AFFORDABLE HOUSING VIABILITY STUDY

LONDON BOROUGH OF SUTTON

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11th September 2008

Contents

EXECUTIVE SUMMARY

- The London Borough of Sutton commissioned DTZ to prepare a study of the viability of different forms/mixes of affordable housing across the Borough. The work will be used to help inform emerging Local Development Framework policies.

- It was agreed that the most appropriate approach was to pick a number of notional sites typical of the sort of sites coming forwards in Sutton. Nineteen sites were selected in total with a variety of former existing uses. Fifteen were classified as large sites delivering between 10 and 175 dwellings and four smaller sites delivering between 5 and 9 dwellings.

- It should be noted throughout the study that the notional sites, though based on historical site scenarios, are only examples from which general conclusions will be drawn and do not account for site specifics or abnormals.

- The primary aim of the study was to identify the maximum quota of affordable housing that could be obligated whilst not stifling development. At the time of instruction, LB Sutton's policy sought 40% affordable housing from all developments of 15 dwellings or more.

- A number of key variables were tested for financial viability under different affordable housing levels (35%, 40%, 45% and 50% of the total number of units). The key variables were: existing use (Industrial, office, community, retail, leisure and residential); value (high, middle and low value bands); and tenure split (70%/30%, 60%/40% and 50%/50% social rented/shared ownership). Special attention was also given to sites under 10 units and the implications of obligating either on-site affordable housing or a standardised tariff-based system for levying contributions on sites over 2 and below 10 units.

- The notional sites were appraised using a developer based model that calculates the cash flow of the scheme and the profitability (Internal Rate of Return) achieved. The study focused on new build residential developments, as these are the sites that will deliver affordable housing through Section 106 agreements.

- The Study measured the sites' profitability. Based on experience of similar investments, it was assumed that sites achieving a profitability lower than 10% for sites under 50 units and 12% for sites over 50 units would not be brought forward by the developer, given the margins required and the risks involved in property development.

- On all the sites, increasing the level of affordable housing decreased the sites' profitability.

- Sites in high value areas (without subsidy) tended to deliver more affordable housing than in middle and low value areas. The provision of affordable housing became more challenging as land and sales values reduced. Non-residential sites in high value areas delivered significantly more affordable housing than non-residential sites in middle and low value areas. However, residential sites in high value areas only delivered, on average, slightly more affordable housing than residential sites in middle and low value areas. In fact there are a number of residential sites (Sites L, M, N and O) where low value areas were able to deliver more affordable housing than middle and high value areas. This is

because there is a disproportional relationship between land price and outturn values between high, middle and low value scenarios. Land values can be seen to reduce between middle and low value areas by up to 30% whereas outturn values reduce in the region of 9%. This relationship enhances the developer's return by decreasing cost more than revenue and increases the ability of the site to deliver affordable housing.

- Of the existing uses, site H (former public house) resulted in the lowest EUV (Existing Use Value) and therefore showed potential to deliver the maximum level of affordable housing tested under all the value and tenure split scenarios. Residential on the other hand resulted in the highest EUV and site density needed to be fully utilised in order for the scheme to be viable whilst providing affordable housing.

- Generally, altering the 70%/30% social rented/shared ownership tenure split to include a higher level of shared ownership increased the revenue produced by the schemes. However, the results show that altering the tenure split in this manner did not allow any firm conclusions to be drawn on how this affects the actual delivery of affordable units. On a number of sites (both with and without grant), adjusting the tenure mix to provide more shared ownership units helped produce more revenue and deliver more affordable units. On a significant number of sites, more revenue was produced but not enough to provide additional affordable housing. Affordable housing policy should therefore focus on addressing housing need, rather than which tenure split provides the most units.

- Using a financial appraisal measure of an investment's success indicates there is no significant difference in the viability of providing affordable housing on smaller sites to larger sites. Problems do occur however in cases where the split of affordable/non-affordable units is not easily divisible to the nearest whole unit.

- In the study the quota of affordable housing that can be delivered on small sites (<10 units) was inextricably linked to the price paid for the land. Given that three out of the four sites examined were already in residential use, the proposed scheme needed to maximise the intensity of development of the available land in order for the scheme to be viable. A difficulty was also encountered in apportioning percentages of tenure based on whole unit numbers when the total number of units goes below 9.

- A tariff-based contribution in lieu of providing on-site provision could be appropriate on some small sites given the results and problems detailed above. The tariff used aimed to capture the difference in revenue produced by a 100% private unit scheme compared to one which provides policy-compliant affordable housing. This average difference was broken down per unit, per habitable room and floor area. The results suggest that the highest viable contribution that can be levied is on a floor area basis. This was due to the precision of levying a tariff on a proportion of total floor area and as such there is no loss of contribution due to rounding.

- Alongside the other key variables, Housing Corporation subsidy will be crucial to the delivery of affordable housing. On the majority of sites, subsidy aided the delivery of 50% affordable housing. The study found that subsidy was especially effective in enabling low value sites to support additional affordable housing whilst still remaining profitable. The council will need to prioritise subsidy to social rented units to bridge the gap in revenue that appears to have a significant effect on development viability.

- The study concludes that if LB Sutton wishes to increase the quota of affordable housing from a 40% to a 50% share of development this will require in many situations the assistance of the appropriate level of grant subsidy.

- Additional research was undertaken into the current arrangements for levying a commuted sum in lieu of on-site affordable housing. The case study, a site with 10 one bedroom flats, revealed that the marginal gain in revenue from an all-private scheme was less than the liability of an off-site contribution. Thus developers with low and mid value sites will be deterred from pursuing off-site contributions. Only on very high value sites will the commuted sum be an option owing to the greater marginal gain from an all private scenario. Given that the commuted sum is only to be exercised in "exceptional circumstances" it remains an appropriate means of levying a contribution.

- A cross-checking exercise was undertaken to verify the findings of the study using the GLA "Three Dragons" Toolkit on a chosen site scenario (40% affordable housing, 70% social rented, 30% shared ownership with no grant subsidy). The exercise illustrated that when appraising all the selected sites, the two approaches are generally in agreement in terms of financially viability when based on the same broad assumptions used in the study.

1. Introduction and Clarification of Instructions

1.1 DTZ was commissioned by the London Borough of Sutton to look at the likely impact of a range of potential affordable housing policies on development viability. The Development Plan for the Borough is the London Plan (2008) and the Sutton UDP (2003) (as amended by the Secretary of State's Direction dated 24th September 2007) indicating those policies that the Council can 'save' while work is in progress on the planning LDF.

1.2 DTZ was commissioned by the London Borough of Sutton to look at the likely impact of a range of potential affordable housing policies on development viability. The Development Plan for the Borough is the London Plan (2008) and the Sutton UDP (2003) (as amended by the Secretary of State's Direction dated 24th September 2007) indicating those policies that the Council can 'save' while work is in progress on the planning LDF.

1.3 The council wishes to assess the viability of a range of policy options for the delivery of affordable housing to inform the emerging LDF policies. Where the results of the assessment warrant, the Council will use the assessment to help establish a common principle within its affordable housing policies.

1.4 An investigation into the viability and funding of affordable housing is required to provide supporting evidence to LDF policy in order to demonstrate that affordable housing policy will not generally inhibit housing development. In addition, the study will assist the Authority in meeting the requirements of PPS3 where Authorities must have regard to the likely availability of subsidy in the formation of affordable housing policy.

1.5 The key questions for the study to answer will be whether the level and type of affordable housing proposed is deliverable without inhibiting development and what level of affordable housing provision is viable, with and without subsidy. The study needs to show how viability is affected, when and where subsidy will be required and the extent of any subsidy.

1.6 The purpose of the viability assessment is to ensure that policy proposals for affordable housing are not so onerous as to prevent opportunity sites from coming forward in the case of both affordable and open market housing.

1.7 As a growing proportion of affordable housing is delivered via Section 106 Agreements, it is increasingly important that local affordable housing policy is realistic and credible and takes into account the local housing market in respect of house prices, supply, demand and need issues.

1.8 In undertaking the viability study a range of typical notional sites was selected closely aligned to actual sites being delivered in LB Sutton. These were chosen to reflect the Local Authority's insight towards these sites in order to test certain key characteristics and their impacts on viability. The use of sites closely aligned to actual developed sites allows the testing of policy options across a range of likely scenarios in a consistent manner, on sites which are typical of those likely to be developed in the future.

1.9 The main driver for development, and through it the provision of affordable housing, is adding value to residual land value (See P.5 explanation of how to calculate residual land value). If

the residual land value created by the proposed development is less than the existing use value then the development will generally not be viable in the market.

1.10 The predominant way in which developers assess the viability of a prospective development is to calculate residual land value[1]. Having calculated its residual present value, a discounted cashflow[2] technique can be performed to show the rate at which the development earns money via the Internal Rate of Return formula[3] (see also Appendix 3). IRR quantifies the rate at which capital invested will earn money that forms the basis for comparing the likely financial outcome of the proposal. The higher a project's IRR the more desirable it is to undertake as it represents the return on investment made. For the purpose of this study, we have used an IRR threshold of 10% for small sites (< 50 units) and 12% for large sites (> 50 units) to reflect the level of risk. Since IRR indicates the level of financial success of an investment if the development of a site returns an IRR below the threshold, it will generally not be taken forward. Furthermore, judgments on the risks associated with planning, construction, affordable housing, sales and marketing will be made.

1.11 The Brief sets out the examination and analysis of the economic viability of the following factors in the Borough's affordable housing policy:

1. For sites capable of achieving 15 or more units, whether the previous existing minimum 40% site target for affordable housing should be increased to 50% or some point between and what is the impact on achieving these targets with and without grant subsidy along with other S106 obligations?

2. For sites capable of achieving between 10-14 units what would be the maximum proportion of affordable housing that could be achieved on-site both with and without grant assistance or other S106 contributions including where there is a net increase of 10 units in any development (London Plan Further Alterations 2008)

3. For sites capable of achieving between 5 and 9 units whether some form of standard charge can be levied and if so to what level

4. For sites that are currently industrial or open space whether a *higher* proportion of affordable housing could be sought and the appropriate level. In other words whether there is scope for extra affordable housing on change of use to housing.

5. Whether the current method and level of off-site contribution remains appropriate or whether a more suitable alternative can be suggested.

[1] This valuation approach is employed for property with development or redevelopment potential. This equation is: Completed Development Value *less Planning and* Construction cost *less* on-costs and finance costs *less* Developers Profit = Residual Land Value.

[2] A Discounted Cashflow valuation approach is used to value a project using the concept of the time value of money. All estimated future cashflows are discounted by a % value usually representing interest on finance to return the future cashflows to a present value.

[3] IRR – The rate of interest at which the future outflows and inflows of money are discounted to return a zero net present value.

6. Whether the Council should be considering including sites with a capacity of between 1 and 4 units

7. Whether the current tenure split between intermediate and social rented units of 70% to 30% is appropriate

1.12 It is unlikely that affordable housing policy can fit all circumstances. But the policy position can address solutions by being clear, explicit and capable of easy communication that will inform the development process at the outset. For it to be workable, policy must sit alongside a negotiated approach to take account of site-specific circumstances for example remediation, and other S106 contributions. Furthermore, delivery needs to be as close to the policy framework as possible, so that policy maintains its credibility and consolidates its position.

