total																				163	
Grant	<i>Grant</i>			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Total																				0	
Other	<i>Planning</i>	£330	7	7	7																21	
	<i>Survey</i>	£500	33																		33	
	<i>Marketing</i>	£0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Total																				54	
Sales fees	<i>b/forward from above</i>		0	0	0	0	0	7	54	54	54	54	54	54	54	54	0	0	0	0	441	
Total costs																						12,294
Net profit/loss from quarter																						3,101
		-2,041	-211	-140	-203	-214	-1,151	-920	690	690	690	770	770	1,840	1,840	0	0	0	0	0	3,101	
Profit/loss bf from last quarter		0	-2,079	-2,333	-2,519	-2,773	-3,044	-4,273	-5,290	-4,687	-4,072	-3,445	-2,807	-2,075	-1,329	521	2,406	2,406	2,406	2,406		
Cumulative profit/loss		-2,041	-2,290	-2,473	-2,722	-2,988	-4,194	-5,193	-4,601	-3,997	-3,382	-2,755	-2,037	-1,304	512	2,362	2,406	2,406	2,406	2,406		
Interest	<i>Charged at</i>	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%	0.00%	0.00%	0.00%		
	<i>Total</i>		-38	-43	-46	-51	-56	-79	-97	-86	-75	-63	-52	-38	-24	10	44	0	0	0	-696	
Cumulative developer profit carried forward to RV calc																						2,405

SITE 7A 68-70 Beluah Hill

Input assumptions		Scenario & option		Affordable 30% = 70% social rented 30% intermediate WITH GRANT									
Croydon site viability study				Dwellings									
Site details				Dwellings		<i>ave floor space</i>		<i>build cost</i>		<i>build index =</i>		<i>sales value</i>	
Site	7A 68-70 Beluah Hill				% of	% of	<i>gross</i>	<i>net</i>	<i>per sq ft</i>				
Location	Upper Norwood				dwgs	units	<i>sq ft</i>	<i>sq ft</i>					
Area	ha	0.37		Market housing	16.8	70.00%	70.00%	949	873	120.00	120.00	299.00	
	acres	0.91		Affordable soc rent	5.0	21.00%	21.0%	949	873	120.00	120.00	215.00	
No dwgs	24			Affordable sh oship	2.2	9.00%	9.0%	949	873	120.00	120.00	215.00	
Density dw/ha	64.9			Total dwgs	24.0	100.00%	100.0%						
								0	0	0.00	0.00	0.00	
								0	0	0.00	0.00	0.00	
Contingency				Total units		24.0	100.0%	22,776	20,952		£2,733,120	£5,736,658	
	allowance	5.00%		Floorspace density		= 22,917 net sq ft per acre							
		137											
Development costs				Other costs									
	standard % build	11.50%		Planning	515.0		£ per dwelling						
		330		Survey	500		£ per dwelling						
	plus abnormal	3.5%											
		100		Marketing	0		£ per dwelling						
	Total	15%		Interest	7.50%		% per annum						
Design fees				Notes									
	on build costs	10.0%											
		287											
	on dev costs	8%											
Planning gain & Grant contributions													
	PG £ per dwg	2,500		60									
	Grant £ per dwg	0		0									
PG ALL													

SITE 7A LAND COST & PHASING

Land		Iterate to achieve 20.0% profit			
		Affordable		No affordable	
		Hectare			
		Affordable	No affordable	Affordable	No affordable
Land purchase price	£	676,000	941,705		
RV per acre	£	739,388	1,030,007	£1,827,027	£2,545,148
Dev profit	£	895,684	1,046,268		
Total costs	£	4,841,874	5,219,280		
profit as % of costs		18.50%	20.05%		