2. Viability Study Limitations

2.1 Whilst this report follows standard development appraisal and financial viability conventions, it has been tailored to the specific circumstances of the local authority. It is also specific to the time at which it was undertaken and will require regular review in the light of local and national policies that relate to both planning and affordable housing. It will also need to reflect changes in local markets and reflect any review of the delivery of affordable housing. Changes in market sentiment and interest rate movements will also have an impact on results.

2.2 The study is time-specific and does not account for the inflation in capital values and development costs. In arriving at values and costs, DTZ has used a variety of sources and market knowledge. Research into new build residential property values across the Borough was undertaken but this is no substitute for detailed local market analysis at the time a site comes forward. DTZ predict that a possible outcome from a slowdown in the housing market may not necessarily be a significant drop in property prices, but may involve an increase in the amount of time it takes to sell a property. This will have a substantial effect on a development's cashflow and the developer's expected returns. Furthermore, this study is also based on interest rates current at the time. It would be unwise to attempt to predict, or build-in to the appraisal, movements in the financial and housing market but it must be appreciated this will have a significant impact on development viability.

2.3 The use of semi-notional sites can be seen as an advantage in that it allows for a consistent approach to modelling key variables within chosen scenarios. On the other hand, this somewhat limits the overall applicability of the chosen sites to market realities. In instances where one variable is being modelled, a large number of average assumptions are used for every other element of the scheme to ensure that the effect on development viability of that one 'flexed' variable is clearly apparent. Key variables and assumptions for this study are dealt with in Section 5, including the overall level of affordable provision, tenure split, construction costs, land price, development period, finance rates etc.

2.4 A further limitation to the study, related to its application to market reality, is the assumption that all sites used are ready to go, i.e. any abnormal costs have been reconciled. This approach was necessary to enable a set of comparable results. Of course, in reality 'normal' sites rarely exist and there is always a degree of site-specific cost involved in residential development but it would be unworkable to provide a standard set of assumptions to cover the range of developments considered.

2.5 There are also a number of other issues that need to be considered in the application of this viability study:

2.6 As discussed, a threshold of 10% (<50 unit site) and 12% (>50 unit site) IRR has been set as the minimum level of return a developer would be looking for to proceed with the scheme. Whilst this is an appropriate benchmark, a developer is likely to apply additional criteria depending on the risk profile of the scheme, taking into account factors such as scheme size, time to delivery, location and other market factors.

2.7 In practice RSL management issues also need to be considered. A low site size threshold produces a very small number of units on sites at the lower end of the scale. RSLs may be circumspect in bidding for these assets because this may entail higher management costs.

This study has not taken into account such practicalities due to the difficulty of quantifying the number of factors involved in this decision making process. In this study DTZ have assumed that all affordable units will be purchased by an RSL regardless of the size, number and configuration.

2.8 Standard building costs have been based on information from BCIS[4]. In fact, this would very much depend on site conditions, the configuration and design of the scheme and the target market at which it was aimed. Similarly, no allowance has been made for economies of scale, which could be significant. Construction costs will generally require tailoring to the particular aspects of a site and scheme design.

2.9 The attitude of developers is also a significant variable. Many developers are able to take a long-term view and may decide not to develop schemes in the current policy environment. Others, perhaps those who have recently bought land at high prices, may be keen to pursue marginal developments, as they need a return on their cash. For the purpose of this study, land has been valued based on Existing Use Value (EUV). The nineteen sites chosen for this study have a range of existing uses and varied planning history and are representative of likely development scenarios going forwards. Where the acquisition of the site involves more than one owner, 15% of land value has been added for site assembly.

2.10 The Housing Corporation grant subsidy used in the study reflects data from the 2006-2008 bid round, which have been cross checked with LB Sutton and is an average figure per unit that does not account for the location or type of units provided nor the case by case basis by which grant is allocated. Grant level assumptions will be dealt with in more detail in Section 5 to follow.

[4] The Building Cost Information Service (BCIS) is the UK property market's leading provider of construction cost and price information. Costs are quoted on a per square metre gross internal floor area basis and are specific to location and build function.

3. Understanding the Importance of Viability

3.1 Scheme viability is crucial in successfully implementing affordable housing policy and conducting affordable housing negotiations. Indeed, "viability" is a central theme of national affordable housing policy contained in PPS3, where local authorities are required to develop affordable housing policy supported by a robust evidence base. New planning policies must be deliverable, not merely aspirational. Thus they need to be based upon an assessment of housing market demand and need and an assessment of land value which can sustain required percentages and tenures of affordable housing in the context of the costs and constraints of development. It remains an issue in delivery terms that developers, when acquiring sites in a competitive environment, do not always allow fully for the cost of affordable housing according to policy. Similarly, developers will not immediately adjust their bid prices to reflect changes in affordable housing and/or planning policy.

3.2 Viability has a central role in policy evolution and negotiations, but there is little government guidance as to how viability negotiations are to be conducted or how local authorities are to make decisions based upon the outcome of a viability appraisal.

3.3 The London Plan, in setting a Borough-wide target of 50%, suggests that viability tools can be used by developers to demonstrate that they cannot deliver the maximum amount of affordable housing for site specific reasons. The GLA "Three Dragons" Development Control Toolkit was released in 2003 and provides the means by which the economics of development on individual sites can be tested. The toolkit was designed to calculate indicative residual land values based on a range of assumptions allowing the user to input scheme specifics or rely on the toolkit's defaults. The toolkit is widely used across all the London Boroughs however it is becoming apparent from recent inspector decisions and S106 negotiations that there is significant confusion as to what viability actually means.

Government's main priorities

3.4 The Government's aim is to ensure that adequate land is identified and brought forward for housing. It recognises that in order to do so, residual land values must be high enough to encourage landowners to sell land for housing. It therefore requires Local Authorities to ensure that the burden of planning gain, along with affordable housing, does not depress the value of land below a level which is insufficient to bring that land forward for housing.

3.5 A major issue is what is this value threshold? What is a reasonable residual value that encourages development?

3.6 The Local Authority needs to assemble robust evidence that considers local land values, competing and alternative land use values, the supply of suitable sites, development cost analysis and the availability of grant funding to counter developers' claims that policy requirements cannot be delivered for any specific site. This highlights a need for clear policy in negotiating on the viability of a scheme.

4. Policy Review

4.1 DTZ undertook an affordable housing policy review of the London borough of Sutton. It is important to establish the current and emerging policy context in order to test alternatives as well as the existing policies themselves.

Planning Policy

4.2 PPS3 (paragraph 29) requires local authorities to set a target through policy that reflects an assessment of the economic viability of land for housing, taking into account a number of factors including the availability of grant funding. Where public subsidy is required, but not available, alternative tenures and or percentages of affordable housing should be sought.

Provision

4.3 Policy HSG9 of the adopted UDP deals with the provision of affordable housing from large sites and states:

"The council will require all residential development on suitable sites capable of accommodating 20 or more dwellings or on sites of 0.8 hectares or more (regardless of the number of units) to provide an element of affordable housing. In exceptional circumstances, the council will consider contributions to provide affordable housing on an alternative site"

4.4 The Council's Interim Policy Statement on Affordable Housing (July 2005) seeks the maximum reasonable amount of affordable units on sites above the threshold and sets the borough-wide affordable housing target at 40%. The London Plan (2004) requires boroughs to set their own individual targets taking into account the mayor's strategic target that 50% of all new housing should be affordable and to seek the maximum reasonable amount of affordable housing on individual sites. The London Plan (2008) seeks affordable housing on any site, which has a capacity to provide 10 or more dwellings.

4.5 The Council's SPD on affordable housing (2006) sets out how the Council will apply affordable housing policy in the Borough.

4.6 Under the Planning & Compulsory Purchase Act 2004, policies adopted as part of the Sutton Unitary Development Plan (UDP) were automatically 'saved' for a period of 3 years, while work on the new Borough Local Development Framework (LDF) progressed.

4.7 By April 2007, the Council was required to submit to the Secretary of State for Communities and Local Government for approval a schedule of UDP Policies it wished to continue to save as part of the statutory development plan for the Borough beyond September 2007. As it is considered that UDP Policy HSG9 was not in general conformity with the London Plan, the Council was directed by the Secretary of State not to save this policy. Instead, the Council should apply the London Plan policies on affordable housing.

Mix and Tenure

4.8 The Council's 2001 Housing Needs Study undertaken by Fordhams and updated in 2008 identifies the need for different sizes of accommodation in terms of numbers of bedrooms and, according to government advice, the housing types most appropriate to a specific site should be determined by a rigorous and realistic assessment of local need.

4.9 Furthermore, in order to create mixed or balanced communities the affordable units should be distributed throughout the site rather than concentrated in one area.

4.10 The 2005 Housing Needs Study Update also suggests that the Council should continue to focus on the provision of social rented accommodation as the majority of need could be met by this tenure and since the cost of shared ownership is close to, or just below, entry level market housing.

On-site Provision

4.11 In order to promote mixed and balanced communities and because the supply of land is limited, the Council's preference is to ensure that affordable provision remains on-site.

Off-site Provision

4.12 In exceptional cases, the Council may consider that the off-site provision of affordable housing is acceptable, or, where an alternative site is not available, a financial contribution in lieu of on-site provision might be accepted. The sum should be calculated based on the formula set out in Appendix 5 of the Council's Affordable Housing SPD.

5. Study Methodology and Assumptions

5.1 DTZ adopted a three-stage process in assessing the financial impact of different affordable housing options.

5.2 Stage one involved the collation of market research on the types of sites that are currently being delivered, land values for comparison, unit sizes, unit mixes and capital values of both the private and affordable units. This stage also included a strategic policy review, which informed the selection of the key variables to be examined.

5.3 Stage two agreed the assumptions to be used, based upon the evidence gathered in stage one and involved the selection of a suitable range of sites to be tested under different scenarios. This was undertaken in consultation with LB Sutton to ensure the selection of sites was fully representative. Further work was undertaken at this stage to construct the financial appraisal model to carry out the testing.

5.4 Stage three involved inputting the sites into the financial model after the correct approach had been agreed. The model was then run under a number of different affordable housing policy scenarios to test financial viability.

5.5 This section of the report will address the process by which the sites were selected and the key variables and general assumptions made in the study.

Site Selection

5.6 The first part of the modelling work involved evaluating the range of sites being developed across the borough and formulating the typical sites. Whilst the method of viability testing sites is based on a series of hypothetical assumptions, site selection is based on a number of real sites coming forward for development within the Sutton area. This allows for sensitivity testing that highlights the impact of the policy changes whilst masking the identity of the sites.

5.7 The council has provided data to inform the site selection process. This comprises:

- Planning permissions for 2004, 2005,2006 and 2007 (to date)
- Housing Completions for 2004, 2005, 2006 and 2007 (to date)
- Projected pipeline of new housing completions for the 2006/2007.

5.8 We have supplemented this information with data accessible on the EGI London Residential Research database for LB Sutton, for the past three years, and further site investigation and research.

5.9 Our approach to the selection of site characteristics to test the viability of future affordable housing policies is to have analysed the recent supply and pipeline to ensure that the modelling is based on the actual type of sites coming forward for development in the LB Sutton area. The specific sites were adjusted to hypothetical archetype site types for the modelling purposes of testing the variables and sensitivities. We do not have actual transactional or valuation information on these individual sites, as this has not been provided,

and would in any case be confidentially restrictive. Therefore all analysis will be based on typical assumptions. These are discussed later in this section of our report on model assumptions.

Exclusions from the analysis

5.10 Our discussions with LB Sutton confirmed that there were particular one-off sites, which are not representative of the types of development coming forward in the Sutton area, and therefore have been excluded from the analysis. The first consists of the site known as the Hamptons, Worcester Park, in excess of 400 units. We have also excluded the major social housing regeneration schemes at Durand Close, Carshalton, and Roundshaw, Wallington.

5.11 The following table provides a list of schemes in LB Sutton within this timeframe, analysed with 20 or more residential units (gross) and where the policy (at the time of instruction) would lead to the requirement to provide affordable housing under the S.106 obligation.

Sites capable of achieving 20 units

Existing Use	Unit Numbers (Gross (Net) Residential Gain)	Comments	Site Reference for Model Analysis
Former Industrial Premises	39	30% affordable housing on-site	A
Community Centre	175	72 affordable housing units provided on-site	B
Existing Office Premises	96		C
Existing Office Building	174	Mixed Use Refurbishment	D
Former Industrial Premises	51	23% (12 units) affordable housing achieved on-site	E
Existing Residential Use – 4 large Dwellings	47 (43)	30% (14 units) affordable housing provided on-site	I

Sites capable of achieving 15-19 units

5.12 Furthermore, there are a significant number of schemes in LB Sutton that fall between the 15 and 19 unit sizes, for example:

Existing Use	Unit Numbers (Gross (Net) Residential Gain)	Comments	Site Reference for Model Analysis
Former Retail with Car Parking	19		G
Existing Residential Use – Three semi-detached	21 (18)		K
Existing Residential Use – Two detached dwellings	18 (16)		L
Existing Residential Use – 4 large detached houses	23 (19)	All private	M
Former Public House	18		H

5.13 A significantly high proportion of the current and pipeline residential development in Sutton are sites which fall into these categories.

Sites capable of achieving 10-14 units

Existing Use	Unit Numbers (Gross (Net) Residential Gain)	Comments	Site Reference for Model Analysis
Former Office Premises	11		F
Existing Residential Use – One large Victorian Property	11 (10)		J
Existing Residential Use – 2 large dwellings	16 (14)		N
Existing Residential Use – 2 detached dwellings	16 (14)		O

Sites capable of achieving fewer than 10 units

Existing Use	Unit Numbers (Gross (Net) Residential Gain)	Comments	Site Reference for Model Analysis
Existing Residential Use – One detached dwelling	6 (5)		P
Former Garden Land at rear of existing dwelling	5		Q
Existing Residential Use – One large detached dwelling	10 (9)		R
Former Industrial Depot	9		S

5.14 Many of these sites (e.g. I, K, L, M, N, O, P, R and Q) would fall under the windfall site category as they result from the purchase and demolition of existing dwelling houses in well established residential areas or the conversions of other uses in areas not identified in the Borough's future housing trajectory.

5.15 Therefore the sites to be tested are selected to replicate the broad spectrum of sites that are typical to the type of sites actually coming forward for development in the LB Sutton area.

5.16 It is important to note that the modelling does not test these specific site transactions, as it would not be possible to gather all the requisite and predominantly confidential or commercially sensitive information on each site.

Sites for evaluation

5.17 The table below details the sites that have been chosen as representative of those coming forwards in the Sutton area. Other site characteristics will be kept constant as detailed in Section 5 of this report. For greater clarity and to aid drawing conclusions the archetypal sites have been grouped by their existing uses. Table 1.1 summarises these designations:

Table 1.1 Sites for evaluation

Existing Use	Sites
Industrial	A, E
Office	C, D, F
Community Use	B
Retail	G
Public House	H
Residential	I, J, K, L, M, N, O
Small Sites	P, Q, R, S

Level of Affordable Housing

5.18 Across the archetypal sites, and when varying other key variables also, four levels of affordable housing provision have been tested to ascertain the maximum level the site can viably sustain under different site conditions. These levels were selected at 35%, 40%, 45% and 50% representing above, at and below scenarios. It was felt that these levels deviate from current policy whilst remaining realistic.

Key Variables

5.19 The following key variables were identified as the factors that could have a significant effect on a site's ability to deliver affordable housing:

Value

5.20 Experience would suggest that the value area a site falls within has a significant effect on the development economics of a site. Value bands were divided into high, medium and low value (see Sutton Postcode Value Areas map Appendix 5).

5.21 Value banding has two facets within the study: existing use value (only for residential, all other EUV's kept constant across the three value bands) and capital values.

5.22 The sales values that can be achieved will be highly dependent on a number of factors, including the location and specification to which the units are built. For the purpose of this study each site has been tested in a high value, mid value and low value scenario to determine what effect this has on the level of affordable housing that can be viably provided. Assumed sales values for private, affordable for social rent and affordable for shared ownership units are detailed in Table 1.2 below.

Table 1.2 Assumed Sale Values without Grant (November 2007)

Property	Size NIA (sq ft)	Value	Private	Affordable – Social Rented	Affordable – Shared Ownership
1 Bed Flat	500	High	£ 220,000	£ 80,000	£ 150,000
		Mid	£ 195,000	£ 75,000	£ 135,000
		Low	£ 170,000	£ 70,000	£ 120,000
2 Bed Flat	650	High	£ 279,500	£ 95,000	£ 187,250
		Mid	£ 247,000	£ 90,000	£ 168,500
		Low	£ 214,500	£ 85,000	£ 149,750
3 Bed Flat	800	High	£ 336,000	£ 115,000	£ 225,500
		Mid	£ 296,000	£ 110,000	£ 203,000
		Low	£ 256,000	£ 100,000	£ 178,000
2 Bed House	800	High	£ 316,000	£ 100,000	£ 208,000
		Mid	£ 292,000	£ 95,000	£ 193,500
		Low	£ 268,000	£ 90,000	£ 179,000
3 Bed House	1000	High	£ 385,000	£ 120,000	£ 252,500
		Mid	£ 355,000	£ 115,000	£ 235,000
		Low	£ 325,000	£ 110,000	£ 217,500
4 Bed House	1300	High	£ 487,500	£ 155,000	£ 321,250
		Mid	£ 448,500	£ 145,000	£ 296,750
		Low	£ 409,500	£ 135,000	£ 272,250

Grant

5.23 The addition of Housing Corporation funding to a scheme is aimed at increasing the level of affordable housing that can be provided. In this study viability has been modelled both with and without grant.

Grant - £60,000 per social rented dwelling, £30,000 per shared ownership dwelling

5.24 Assumed revenues inclusive of grant are detailed in Table 1.3 below:

Table 1.3 Assumed Sales Values with Grant (November 2007)

Property	Size NIA (sq ft)	Value	Private	Affordable – Social Rented	Affordable – Shared Ownership
1 Bed Flat	500	High	£ 220,000	£ 140,000	£ 180,000
		Mid	£ 195,000	£ 135,000	£ 165,000
		Low	£ 170,000	£ 130,000	£ 150,000
2 Bed Flat	650	High	£ 279,500	£ 155,000	£ 217,250
		Mid	£ 247,000	£ 150,000	£ 198,500
		Low	£ 214,500	£ 145,000	£ 179,750
3 Bed Flat	800	High	£ 336,000	£ 175,000	£ 255,500
		Mid	£ 296,000	£ 170,000	£ 233,000
		Low	£ 256,000	£ 160,000	£ 208,000
2 Bed House	800	High	£ 316,000	£ 160,000	£ 238,000
		Mid	£ 292,000	£ 155,000	£ 223,500
		Low	£ 268,000	£ 150,000	£ 209,000
3 Bed House	1000	High	£ 385,000	£ 180,000	£ 282,500
		Mid	£ 355,000	£ 175,000	£ 265,000
		Low	£ 325,000	£ 170,000	£ 247,500
4 Bed House	1300	High	£ 487,500	£ 215,000	£ 351,250
		Mid	£ 448,500	£ 205,000	£ 326,750
		Low	£ 409,500	£ 195,000	£ 302,250

Tenure Split

5.25 Based on the assumed extra revenue that can be achieved for shared ownership units, as detailed in the above table, it was felt that there could be the potential to deliver a greater number of affordable units if policy deviated from the current 70/30 social rented/shared ownership split. On this basis, tenure split was tested at 70/30, 60/40 and 50/50 social rented/shared ownership.

Small Sites

5.26 In the study special attention has been given to the provision of affordable housing on sites delivering less than the 10 unit threshold. Such sites were tested to assess their potential to deliver affordable housing at different levels.

5.27 Due to the study being based upon number of units, the following assumptions were made with regards to the actual number of affordable units provided under different levels of provision:

Table 1.4 Affordable Housing Divisions on Small Sites

	Number of Affordable Units Provided		
Units	30%	40%	50%
9	3	4	4
5	2	2	2

5.28 On sites where the total number of units provided is odd and 50% affordable housing is being tested, it has been assumed that the developer will provide more private than affordable units. E.g. on the above site with 5 units at 50% affordable housing the developer will provide 3 units private and 2 affordable.

Affordable Housing Tariff

5.29 Given the potential difficulties in securing affordable housing on smaller sites, DTZ were asked to examine the effect of lowering the threshold to two units and obligating an affordable housing tariff in lieu of on-site provision for sites that deliver between 2 to 9 units. It was hoped that implementing such a policy would halt the current pattern of sites being delivered just below the London Plan threshold (10 units) and secure a contribution from all development in the Borough.

5.30 Experience would imply the calculations need to be simple and transparent to ensure that it is evident to developers where the contribution will be re-invested. The tariff should also reflect changes in market conditions and rely on data capable of being accessed by the council and any applicant. In arriving at a potential tariff system, DTZ undertook research into comparable local authorities where this type of levy had been implemented or where the commuted sum calculation already in place was of particular relevance to the economics of small sites.

5.31 It was agreed that the level the tariff is set at should capture the difference in revenue produced by a scheme that delivers no affordable housing to one that delivers policy-compliant affordable housing (50% with subsidy in this case). In essence, this figure represents the open market value of the site with no affordable housing, less the value of the site with 50% affordable housing.

5.32 For each site, the difference in revenue was calculated and worked back per unit, per habitable room and on a floorspace basis (see Appendix 6 for breakdown). An average for each means of differentiation was equated in a high, mid and low value scenario. The mean average differences are detailed in Table 1.5 below.