Programme	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	Q2	Q3	Q4		
Units started																						
Market housing			2.8	2.8	2.8	2.8	2.8	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	16.8
Affordable soc rent			0.8	0.8	0.8	0.8	0.8	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	5.0
Affordable sh oship			0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0	0	4	4	4	4	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	24.0
Units 'built'																						
Market housing					3	3	3	3	3	3	0	0	0	0	0	0	0	0	0	0	0	17
+2Q					1	1	1	1	1	1	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	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					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Units completed																						
Market housing						3	3	3	3	3	3	0	0	0	0	0	0	0	0	0	0	17
+3Q						1	1	1	1	1	1	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	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Units purchased																						
Market housing						3	3	3	3	3	3	3	0	0	0	0	0	0	0	0	0	17
+4Q							1	1	1	1	1	1	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	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	0	0	0	0	0	0	0	0	0	0	0	0

SITE 7A 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	Q2	Q3	Q4	
INCOME																						
Housing sales	<i>Market housing</i>	0	0	0	0	0	0	731	731	731	731	731	731	0	0	0	0	0	0	0	0	4,385
	<i>Affordable soc rent</i>	0	0	0	0	0	0	158	158	158	158	158	158	0	0	0	0	0	0	0	0	946
	<i>Affordable sh oship</i>	0	0	0	0	0	0	68	68	68	68	68	68	0	0	0	0	0	0	0	0	405
	<i>0</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<i>0</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<i>Sales fees</i>	0	0	0	0	0	0	-27	-27	-27	-27	-27	-27	0	0	0	0	0	0	0	0	-164
Total income		0	0	0	0	0	0	956	956	956	956	956	956	0	0	0	0	0	0	0	0	5,737
COSTS																						
Land	<i>Land acquisition</i>	676																				676
	<i>Stamp duty</i>	27																				27
	<i>Purchase fees</i>	19																				19
	Total																					722
Build costs	<i>Market housing</i>	0	0	0	0	319	319	319	319	319	319	0	0	0	0	0	0	0	0	0	0	1,913
	<i>Affordable soc rent</i>	0	0	0	0	96	96	96	96	96	96	0	0	0	0	0	0	0	0	0	0	574
	<i>Affordable sh oship</i>	0	0	0	0	41	41	41	41	41	41	0	0	0	0	0	0	0	0	0	0	246
	<i>0</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<i>0</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<i>Build contingency</i>	5.0%	0	0	0	23	23	23	23	23	23	0	0	0	0	0	0	0	0	0	0	137
	Total																					2,870
Dev costs	<i>Upfront</i>	5.8%	41	41	41	41																165
	<i>Build related</i>	5.8%	0	0	28	28	28	28	28	0	0	0	0	0	0	0	0	0	0	0	0	165
	<i>Abnormals</i>	4%	50	50																		100
	Total																					430
Fees	<i>Fees on build costs</i>	10.0%	0	0	0	48	48	48	48	48	48	0	0	0	0	0	0	0	0	0	0	287
	<i>Fees on dev costs</i>	8.0%	7	7	6	6																34
	Total																					321
PG	<i>Planning gain</i>			10	10	10	10	10	10	0	0	0	0	0	0	0	0	0	0	0	0	60
	Total																					60
Grant	<i>Grant</i>			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total																					0
Other	<i>Planning</i>	£515	4	4	4																	12
	<i>Survey</i>	£500	12																			12
	<i>Marketing</i>	£0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total																					24
Sales fees	<i>b/forward from above</i>		0	0	0	0	0	27	27	27	27	27	27	0	0	0	0	0	0	0	0	164
Total costs		837	103	88	84	566	566	593	593	554	554	27	27	0	0	0	0	0	0	0	0	4,592
Net profit/loss from quarter		-837	-103	-88	-84	-566	-566	363	363	403	403	929	929	0	0	0	0	0	0	0	0	1,145
Profit/loss bf from last quarter		0	-852	-973	-1,081	-1,187	-1,786	-2,396	-2,071	-1,740	-1,362	-977	-50	896	896	896	896	896	896	896	896	
Cumulative profit/loss		-837	-955	-1,061	-1,165	-1,753	-2,352	-2,033	-1,708	-1,337	-960	-49	879	896	896	896	896	896	896	896	896	
Interest	<i>Charged at</i>	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%	0.00%	0.00%	
	<i>Total</i>		-16	-18	-20	-22	-33	-44	-38	-32	-25	-18	-1	16	0	0	0	0	0	0	0	-250
Cumulative developer profit carried forward to RV calc		-852	-973	-1,081	-1,187	-1,786	-2,396	-2,071	-1,740	-1,362	-977	-50	896	896	896	896	896	896	896	896	896	895