Table 1.5 Average Revenue Differentials

Per Unit Average	
High Value	£53,793
Mid Value	£43,161
Low Value	£32,537

Per Habitable Room Average	
High Value	£18,970
Mid Value	£15,143
Low Value	£11,319

Per Sq Metre Average	
High Value	£764
Mid Value	£603
Low Value	£452

5.33 On the basis of these figures, the range of values detailed in Appendix 2 were tested on sites P to S across the three value areas to ascertain the level of tariff that could be applied in each case whilst keeping the site viable.

Commuted Sum

5.34 In addition to the above, the application and appropriateness of the current method of securing off-site contributions on sites over the threshold was appraised. The sum used was based on the formula detailed in Appendix 4 and 5 of London Borough of Sutton – Supplementary Planning Document – Affordable Housing. A copy of this section is included in Appendix 4. The results are discussed in Section 7.

Standard Assumptions

5.35 Aside from the key variables detailed above, there were a number of standard assumptions made on aspects of the sites to be kept consistent.

Existing Use Value (EUV)

5.36 Existing use values have been based on the following assumptions plus an additional 15% added to present value for site assembly where applicable. Estimated rents and values are based on comparables collected in March 2008.

Office

5.37 Assumed 80% efficiency between Gross and Net lettable area.

5.38 Based on comparable evidence of offices in similar locations in the Borough we have assumed existing Grade C office rents of £86 per sq m (£8 per sq ft).

Existing Residential

5.39 The value assumptions are contained in Table 1.6 below, dependent on the plot size and sales values from the Land Registry.

Table 1.6 Average Property Prices in LB Sutton (source: Land Registry)

Property Type	High Value	Mid Value	Low Value
Large Detached House	£750,000	£600,000	£450,000
Detached House	£650,000	£500,000	£350,000
Semi-detached House	£359,881	£299,881	£239,881
Flat	£300,000	£250,000	£200,000

Industrial

5.40 Based on comparable evidence, we have assumed £3,459,540 per hectare (£1,400,000 per acre).

Retail

5.41 Based on comparable evidence, we have assumed a low-grade retail rent of £160 per sq m (£9 per sq ft) with 80% plot to site ratio.

Public House

5.42 Existing use value has been estimated by capitalising the property's current rateable value for the 2000 rating list. This rateable value was estimated as of 1st April 1998. Based on comparable evidence of public houses across the country, we have assumed a yield of 5%.

Internal Rate of Return (IRR)

5.43 The IRR level set to determine if the site is financially viable or not is 10% for small sites (<50 units) and 12% for large sites (>50 units). It is assumed that a site resulting in an IRR below

this level does not give the developer a sufficient return to bring the site forwards and therefore is deemed not viable.

Intermediate Housing

5.44 Intermediate housing has been assumed to be provided in the form of shared ownership and values represent an average of the information received from LB Sutton's development partners.

Build Costs – Private Units

5.45 The private unit build costs used in the viability model are taken from the residential costs on BCIS re-based using a location index of 115 for Greater London for general housing and flats and are based on rates per square foot gross internal area for the building excluding external works and contingencies and with preliminaries apportioned by cost. These rates were correct as of 10th November 2007:

New Build, Housing, Mixed Developments - £1,118 per sq m (£110 per sq ft)

Flats (Apartments) - £1,292 per sq m (£120 per sq ft)

Build Costs – Affordable Units

5.46 The build costs assumed for the affordable units are higher to comply with higher building regulations and are as advised by the development partners.

Affordable Houses - £1,292 sq m (£120 per sq ft)

Flats (Apartments) - £1,507 sq m (£140 per sq ft)

S106 Costs

5.47 For the purpose of this study, £7,500 per unit for S106 contributions, other than affordable housing, has been agreed.

Demolition Costs

5.48 Due to the nature of this study we have assumed £16 per sq m (£1.50 per sq ft). This figure is based on our best estimates for a site clearance with no contamination or deleterious materials.

Finance Costs

5.49 A conservative interest rate of 6.75% per annum has been assumed to allow for fluctuations.

Professional Fees

5.50 Assumed at 10% of Construction Cost.

Disposal Costs

5.51 Assumed 3% of Gross Development Value (GDV)[5] to incorporate marketing and sales of the private units.

Acquisition Costs

5.52 Assumed at 5.8% on land acquisition.

Inflation

5.53 A degree of inflation has been built in assumed at 3.5% per annum on costs and 2.5% on revenue.

[5] Gross Development Value in this case refers to the total revenue received from the sale of all the units on the site.

6. Results of the modelling exercise

6.1 The results of our modelling exercise are shown in Appendix 1 A – O for large sites and Appendix 2 P – S for small sites (<10 units) including tables with raw data and graphs for interpretation. With reference to these, this section of the report will analyse the results for each site individually.

6.2 The results have also been presented in a series of graphs (1.B – 2.S) shown in Appendix 1 and 2.

6.3 In this section we set out a number of considerations that are based on an interpretation of the results contained in Appendix 1 and 2. The results represent the viability of a number of archetypal sites that are based on a large number of general assumptions. Because of this, the results will give rise to situations where they may or may not hold true in actual scenarios. The calculation of IRR is a very sensitive investment measurement technique, which is particularly susceptible to changes in revenue and phasing (see Appendix 3 for IRR definition and formula).

Large Sites (over 10 units)

Site A – Industrial Existing Use (See Appendix 1 – A)

Without Grant:

6.4 This site was based on a 0.47 ha site formally used for light industrial manufacture. The planned development consists of renovation and new build to include a mix of 39 one and two bed flats and a small number of two bedroom maisonettes. The existing use value was estimated at £1,626,000 and the following patterns emerged.

6.5 The site brought forward in a high value area without grant could viably sustain 50% affordable housing (19 units) while remaining relatively profitable. Deviating from a 70/30 social rented: shared ownership was not necessary to deliver 50% affordable housing in high value areas (see Appendix 1 – Graph 1A).

6.6 In mid value areas without grant a provision of 40% (16 units) was more appropriate under a 70:30 tenure split. Increasing the proportion of shared ownership units, on the whole, allowed this level to be increased to 45% under a 60/40 and 50/50.

6.7 Tested in a low value area without grant the site typically struggled to deliver any of the levels of affordable housing tested due to the relatively low revenue received from the sale of the private units. The profitability was only close to a sufficient level to bring the site forward under a 50/50 tenure split where we would estimate, though have not tested, 30% affordable housing (12 units) could be appropriate.

With Grant:

6.8 The addition of HC grant to the site increased the potential to deliver a greater proportion of affordable housing across all three value areas. Tenure wise, the most notable effect on viability was at a 70:30 tenure split as the assumptions for grant favour social rented units (see Section 5 - Value Assumptions). Value wise, the addition of HC grant was most beneficial in increasing the potential of sites in low value areas to deliver a higher proportion of affordable housing, which in this case was in the region of 45-50% dependent on tenure split (See Appendix 1 - Graph 1.A).

Site B – Community Existing Use (See Appendix 1 – B)

Without Grant:

6.9 Site B is based on a site formerly occupied by community uses with an area of 1.4 hectares. The proposed new build development includes 175 one and two bed flats. Our viability testing has assumed an existing use value of £4,843,356.

6.10 In the high value scenario tested this site could deliver 50% affordable housing (87 units) without grant whilst remaining relatively profitable (See Appendix 1 – Graph 1.B). This was true across all three tenure splits tested and the results would suggest this is a product of the high density at which development takes place on this site (125 dph).

6.11 As with the above, the site in a mid value scenario yielded a high enough return to remain viable whilst providing up to 50% affordable housing (87 units) provided grant funding is available.

6.12 In the low value scenario tested this level of provision had to be decreased to 35% (61 units) to deliver a viable scheme.

With Grant:

6.13 DTZ would suggest that on a site developed to this density, and where the land can be purchased at existing use value, HC grant may not be required to deliver a viable scheme which includes a high level of affordable housing. This assumption given that in all three value scenarios the extra revenue received tended to allow 50% affordable housing to be sustained whilst resulting in IRRs in the region of 19% - 45%. However, land for residential development is rarely purchased at existing use value and the land price will almost always be based on an assumption of the maximum density the vendor believes can be achieved on the site whilst obtaining planning permission and will reflect the assumed S106 position with regard to affordable housing. The S106 position therefore needs to create sufficient value to bring the site forward for development.

Site C – Office Existing Use (See Appendix 1 – C)

Without Grant:

6.14 Site C was based on the replacement of a 7 storey office block with residential development incorporating 96x one, two and three bedroom flats. The site was valued on the basis of its existing use with an assumed land value of £5,166,638.

6.15 Typically this site in a high value area without grant tended to viably deliver a maximum of 35% affordable housing (34 units). Amending the tenure split in favour of more shared ownership units increased the site's potential to bring forwards a higher proportion in the region of 40% (38 units) with a 60/40 split and 45% (43 units) with a 50/50 social rented/shared ownership split (See Appendix 1 – Graph 1.C).

6.16 In a mid value scenario without grant the site struggled to remain profitable in delivering any of the quotas tested. Based on the patterns of IRR emerging from the viability testing DTZ estimate that 25% (24 units) could be obligated for 70/30 and 60/40 tenure splits. If a 50/50 tenure split was adopted the quota of unit could possibly be extended to 30% (29 units).

6.17 As with the above, placing the site in a low value area significantly affected its ability to provide any level of affordable housing given the low revenues received from the private sales. Without grant the IRRs for this site under all the tenure split variations were so low it is difficult to recommend an appropriate level of affordable housing. Based on the values and assumptions used in this study DTZ would not expect this site to come forward in such an area.

With Grant:

6.18 The addition of HC grant increased the viability of the site across all value areas (see graph 1.C). The site in high value areas could deliver 50% with relative success. In a mid value scenario the site could typically sustain between 40 – 50% increasing with amendments to tenure split. As discussed, a site of this nature and existing use could not provide affordable housing at the levels tested. Given the evident patterns in profitability, with grant, DTZ estimate 25% affordable housing could potentially be stipulated here.

Site D – Office Existing Use (See Appendix 1 – D)

Without Grant:

6.19 This site is based on an office refurbishment of a 0.54ha site. The proposed development includes 174x studios, one and two bedroom flats. Our viability testing has assumed an existing use value of £8,200,808.

6.20 The site in a high value scenario tended to deliver 45% (78 units) at a 70/30 tenure split and 50% (87 units) at 60/40 and 50/50. As with Site B this level can be sustained with relative ease given the high density (322 dph) at which the high value studios and flats have been developed (see Appendix 1 – Graph 1.D).

6.21 In a mid value area this site at best could viably deliver 35% affordable housing with a 50/50 tenure split. At tenure splits of 70/30 and 60/40 the IRR of the site fell just below the threshold. On this basis the results suggest that 30% (52 units) may be an appropriate quota.

6.22 The low value scenario failed to produce a financially viable site under any level of affordable housing tested. This assessment found this to be a product of the high existing use value and low capital values of the units being sold in this scenario.

With Grant:

6.23 The addition of HC grant to the revenue of the scheme increased the ability of the site to deliver affordable housing in all three value scenarios. The level was increased to 50% in high and mid level scenarios. The site in a low value area still failed to reach the required level of profitability under any of the levels tested. However this was marginal and DTZ would suggest that based on the results here a level of 30% could be viably provided.

Site E – Industrial Existing Use (See Appendix 1 – E)

Without Grant:

6.24 This site is based on a redevelopment of an existing 2-storey light industrial building of which the existing use value was estimated at £1,383,816. The proposed development on this 0.4ha site includes 51 one and two bedroom flats.

6.25 The site brought forwards in a high value scenario had the potential to deliver 50% affordable housing (26 units) with a 70/30, 60/40 and 50/50 tenure split. Varying this tenure split in favour of shared ownership increased the IRR in the region of 10% points from a 70/30 to 50/50 tenure split.

6.26 The results for this site in a mid value area were also encouraging with 50% affordable housing proving viable at the three tenure splits tested (see Appendix 1 – Graph 1.E). The difference in IRR terms between high value and mid value sites was in the region of 20% points. In revenue terms at a 70/30 split the high value scenario produced £9,543,563 compared with the mid value scenario produced £8,558,875.

6.27 The results for the low value scenario suggested that sites of this nature have the potential to deliver 40% affordable housing (20 units) at a 70/30 and 60/40 tenure split. Increasing the proportion of shared ownership units to 50%/50% increased profitability sufficiently to support an affordable housing quota of 45% (23 units).

With Grant:

6.28 The addition of HC grant further increased the site's profitability and ability to deliver a high level of affordable housing. With grant the results suggest all sites can support 50% affordable housing with ease. Given the low existing use value grant is not necessary to deliver affordable housing at policy level.

Site F – Office Existing Use (See Appendix 1 – F)

Without Grant:

6.29 Site F is based on the demolition of an existing office building and the new build of 11x one and two bedroom flats. The site area is 0.097ha and the estimated existing use value £670,973.

6.30 The high value scenario without grant tended to support up to 40% affordable housing (4 units) with a 70/30 tenure split whilst remaining profitable. Increasing the proportion of shared ownership units increased the profitability to a level that tended to support 50% affordable housing (5 units). In this instance this shift in profitability results from a shift in just one unit from social rent to shared ownership tenure.

6.31 Mid and low value sites were not effective in delivering affordable housing viably at the levels tested. In the case of the mid value scenario this was marginal (7% IRR) when tested at 35% (4 units) with 60/40 and 50/50 tenure splits. On this basis the results suggest 30% (3 units) could be more appropriate. This site in a low value scenario resulted in IRRs too low to estimate an appropriate level.

6.32 Given the size of this site, in unit terms, increasing the affordable housing quota did not increase the number of actual units provided. For example a quota of 35% and 40% affordable housing would equate to 4 units. Likewise 45% and 50% both equate to 5 units.

With Grant:

6.33 Housing Corporation grant increased the supportable quota of affordable housing particularly at 70/30 and 60/40 tenure splits given the additional grant applied to social rented units. High value locations achieved a quota of 50% across all three tenure types whilst mid value locations supported 40% at 70/30 and 50% at 60/40 and 50/50 tenure splits. HC grant was not effective in increasing the levels of revenue sufficiently to allow low value sites the capacity for affordable housing.

Site G – Retail Existing Use (See Appendix 1 – G)

Without Grant:

6.34 This site is based on the demolition and redevelopment of existing retail premises occupying a 0.081 ha site. The proposed development incorporates 19x one and two bed flats built to a density of 234 dph. The existing use value has been estimated at £1,205,594.

6.35 This study suggests that Site G brought forwards in a high value area tended to achieve 35% affordable housing (7 units) with a 70/30 tenure split. Varying this to a 50/50 tenure split increased the maximum level deliverable to 40% (8 units).

6.36 This site in a mid-value scenario failed to yield a return that brought the IRR above the threshold at the quotas and tenure mixes tested. The IRRs are too low at a 70/30 and 60/40 tenure mix for DTZ to make any kind of estimation as to the quota that could be sustained. We

estimate that at a 50/50 tenure split the site could potentially provide 25% affordable housing (5 units).

6.37 The low value scenario tended to be unable to deliver any of the levels of affordable housing tested in this study. As was the case with the mid-value scenario, the IRRs are too low for DTZ to estimate the likely level that could be sustained.

With Grant:

6.38 HC grant aided affordable housing delivery in high and mid value scenarios. The site in a high value scenario could achieve 50% affordable housing (9 units) at all three tenure splits and the mid value scenario could achieve between 50% dependent on tenure split. The high existing use value and low revenue received from the private units still led to a failure of the site to deliver affordable housing at the levels tested under the low value scenario.

Site H – Public House Existing Use (See Appendix 1 – H)

Without Grant:

6.39 Site H is based on the demolition and redevelopment of a public house to provide 18 one and two bedroom flats and bungalows. The site area is 0.119 ha and the existing use, based on capitalization of rent, has been estimated at £280,000.

6.40 Given the existing use value in comparison to the revenue potential of the units provided this site delivered the maximum level (50%, 9 units) of affordable housing across all three value bands and tenure splits.

With Grant:

6.41 The resulting IRRs were sufficient without grant to suggest that subsidy was not required in this instance. The extra revenue received from the HC grant increased the profitability of the site resulting in IRRs over 100% for high value scenarios. Given the low site value it can be assumed that even with 100% affordable housing this site would be viable.

Site I – Residential Existing Use (See Appendix 1 – I)

6.42 See Section 5 for residential existing use assumptions.

Without Grant:

6.43 This site occupied 0.5ha and was formally 4 large residential units. The development scenario included 47x one and two bedroom flats. The following existing land values were assumed:

High Value: £3,450,000
Mid Value: £2,760,000
Low Value: £2,070,000

6.44 Site I in a high value scenario and with a 70/30 tenure split struggled to viably support 35% affordable housing (17 units). Increasing the proportion of shared ownership units brought the IRR above the threshold for a site of this size providing 35% (see Appendix 1 – Graph 1.I).

6.45 The mid value scenario resulted in IRRs marginally below the viability thresholds used within this study. Though not directly modeled DTZ would suggest that given the patterns in profitability experienced under different scenarios this site could sustain 25% affordable housing (12 units) for a 70/30 tenure split and 30% affordable housing (14 units) for a 60/40 and 50/50 tenure split.

6.46 Given the residential existing use and the predominance of one and two bedroom flats on the site low value areas tended not to have the capacity to accommodate any level of affordable housing tested in the study.

With Grant:

6.47 Increased funding through HC grant increased the site's ability to deliver affordable housing in all three value areas. The results for the high and mid value scenarios suggested the site had the potential to deliver 50% affordable housing (24 units). The most notable increase in the level of affordable housing that could be sustained was in low value areas where 45% (21 units) could be supported at a 70/30 tenure split and 50% for 60/40 and 50/50.

Site J – Residential Existing Use (See Appendix 1 – J)

Without Grant:

6.48 Site J is based on refurbishment of a large Victorian property (0.134 ha) converted into 3 flats. The development scenario used consists of 10x one and two bedroom flats. The existing use value was estimated as below:

High Value: £900,000
Mid Value: £750,000
Low Value: £600,000

6.49 The site in a high value scenario tended to be unable to viably support any level of affordable housing tested at the three tenure variations. The appraisal suggests this is a product of the high existing use value in a high value area and the development consisting of one and two bedroom flats. Furthermore the development is delivered at a relatively low density. This is also true of mid and low value scenarios where the same concepts apply.

With Grant:

6.50 The addition of HC grant increased the site's ability to deliver affordable housing most significantly in high value scenarios where 40% affordable housing (4 units) could be achieved at 60/40 and 50/50 tenure splits. Mid Value sites resulted in IRRs that were marginally below the threshold for a site of this size suggesting a level of 30% (3 units) could be appropriate here. The additional revenue received still failed to increase IRR to above the threshold in the low value scenario.

Site K – Residential Existing Use (See Appendix 1 – K)

Without Grant:

6.51 Site K is based on the demolition of 3 existing semi-detached properties and the new build of 18x two bedroom flats. On this basis we have estimated the following existing use values:

High Value: £1,241,589
Mid Value: £1,034,589
Low Value: £827,590

6.52 Given high values this site has the potential to viably sustain 40% affordable housing (7 units) at a 70/30 and 60/40 tenure split. Increasing the shared ownership proportion within the tenure split to 50/50 improves profitability allowing for 50% affordable housing (9 units) provision without grant.

6.53 The results suggest that this site in a mid value scenario has the potential to support a maximum level of 35% affordable housing across all three tenure splits.

6.54 The low value scenario results in low IRRs at the levels tested and 70/30 and 60/40 tenure splits. A 6% IRR resulted from the scheme tested at 35% with a 50/50 tenure split. On this basis the site may support a level of affordable housing in the region of 25%.

With Grant:

6.55 As anticipated the addition of HC grant increases the site's ability to deliver a greater proportion of affordable housing (see Appendix 1 – Graph 1.K). The effect of HC grant is especially significant in this case given the total number of units on the site. In high and mid value areas this level was increased to 50% at all tenure splits. The low value scenario was viable up to 45% at a 70/30 tenure split and 50% for a 60/40 and 50/50 tenure split.

Site L – Residential Existing Use (See Appendix 1 – L)

Without Grant:

6.56 This site was based on the demolition of 2 detached dwellings and replacement to include 16x one and two bed flats. On the basis of the two detached dwellings the existing use was estimated as below:

High Value: £1,495,000
Mid Value: £1,150,000
Low Value: £805,000

6.57 This site in a high value area failed to deliver 35% (6 units) plus affordable housing at the three tenure splits tested. The resulting IRRs were too low to make any kind of estimation as to the likely level of affordable housing that could be supported on a site of this nature. The same pattern emerged for the mid and low value scenarios tested. The appraisal suggests this results from the high existing use value of the detached properties.

With Grant:

6.58 When tested under the assumption that the site receives HC grant the site could sustain a greater proportion of affordable housing especially in low value areas where 40% (6 units) could be sustained across the three tenure splits (see Appendix 1 - graph 1.L). This pattern resulted from the lower price paid for land in low value areas and the standard grant assumption made across the three value scenarios. In high and mid value areas the resulting IRRs fell a few IRR percentage points below the threshold. Therefore it could be estimated that levels of between 30% - 35% could be appropriate here.

Site M – Residential Existing Use (See Appendix 1 – M)

Without Grant:

6.59 Site M was based on the demolition of 4 large detached houses and the erection of 19x three and four bedroom houses (48 dph). With a site area of 0.12ha the existing use value was estimated as follows:

High Value: £3,450,000
Mid Value: £2,760,000
Low Value: £2,070,000

6.60 This site in a high and mid value scenario was unable to deliver any of the levels of affordable housing at the three tenure splits tested. In the low value scenario we estimate that at 60/40 and 50/50 a quota of 30% could be supported (see Appendix 1 – Graph 1.M). This sites inability to deliver affordable housing viably is ultimately due to a combination of the sites high existing use value and the low density (48 dph) at which the new scheme is developed. Results for other sites in this study would suggest that an optimum density could be in the region of 80 dph and above.