SITE 8A Sumner Gardens

SITE 8A LAND COST & PHASING

Land		Iterate to achieve 20.0% profit			
		Affordable		No affordable	
		Hectare			
		Affordable	No affordable	Affordable	No affordable
Land purchase price	£	460,600	511,923		
RV per acre	£	745,609	828,690	£1,842,400	£2,047,692
Dev profit	£	558,098	623,104		
Total costs	£	3,016,950	3,108,646		
profit as % of costs		18.50%	20.04%		

Programme	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	Q2	Q3	Q4	
Units started																					
Market housing			0.7	2.8	2.8	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	9.1
Affordable soc rent			0.2	0.8	0.8	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	2.7
Affordable sh oship			0.1	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2
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	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0	0	1	4	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13.0
Units 'built'																					
Market housing					1	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	9
+2Q Affordable soc rent					0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	3
+2Q Affordable sh oship					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
Units completed																					
Market housing						1	3	3	3	0	0	0	0	0	0	0	0	0	0	0	9
+3Q Affordable soc rent						0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	3
+3Q Affordable sh oship						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
Units purchased																					
Market housing							1	3	3	3	0	0	0	0	0	0	0	0	0	0	9
+4Q Affordable soc rent							0	1	1	1	0	0	0	0	0	0	0	0	0	0	3
+4Q Affordable sh oship							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

SITE 8A 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	Q2	Q3	Q4	
INCOME																						
Housing sales	<i>Market housing</i>	0	0	0	0	0	0	201	804	804	804	0	0	0	0	0	0	0	0	0	0	2,612
	<i>Affordable soc rent</i>	0	0	0	0	0	0	52	207	207	207	0	0	0	0	0	0	0	0	0	0	674
	<i>Affordable sh oship</i>	0	0	0	0	0	0	22	89	89	89	0	0	0	0	0	0	0	0	0	0	289
	<i>0</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<i>0</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<i>Sales fees</i>	0	0	0	0	0	0	-8	-30	-30	-30	0	0	0	0	0	0	0	0	0	0	-99
Total income		0	0	0	0	0	0	275	1,100	1,100	1,100	0	0	0	0	0	0	0	0	0	0	3,574
COSTS																						
Land	<i>Land acquisition</i>	461																				461
	<i>Stamp duty</i>	14																				14
	<i>Purchase fees</i>	13																				13
	Total																					487
Build costs	<i>Market housing</i>	0	0	0	0	94	376	376	376	0	0	0	0	0	0	0	0	0	0	0	0	1,222
	<i>Affordable soc rent</i>	0	0	0	0	28	113	113	113	0	0	0	0	0	0	0	0	0	0	0	0	367
	<i>Affordable sh oship</i>	0	0	0	0	12	48	48	48	0	0	0	0	0	0	0	0	0	0	0	0	157
	<i>0</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<i>0</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<i>Build contingency</i>	5.0%	0	0	0	7	27	27	27	0	0	0	0	0	0	0	0	0	0	0	0	87
	Total																					1,833
Dev costs	<i>Upfront</i>	5.0%	23	23	23	23	23	23	23	0	0	0	0	0	0	0	0	0	0	0	0	92
	<i>Build related</i>	5.0%	0	0	7	28	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	92
	<i>Abnormals</i>	1%	10	10																		20
	Total																					204
Fees	<i>Fees on build costs</i>	10.0%	0	0	0	14	56	56	56	0	0	0	0	0	0	0	0	0	0	0	0	183
	<i>Fees on dev costs</i>	8.0%	3	3	2	4	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	16
	Total																					200
PG	<i>Planning gain</i>			2	7	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23
	Total																					23
Grant	<i>Grant</i>			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total																					0
Other	<i>Planning</i>	£515	2	2	2																	7
	<i>Survey</i>	£500	7																			7
	<i>Marketing</i>	£0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total																					13
Sales fees	<i>b/forward from above</i>		0	0	0	0	0	8	30	30	30	0	0	0	0	0	0	0	0	0	0	99
Total costs		531	38	36	62	193	658	628	651	30	30	0	0	0	0	0	0	0	0	0	0	2,859
Net profit/loss from quarter		-531	-38	-36	-62	-193	-658	-353	449	1,069	1,069	0	0	0	0	0	0	0	0	0	0	715
Profit/loss bf from last quarter		0	-541	-590	-638	-714	-923	-1,611	-2,001	-1,581	-522	558	558	558	558	558	558	558	558	558	558	
Cumulative profit/loss		-531	-579	-626	-700	-906	-1,581	-1,964	-1,552	-512	548	558	558	558	558	558	558	558	558	558	558	
Interest	<i>Charged at</i>	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%	0.00%	0.00%	0.00%	0.00%	
	<i>Total</i>		-10	-11	-12	-13	-17	-30	-37	-29	-10	10	0	0	0	0	0	0	0	0	0	-158
Cumulative developer profit carried forward to RV calc		-541	-590	-638	-714	-923	-1,611	-2,001	-1,581	-522	558	558	558	558	558	558	558	558	558	558	558	557

SITE 9A Nursery site

Input assumptions		Scenario & option		Affordable 30% = 70% social rented 30% intermediate WITH GRANT								
Croydon site viability study				Dwellings								
Site details				Dwellings		<i>ave floor space</i>		<i>build cost</i>	<i>build index =</i>	<i>sales value</i>		
Site	9A Nursery site				% of	% of	<i>gross</i>	<i>net</i>				
Location	Purley Oaks Rd				dwgs	units	<i>sq ft</i>	<i>sq ft</i>	<i>per sq ft</i>	<i>per sq ft</i>		
Area	ha	0.48		Market housing	7.0	70.00%	70.00%	1,216	1,216	117.00	117.00	320.00
	acres	1.19		Affordable soc rent	2.1	21.00%	21.0%	1,216	1,216	117.00	117.00	215.00
No dwgs		10		Affordable sh oship	0.9	9.00%	9.0%	1,216	1,216	117.00	117.00	215.00
Density dw/ha		20.8		Total dwgs	10.0	100.00%	100.0%					
								0	0	0.00	0.00	0.00
Contingency								0	0	0.00	0.00	0.00
			£k									
allowance	2.50%		36									
Development costs												
standard % build	12.50%		182									
plus abnormal	0.0%		0									
Total	13%											
Design fees												
on build costs	10.0%		146									
on dev costs	8%											
Planning gain & Grant contributions												
PG £ per dwg	1,800		18									
Grant £ per dwg	0		0									
PG ALL												
				Other costs								
				Planning		515.0						£ per dwelling
				Survey		500						£ per dwelling
				Marketing		0						£ per dwelling
				Interest								
				% per annum		7.50%						
				Notes								

SITE 9A LAND COST & PHASING

Land		Iterate to achieve 20.0% profit			
		Affordable		No affordable	
		Hectare			
		Affordable	No affordable	Affordable	No affordable
Land purchase price	£	785,364	989,356		
RV per acre	£	662,151	834,139	£1,636,175	£2,061,158
Dev profit	£	547,894	648,732		
Total costs	£	2,961,016	3,243,218		
profit as % of costs		18.50%	20.00%		

Programme	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	Q2	Q3	Q4	
Units started																					
Market housing			0.7	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	0.0	0.0	7.0
Affordable soc rent			0.2	0.6	0.6	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	2.1
Affordable sh oship			0.1	0.3	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	0.0	0.0	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	0.0	0.0	0.0	0.0
0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10.0
Units 'built'																					
Market housing					1	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	7
+2Q Affordable soc rent					0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
+2Q Affordable sh oship					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
Units completed																					
Market housing						1	2	2	2	0	0	0	0	0	0	0	0	0	0	0	7
+3Q Affordable soc rent						0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	2
+3Q Affordable sh oship						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
Units purchased																					
Market housing							1	2	2	2	2	0	0	0	0	0	0	0	0	0	7
+4Q Affordable soc rent							0	1	1	1	1	0	0	0	0	0	0	0	0	0	2
+4Q Affordable sh oship							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