With Grant:

6.61 The addition of HC grant to the high value scenario failed to increase the profitability significantly to deliver a viable scheme under any tenure split. This site in a mid value area could potentially deliver 30% affordable housing (6 units) based on the IRR resulting from the tested 35% condition. Low value sites seemed to benefit most from the extra revenue viably delivering 35% at 70/30 and 40% at 60/40 and 50/50 due to a combination of low site value and standard grant assumption.

Site N – Residential Existing Use (See Appendix 1 – N)

Without Grant:

6.62 This site was based on the demolition of 2 existing large dwellings and the erection of 14x one and two bedroom flats and four bedroom houses. With a site area of 0.321 ha the existing use value for this site was estimated as follows:

High Value: £1,750,000
Mid Value: £1,380,000
Low Value: £1,035,000

6.63 Without HC grant and in high, mid and low value scenario this site struggled to deliver any level of affordable housing that was tested. This was also the case when varying the tenure split to include a higher proportion of shared ownership units.

With Grant:

6.64 With HC grant the IRRs resulting from low value scenarios were marginally under the threshold for 35% affordable housing (5 units) so it could be reasonable to assume that 25% (4 units) could be supported in this instance.

6.65 DTZ suggest that the reason there is such low capacity for affordable housing is owed to the lower density at which development takes place on this scheme. A further explanation may be the existence of four bedroom houses on the development and the effect on revenue of one or more of these properties being designated for affordable housing.

Site O – Residential Existing Use (See Appendix 1 – O)

Without Grant:

6.66 Site O is based on the demolition of 2 detached dwellings and new build of 14x one and two bedroom flats. The site area is 0.131ha and the existing use value has been estimated as follows:

High Value: £1,495,000
Mid Value: £1,150,000
Low Value: £805,000

6.67 Given the price of the site in comparison to the units provided this site performed poorly, in terms of capacity for affordable housing, across all three value bands and tenure splits. The IRRs that resulted were not at a significant level to enable DTZ to make any kind of judgment as to the level of affordable housing that was most appropriate.

With Grant:

6.68 Only with the addition of HC grant did the IRR achieved from the low value scenario come close to the threshold (see Appendix 1 – Graph 1.0). It can thus be estimated that a quota of 25% (4 units) could be supported on the site,though this level has not been tested directly.

Small Sites (Under 10 units)

6.69 It should also be noted at this stage that on sites of 5 units and under there is an issue with dividing units between tenures on a unit basis. Due to rounding this can result in unrealistic splits. For example, where 5 units are provided and units are rounded to the nearest whole, the same number of dwellings (i.e.2) will be required as affordable under 35%, 40%, 45% and 50%.

Site P – Residential Existing Use (See Appendix 2 – P)

6.70 Small Site P was formerly a detached dwelling that has been demolished and redeveloped into 5x one-bed flats. The site area is 0.013ha and the estimated existing use values are as follows:

High Value: £650,000
Mid Value: £500,000
Low Value: £350,000

6.71 Across all tested value scenarios and tenure splits the site was incapable of delivering affordable housing whilst remaining viable (see Appendix 2 – Graph 2.P). DTZ suggest possible reasons for this is twofold. The purchase of the existing dwelling here has been assumed at average open market value for a detached dwelling as reported by the Land Registry. In reality this figure may be slightly conservative as this assumes the property is in good condition and the development form chosen might not have represented the most valuable use for the site, which appears to be the existing use. The provision of social rented and shared ownership tenures will decrease the revenue significantly. The high existing use value results in an unviable scheme even when developed with no affordable housing. The addition of HC grant in this instance is not sufficient to increase the revenue to a level where the site becomes viable for the developer. Furthermore it is the case with this site that even a scheme that includes no affordable housing still results in costs being greater than revenue. This is a good example of the volatile nature of development on small sites and in this case the lack of profitability can be attributed to the high price of acquiring the land combined with the relatively low revenue received from providing solely one-bedroom flats.

6.72 The application of a tariff in lieu of on-site provision as with the above failed to deliver a viable site at any of the levels tested and within any of the value scenarios.

Site Q – Garden Land Existing Use (See Appendix 2 – Q)

6.73 Small Site Q is based on a development on garden land at the rear of a 2 storey Victorian house. The existing use value was estimated £263,250 based on the value of garden land plus a degree of hope value.

6.74 As with Site P the same numbers of affordable units are provided under all the levels of provision and tenure splits. Therefore the results are solely dependent on the capital values that can be achieved. High value sites tended to be viable providing up to 50% (2 units) affordable housing under all tenure conditions both with and without grant (see Appendix 2 – Graph 2.Q).

6.75 The site in the mid value scenario delivered 50% whilst remaining relatively profitable both with and without grant.

6.76 In contrast the site in a low value scenario resulted in negative IRRs and failed to deliver any of the affordable housing levels tested. In purely economic terms this resulted from the cost of development exceeding the total revenue received by the developer.

6.77 Site Q's capacity for delivering affordable housing is in contrast to the results for site P where the same number of units are provided on a similar sized site. The main difference in development economics here is the land price. Site P assumes the property is acquired at full market value and then demolished whereas site Q land price is reflective of garden land and does not involve the additional costs associated with demolition. Furthermore, the total revenue generated from development on Site P includes 5x one-bedroom flats whereas Site Q delivers 5x two bedroom flats. In reality in Site P's case a developer would probably look to build to a higher density and develop more than 5 units on this plot or alternative look to buy a property in disrepair and thus not pay full market value.

6.78 In high and mid value areas Site Q delivered 50% without grant therefore the addition of subsidy increased profitability for the developer to achieve IRRs of 45% for high value and 26% for mid value. In low value areas HC grant brought the IRR closer to threshold achieving an IRR of 9%, it can therefore be estimated that this site could deliver in the region of 25% affordable housing (1 unit).

6.79 The results suggest that applying a tariff per private unit provided in lieu of on-site provision was viable up to £55,000 per unit in high and mid value scenarios. The low value scenario failed to support a contribution of £25,000 per unit (IRR 8%) but could support £20,000 per unit (IRR 10%).

6.80 A tariff levied per habitable room was viable when the tariff was set at up to £20,000 (£300,000 total contribution) in high value areas, £17,500 (£262,500 total contribution) in mid value areas and £5,000 (£75,000 total contribution) per hab room in low value areas.

6.81 Applying a tariff on a sq ft basis based on the schemes GIA tended to result in high value areas supporting a tariff of up to £80 psf (£312,000 total contribution) in high value areas, £70,000 psf (£273,000 total contribution) in mid value areas and £20 psf (total contribution £78,000) in low value scenarios.

Site R - Residential Existing Use (See Appendix 2 – R)

6.82 Small Site R is based on the demolition of an existing large detached dwelling and construction of 9x two bedroom flats. The plot area is 0.117 and the existing use value has been estimated as follows:

High Value: £750,000
Mid Value: £600,000
Low Value: £450,000

6.83 In a high value scenario this site tended to be unable to viably deliver any level of affordable housing tested under the tenure mixes. However the resulting IRR (8%) suggests the site could potentially support 30% under these circumstances. Mid value sites resulted in a similar pattern (see Appendix 2 – Graph 2.R).

6.84 HC grant increased the level of affordable housing that could be viably provided to 50% on high value sites and 35% - 50% on mid value sites dependant on tenure split. On low value sites HC grant had a significant effect in enabling the site to support 35% (3 units) at 70/30 and 50% (4 units) at 60/40 and 50/50.

6.85 Testing a tariff in lieu of on-site provision on a per unit basis suggested the site could support a tariff of up to £55,000 per unit (£495,000 total contribution) in a high value area and £35,000 per unit (£315,000 total contribution) in mid value. Low value areas failed to support any of the tariff levels tested whilst remaining viable. Testing low value sites independently suggested that low value sites tended to support a tariff of around £5,000 (£45,000 total contribution).

6.86 Applying this tariff on a per habitable room basis increased the maximum contribution that could be obligated from high value sites, based on a charge of £20,000 per hab room (£540,000 total contribution). Mid value sites showed the tendency to support up to £12,500 per hab room (£337,500 total contribution) with low value sites failing to be viable under any of the levels of tariff initially tested. The low value scenario was tested individually and tended to achieve an IRR above the threshold with a tariff of £1,000 per hab room (£27,000 total contribution).

6.87 Similar patterns emerged from testing a tariff based on area (GIA). The site in a high value area showed the potential to support a tariff of £80 per sq ft (£561,600 total contribution) and mid value areas proved able to support £40 per sq ft (£280,800 total contribution). As with a per unit and per habitable room contribution the low value scenario proved unable to support the minimum tariff tested (£20 per sq ft). The site proved viable when tested individually at a maximum of £5 per sq ft (£35,100 total contribution).

Site S – Industrial Existing Use (See Appendix 2 –S)

6.88 Site S is based on a former light industrial depot occupying a 0.2ha site. The proposed development includes 9x one and two bedroom flats. The existing use value has been estimated at £691,908.

6.89 This site in a high value scenario tended to show potential to deliver 50% affordable housing (4 units) across all tenure splits. The mid value scenario proved able to support between 35%

(3 units) and 50% dependent on tenure split (see Appendix 2 - Graph 2.S). In this case the low value site also proved viable under the obligation of 35% affordable housing.

6.90 The additional revenue received on the receipt of HC grant increased the levels viable to 50% at all tenure splits in high, mid and low value scenarios.

6.91 This site also proved capable of supporting a tariff in all the forms tested and nearly all value scenarios. The site in a high and mid value scenario supported a tariff per unit up to £55,000 (£495,000 total contribution). Low value scenarios on the other hand achieved an IRR (9%) just below the threshold (10%) for a contribution of £55,000 per unit but proved able to support £50,000 per unit (£450,000 total contribution).

6.92 A contribution on a per habitable room basis was viable up to £20,000 (£400,000 total contribution) in high and mid value areas. Low value areas tended to support a lesser figure of £15,000 (£300,000 total contribution) per hab room.

6.93 A similar pattern emerged from levying a contribution on a per square foot basis. High and mid value scenarios supported up to £80 per sq ft (£640,224 total contribution) whilst low value scenarios tended to support £50,000 (£400,140 total contribution).

7. Conclusions

7.1 The London Borough of Sutton commissioned DTZ to prepare a study of the viability of different forms/mixes of affordable housing in the Borough. The work will be used to help inform emerging Local Development Framework Policies.

7.2 The Annual Monitoring Report 2006-2007 states that in the last 3 years LB Sutton has delivered 28% affordable housing in residential completions, which falls short of the London Plan's 50% target and the then Borough wide policy of 40%.

7.3 As the level of affordable housing delivered needs to increase substantially and preferably catch up, the effectiveness of policy levels of 35%, 40%, 45% and 50% affordable housing in the units produced was tested in agreement with the Local Authority.

7.4 The results in Appendix 1 and 2 suggest that increasing the level of affordable housing provided on the notional sites tested had a negative effect on development profitability thereby decreasing the scheme's viability. Increasing the proportion of affordable housing by 5% (i.e. from 35% to 40% to 45% to 50%) tended to reduce a scheme's IRR by 3% – 10% points.

7.5 Overall the results suggest that a starting point for negotiations should be a Borough-wide quota of 40% affordable housing without grant subsidy and 50% with subsidy on sites of 10 units or more. Table 1.7 overleaf shows the averages of the maximum levels of affordable housing that could be supported on sites with differing existing use in different value areas.

Table 1.7 Average Viable Quotas of Affordable Housing

Existing Use	**Value Area**	**Tenure Mix: Rent/Low Cost Home Ownership No Grant**			**Tenure Mix: Rent/Low Cost Home Ownership Grant**		
		70/30	60/40	50/50	70/30	60/40	50/50
Industrial	High	50	50	50	50	50	50
	Mid	45	45	50	50	50	50
	Low	30	30	40	50	50	50
Office	High	40	45	45	50	50	50
	Mid	30	30	35	40	45	50
	Low	<25	<25	<25	25	25	25
Community	High	50	50	50	50	50	50
	Mid	50	50	50	50	50	50
	Low	35	35	35	50	50	50
Retail	High	35	40	40	50	50	50
	Mid	<25	<25	25	50	50	50
	Low	<25	<25	25	<25	<25	25
Public House	High	50	50	50	50	50	50
	Mid	50	50	50	50	50	50
	Low	50	50	50	50	50	50
Residential	High	30	30	30	35	35	40
	Mid	<25	<25	<25	40	40	40
	Low	<25	<25	<25	30	35	35
Overall	High	40	45	45	50	50	50
	Mid	35	40	40	50	50	50
	Low	30	35	35	40	40	40

7.6 This section of the Report looks at some broad conclusions focusing on the main themes of the study detailed throughout Section 5.

Existing Use

7.7 Site values used for the study were existing use value plus where applicable a 15% uplift for site assembly. As discussed in Section 4 sites were grouped according to their existing use to examine the impact this had on a site's ability to deliver affordable housing.

7.8 Given the nature of the study and the theoretical approach used to value the sites, it is hard to be conclusive as to which existing uses can deliver the highest quota of affordable housing. What is clear is that, based on existing use value, industrial land has the lowest value and residential the highest and this has a significant effect on the affordable housing that can be delivered.

7.9 On this basis former industrial sites tend to sustain the highest level of affordable housing, generally supporting 50% both with or without grant in high value areas; in mid value locations 40% to 50% without grant or 50% with grant and in low value areas 30% to 40% without grant or 50% with grant depending on tenure mix (see Appendix 1 – A & 1 – E & graphs 1.A & 1.E). Community use, Site B, yielded the same pattern as industrial sites, due to low existing use

value compared with high residential development value. This pattern may be unrealistic given the high abnormal costs associated with transforming industrial land into residential development. However as it is not possible to quantify abnormal costs by their very nature (see Section 5), this aspect was not incorporated into the financial model.

7.10 Former office sites (Sites C, D and F) struggled to achieve the required level of profitability at the affordable housing levels tested in mid to low value areas. The results indicate that without subsidy there is potential to deliver between 30% and 35% in middle value areas, depending on tenure mix. High value areas were potentially able to deliver between 40% and 50% affordable housing depending on the tenure split and availability of subsidy.

7.11 Sites that were formerly retail premises (Site G) tended to deliver affordable housing at the levels tested only in high value areas where no subsidy was available. Mid and low value areas on the other hand showed a potential to deliver less than 25%. The addition of subsidy delivered 50% affordable housing in high and mid value areas but was not effective in providing a higher level in low value scenarios.

7.12 The results suggest that existing use is a significant factor in defining a site's ability to support affordable housing. Site H is a good example of the effect that site value can have on viability. Based on a former public house and valued by capitalising estimated rent, this site could support 50% affordable housing both with or without grant at all the variations in tenure mix tested. Furthermore it suggests that this site, acquired at this price, has the potential to deliver 100% affordable housing. In contrast Site J, formerly a Victorian property converted into three residential flats, struggles to deliver any level of affordable housing.

7.13 In practice how significant the land price is in defining a site's ability to support affordable housing will depend on a number of other factors including the outturn values of the proposed units, the design and density of the development and the cost of any additional planning obligations that may apply.

Value

7.14 The results illustrate the importance of site value in its ability to deliver affordable housing (see Appendix 5 for Value Areas Map). In general, high value areas are likely to deliver a greater amount of affordable housing than middle and low value areas. The provision of affordable housing became more challenging as land and sales values reduced.

7.15 On non-residential sites (without subsidy) in high value areas (Sites A, B, C, D, E, F, G and H) significantly more affordable housing (a 10% margin) could be delivered than on non-residential sites in middle and low value areas (see Table 1.7 for Average Viable Amounts of Affordable Housing delivered).

7.16 On residential sites (without subsidy) in high value areas, the results show that, on average, approximately 5% more affordable housing could be delivered than on residential sites in middle and low value areas (see Table 1.7). However there are a number of residential sites (Sites L, M, N and O) where low value areas were able to deliver more affordable housing than middle and high value areas. This is due to the disproportional relationship between outturn values and land price which is best illustrated using an example. On Site L the reduction in land price from middle value (£1,150,000) to low value (£805,000) represented

30%. The reduction in outturn values (without subsidy for the affordable housing) from middle value sites to low value sites was on average 9% across all dwelling types. Thus the reduction in developer's costs (land price) is disproportional to the reduction in revenue (outturn value of completed units). This relationship is beneficial to the developer's return and increases the ability of the site to deliver affordable housing.

7.17 In terms of policy, flexibility may be the best approach. It is difficult to draft guidance based on value, as residential market conditions are in flux. If any kind of formal differentiation is to be made within the planning framework, it will need to be subject to regular updating and review. In reality additional complications arise, as development value is dependent on several factors including design and specification and most importantly location.

Grant Subsidy

7.18 The grant level tested was £60,000 per unit for social rented dwellings and £30,000 per unit for shared ownership. The results suggest that the addition of Housing Corporation grant significantly increases a site's capability to deliver affordable housing. Typically the receipt of grant increases the level of affordable housing that could be provided by 10-15% points.

7.19 High value locations tended to perform particularly well with the addition of grant (see Sites A, B, C, D, E, F, G, H, I, K, Q, R and S) delivering the maximum level of affordable housing at 50%. Under certain specific site scenarios mid and low value scenarios also delivered well above current policy whilst remaining viable (see graphs 1.A, 1.B, 1.E, 1.H, 1.K, 2.R and 2.S).

7.20 Grant was especially effective in enabling low value sites to support a level of affordable housing above 25% (see Appendix 1 – Graphs 1.C, 1.D, 1.I, 1.K, 1.L, 1.N, 1.0, Appendix 2 – 2.Q and 2.R). This would appear particularly significant for non-residential existing uses where the land value is constant across the three value bands.

7.21 Based on the findings for sites in receipt of grant it may be reasonable to require 50% affordable housing as a target. Though, as with value, if this is to be pursued it needs to be flexible and should take full account of a site-specific viability assessment to ascertain the most appropriate level of affordable housing. This will be increasingly important if the Housing Corporation continues to maintain grant rates at levels similar to 2006. As the results show, some sites will be unable to deliver this quota with subsidy due to site specific details and an open book viability assessment will remain the most appropriate negotiation tool.

Tenure Split

7.22 This assessment suggests that, in general, adjusting the tenure mix from a split of 70%/30% social rented/shared ownership to a 50%/50% tenure split delivered the highest level of affordable housing (see Appendix 1 – Sites C and K).

7.23 However, the results on tenure split do not allow any firm conclusions to be drawn. On a number of sites, both with and without grant, adjusting the tenure mix in favour of a larger proportion of shared ownership led to an increase in development profitability that delivered a higher level of affordable housing. This was the case on Site A (Low value - No grant); Site C (High and Mid Value - No grant and Mid Value - With grant); Site D (High and Mid Value - No grant); Site E (Low value - No grant); Site F (High value – No grant, Mid value - With grant);

Site I (High and Mid Value - No grant); Site J (High and Mid Value - With grant); Site L (High and Mid Value - With grant) and Site O (Low Value - With grant).

7.24 On the other hand, in a large number of cases an increase in the proportion of shared ownership did not improve the viability of the site to the extent that more affordable housing could be provided. This is a result of the actual revenue difference between social rented and shared ownership properties when compared to the revenue generated from the development as a whole. For example, in middle value sites without grant, the revenue received by the developer from a one bed social rented unit is £75,000 compared with £135,000 shared ownership. Thus a shared ownership unit produces £60,000 additional revenue, which is not a sufficient amount in some cases to significantly improve a site's profitability to enable a greater amount of affordable housing to be provided. Also in smaller sites the actual shift in tenure may only involve a small number of units. This trend is especially evident if subsidy is included because the difference in revenue between the tenures is effectively halved due to social rented units receiving £60,000 grant and shared ownership units only £30,000.

7.25 The findings suggest that affordable housing policy should focus on addressing housing need rather than which tenure split delivers the most units. This is because shared ownership is targeted as starter homes for first time buyers whereas social rent has a bias for larger family units, which are less commonly delivered.

Securing Affordable Housing on Small Sites (<10 units)

7.26 This study also identifies small sites (those under 10 dwellings) as having specific characteristics in terms of the delivery of affordable housing. The results suggest that sustaining affordable housing on the sites tested in all the value bands is problematic. Without subsidy, high value areas supported the delivery of 50% affordable housing on some sites (Sites Q and S) and 30% or less on others (Sites P and R). Mid value areas tended to result in the same outcome whilst low value areas struggled to deliver any of the quotas tested except on Site S. The addition of subsidy tended to support a higher level of affordable housing.

7.27 It is clear from the results that the price paid for the land is a significant factor in defining the viability of providing affordable housing on small sites. If a high price is paid for the land and the developer does not intensify the density, the site's profitability may not be able support any level of affordable housing (see Site P). Furthermore, sites similar in character to Site P may struggle to come forwards, even without affordable housing, given the high cost of land and construction.

7.28 This is in contrast to site R of similar size (0.117 ha), where the developer pays £100,000 more for the site but builds 9 x two bed flats instead of 5 x one bed flats as is the case of Site P. The level of affordable housing the site can sustain increases in high and mid value scenarios due to the increase in density and higher capital values of two bedroom units.

7.29 The results that emerge from the four tested sites (See graphs 2.P – 2.S) highlight the difficulty of providing affordable housing on some small sites.

7.30 A policy using unit numbers produced as the basis for apportioning affordable housing on small sites may not be the best approach. The reason for this is not due to the different viability thresholds for small and large sites but rather due to the difficulty in imposing a

mathematical basis for apportioning tenures on small sites (See table 1.4). Using a financial appraisal measure of an investment's success indicates there is no significant difference in the viability of providing affordable housing on smaller sites compared to larger sites. However problems arise from the need to round to the nearest unit and the differences in the type of unit provided in certain locations based on the assumptions. For example some small sites in suburban locations may provide 5 x four bedroom houses whereas a site of the same number of units in a town centre location may provide 5 x one-bedroom flats. This will clearly have an effect on the profitability of a site and the level of affordable housing that can be provided.