SITE 9A CASH FLOW AFFORDABLE

	rate	Year 1	Year 1	Year 1	Year 1	Year 2	Year 2	Year 2	Year 2	Year 3	Year 3	Year 3	Year 3	Year 4	Year 4	Year 4	Year 4	Year 5	Year 5	Year 5	Year 5	TOTALS
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
INCOME																						
Housing sales																						
	<i>Market housing</i>	0	0	0	0	0	0	272	817	817	817	0	0	0	0	0	0	0	0	0	0	2,724
	<i>Affordable soc rent</i>	0	0	0	0	0	0	55	165	165	165	0	0	0	0	0	0	0	0	0	0	549
	<i>Affordable sh oship</i>	0	0	0	0	0	0	24	71	71	71	0	0	0	0	0	0	0	0	0	0	235
	<i>0</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<i>0</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<i>Sales fees</i>	0	0	0	0	0	0	-10	-30	-30	-30	0	0	0	0	0	0	0	0	0	0	-102
Total income																						3,508
COSTS																						
Land																						
	<i>Land acquisition</i>	785																				785
	<i>Stamp duty</i>	31																				31
	<i>Purchase fees</i>	22																				22
	Total																					838
Build costs																						
	<i>Market housing</i>	0	0	0	0	100	299	299	299	0	0	0	0	0	0	0	0	0	0	0	0	996
	<i>Affordable soc rent</i>	0	0	0	0	30	90	90	90	0	0	0	0	0	0	0	0	0	0	0	0	299
	<i>Affordable sh oship</i>	0	0	0	0	13	38	38	38	0	0	0	0	0	0	0	0	0	0	0	0	128
	<i>0</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<i>0</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<i>Build contingency</i>	2.5%	0	0	0	4	11	11	11	0	0	0	0	0	0	0	0	0	0	0	0	36
	Total																					1,458
Dev costs																						
	<i>Upfront</i>	6.3%	23	23	23	23				0	0	0	0	0	0	0	0	0	0	0	0	91
	<i>Build related</i>	6.3%	0	0	9	27	27	27	0	0	0	0	0	0	0	0	0	0	0	0	0	91
	<i>Abnormals</i>	0%	0	0																		0
	Total																					182
Fees																						
	<i>Fees on build costs</i>	10.0%	0	0	0	0	15	44	44	44	0	0	0	0	0	0	0	0	0	0	0	146
	<i>Fees on dev costs</i>	8.0%	2	2	3	4	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	15
	Total																					160
PG																						
	<i>Planning gain</i>			2	5	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
	Total																					18
Grant																						
	<i>Grant</i>			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total																					0
Other																						
	<i>Planning</i>	£515	2	2	2																	5
	<i>Survey</i>	£500	5																			5
	<i>Marketing</i>	£0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total																					10
Sales fees	<i>b/forward from above</i>		0	0	0	0	0	0	10	30	30	30	0	0	0	0	0	0	0	0	0	102
Total costs																						2,769
Net profit/loss from quarter																						739
Profit/loss bf from last quarter		0	-886	-929	-985	-1,064	-1,283	-1,833	-2,011	-1,497	-484	548	548	548	548	548	548	548	548	548	548	
Cumulative profit/loss		-870	-912	-967	-1,045	-1,260	-1,799	-1,974	-1,470	-475	538	548	548	548	548	548	548	548	548	548	548	
Interest	<i>Charged at</i>	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%	0.00%	0.00%	0.00%	0.00%	
	<i>Total</i>		-16	-17	-18	-20	-24	-34	-37	-28	-9	10	0	0	0	0	0	0	0	0	0	-192
Cumulative developer profit carried forward to RV calc																						547