7.31 A more effective approach may be to obligate provision on small sites in terms of habitable rooms or floor space. This would help counter the current trend towards the provision of smaller units where, possibly, larger units are more appropriate, i.e. in suburban locations.

7.32 There is also evidence that affordable housing in close proximity to private housing can devalue the selling price of private units. The exact depression in values is difficult to quantify and has not been included in this study but this may be a significant factor in amplifying the difficulties in providing affordable housing on smaller sites.

Securing a contribution from all development through a tariff-based contribution

7.33 Whilst PPS3 encourages the provision of on-site affordable housing to create mixed communities, there will be instances when an off-site contribution may be more effective at providing affordable housing. This is specifically relevant if LB Sutton plans to lower the affordable housing threshold to any development over 2 units.

7.34 Proposed tariff levels were tested as detailed in section 5 of this report. It was agreed that the tariff level should capture the additional revenue generated by a site with no affordable housing and one that delivers policy compliant affordable housing (assumed to be 50% with subsidy). An average difference in revenue was calculated across the tested sites and broken down per unit, per habitable room and on a per square metre basis. In essence this figure represents open market value less the value of the affordable housing.

7.35 The results presented in Appendix 2 suggest the tariffs detailed in Table 1.8 overleaf are the maximum that could be supported, based on the assumptions used in these studies, on sites between 2 and 9 units:

7.36 Table 1.8 Viable Tariff Levels

Per Unit	
High Value	£55,000
Mid Value	£35,000
Low Value	£5,000

Per Habitable Room	
High Value	£20,000
Mid Value	£10,000
Low Value	£2,000

Per Square Metre	
High Value	£861
Mid Value	£431
Low Value	£108

7.37 Site P aside (see graph 2.P), the findings suggest that a tariff-based contribution could be a useful way to achieve a contribution from sites delivering fewer than 10 units and its implementation may halt the pattern of schemes that cluster below the affordable housing threshold. The analysis suggests that if LB Sutton is looking to achieve the maximum contribution, a per square metre levy would yield the highest overall payment. This is due to the precision of levying a tariff on a proportion of total floor area and as such there is no loss of contribution due to rounding as discussed earlier in the small site conclusions.

7.38 The financial arrangements to achieve this contribution would be the subject of detailed negotiation in each case. Whilst it is not part of the brief to suggest a possible formula as to an appropriate contribution one can draw on national best practice to suggest parameters for the contribution. Experience would imply the calculations need to be simple and transparent to ensure that it is fully evident to developers. The tariff should also reflect changes in market conditions and rely on data available in the public domain. For example Nottingham City Council's tariff is based upon a sum per dwelling that represents 25% of the average house price in the city based on Land Registry figures updated in February of each year. This illustrates a simple calculation using publicly available information that reflects changes in market conditions and allows for annual re-adjustment. This is a similar approach is also aligned with several other local authorities across the UK.

7.39 Based on the results detailed in this study, it is difficult to suggest what might be the likely success of a tariff based contribution if such a policy was to be adopted. The viability testing found that in most cases a tariff could be sustained whilst the scheme remained profitable, despite the fact that affordable housing is not currently required on sites of fewer than 10 units. It may be constructive for LB Sutton to discuss the implementation of a tariff with developers and RSLs in order to seek a pragmatic analysis of a tariff's likely impact, for example gaining an appreciation of the locational differences in land and property values, construction costs and risks.

Current Commuted Sum Calculation

7.40 In addition to a standardised tariff in lieu of on-site provision of affordable housing on small sites below the threshold, DTZ was asked to address the appropriateness of the current level of off-site contributions for exceptional cases above the current threshold.

7.41 The current off-site contribution is based on two calculations contained in Appendix 4 and 5 of the Affordable Housing SPD (2006). The first establishes the number of off-site units that are required by inputting into the formula, reproduced below, the total number of units to be provided in the planning application for the site i.e. the site's capacity and the percentage of on-site affordable housing that is required in that application.

7.42 Having calculated the number of off-site affordable units required, the financial contribution is the sum of each unit's funding gap according to the area of each unit. The funding gap of each unit is the 100% Total Cost Indicator (TCI) value of that unit less its capitalised rent, net of service charge, as illustrated in the table of contributions contained in Appendix 4 of this report (or Appendix 5 of the SPD), which of course ignores any element of subsidy because no physical units are delivered.

7.43 Formula for Calculating the Number of off-Site Units:

$$C = \{ 100 \times [A \div (100 - B)] \} - A$$

Where:
A= the capacity in units in the planning application site
B = % of affordable housing being sought in the application
C = number of off-site units to be provided

7.44 To illustrate the applicability of the current system, the case study (Table 1.9 overleaf) is performed on a site consisting of 10 x one bedroom flats policy compliant at 50% affordable housing.

Table 1.9 Commuted Sum Case Study

Type of Units	With On-Site Provision	With Off-Site Contribution
Private units	5 x one bed apartments, 47 m2	10 x one bed apartments , 47m2
Affordable units	5 x one bed apartments (on-site)	10 x one bed apartments (off-site)
Open Market Value per unit	£195,000	£195,000
TCI per unit	£116,000	£116,000
GDV Private	£975,000	£1,950,000
GDV Affordable	£580,000 (5 x £116k)	£0
GDV Total	£1,555,000	£1,950,000
Developers profit from private units at 15% margin	£146,250	£146,250 (from 5 private units @ 15%)
Developers profit / (loss) from affordable housing	£(102,500) *	£292,500 (from 5 private units that would have been affordable - assuming 30% margin to account for normal 15% plus an additional 15% reflecting lower land price for 50% affordable housing)
Developers Contribution	£0	£556,630 (£55,663 x 10 off-site units)
Total profit / (loss)	£43,750**	£(117,880)

Note:

* Developers loss on affordable housing for on-site provision is based on a 30% margin, therefore the cost of providing the affordable unit is £975,000 x 70% which equals £682,500. As the receipt is £580,000 there is a loss of £102,500.
** There may be a reduction in private sales values due to a presence of affordable units in close proximity, which has not been accounted for.

7.45 In an on-site scenario the developer provides 5 x private units and 5 x affordable units, which yields an overall profit of £43,750, which represents 3% of GDV. It assumes a 15% profit margin for the private units and 30% for the affordable units because it assumes the land price accounted for the reduction in revenue from affordable housing.

7.46 Should the affordable units be provided off-site in line with the current commuted sum calculation then the developer provides 10 units on-site as private and contributes to 10 units off-site (see calculation 7.41 above). A total off-site contribution of £556,630 is due, which set against the profit for developing 10 private units yields a loss of £(117,880). This is likely to be the pattern on all schemes since the marginal gain in revenue from an all private scheme is less than the liability of an off-site contribution or commuted sum.

7.47 On sites of low and medium value, the financial contribution for a commuted sum will deter an off-site contribution in lieu of on-site affordable housing. This will be reinforced if grant funding is a possibility because the revenue produced by the on-site affordable housing can be significantly enhanced. As such, the commuted sum arrangements promote on-site provision instead of a financial contribution.

7.48 In very high value areas the commuted sum in lieu of social housing may be a realistic option because of a greater marginal gain from an all private development coupled with considerations of design layout, marketing and rates of sale because the presence of social housing may have a negative effect on the value of the private units. In situations like this a commuted sum could deliver affordable housing in a more appropriate context at better value and in greater number. Since off-site contributions should only apply to sites above the threshold that are "exceptional cases", such as the high value sites discussed, it appears that the current calculation is an appropriate means to base an off-site contribution.

7.49 The current system for levying the commuted sum is based on TCI values that represent the costs of acquisition and build including on-costs of housing in a specific location. However the TCI index has not been revised since it was last published in 2003 other than by means of an indexation to the RPI or the consumer price index, which has appreciably trailed land price and build cost inflation since that time. Therefore TCI generally understates the cost of providing housing in today's market. If as this study has shown the 'funding gap' is onerous based on TCI, supplanting it with a higher value will increase the off-site funding gap and make it more onerous.

7.50 Given the severe deflationary conditions impacting on the property market at the present time, the gap between TCI and current costs are expected to reduce considerably. Nevertheless retaining TCI as a basis in which to index current market costs is quite possible as long as the a methodology or source for the rate of indexation is acceptable.

Three Dragons Testing

7.51 As discussed in Section 3 of this report, the GLA "Three Dragons" Toolkit allows local authorities in London to assess the development viability of a scheme in relation to the level of affordable housing proposed. On this basis, it is possible to verify the results presented in Sections 6 and 7 of this report.

7.52 It is important to be clear about the difference in approaches between this study and the Toolkit. The property valuation is arrived at by means of two completely different approaches, one based on a discounted cash flow and the other via a residual valuation. This study adopts the discounted cash flow approach which calculates the value of expected future cash flows as the properties Net Present Value (NPV). The IRR is then equated as the discount rate that produces an NPV of equal to zero.

7.53 The GLA toolkit calculates residual land value (discussed in section 1 of this report) which is the gross development value less all costs including developers profit and this is compared with the existing use value of the site to see the extent of whether it is greater or less.

7.54 In order to carry out this assessment a mid value, 40% affordable housing quota, 70/30 tenure split without grant subsidy has been selected. A summary of the results from the two approaches can be seen in Table 1.10 overleaf and in Appendix 7, which shows the scheme results page for each site.

Table 1.10 Comparison of DCF and Residual Appraisal Approaches

Site	Units	Discounted Cash Flow Approach (DTZ Model)		Residual Land Value (Three Dragons Model)				Agree?
		IRR (%)	Max. Affordable Quota Whilst Viable (%)	Residual Value	Existing Use Value (EUV)	Residual Against EUV	Max Affordable Quota Whilst Viable (%)	
A	39	15	40	£1,715,000	£1,626,000	£89,000	40	✓
B	175	20	50	£7,568,000	£4,843,000	£2,725,000	50	✓
C	96	3	25	£3,977,000	£5,167,000	-£1,190,000	25	✓
D	174	7	30	£7,301,000	£8,201,000	-£900,000	35	✓
E	51	32	50	£2,162,000	£1,384,000	£778,000	50	✓
F	11	1	<25	£470,000	£671,000	-£201,000	20	✓
G	19	-4	<25	£801,000	£1,206,000	-£405,000	20	✓
H	18	48	50	£753,000	£280,000	£473,000	50	✓
I	47	2	<25	£952,000	£2,760,000	-£1,808,000	15	✓
J	10	-9	<25	£431,000	£750,000	-£319,000	13	✓
K	18	5	35	£741,000	£1,035,000	-£294,000	25	✓
L	16	-2	<25	£723,000	£1,150,000	-£427,000	20	✓
M	19	-4	<25	£1,485,000	£2,760,000	-£1,275,000	10	✓
N	14	-9	<25	£754,000	£1,380,000	-£626,000	10	✓
O	14	-12	<25	£632,000	£1,150,000	-£518,000	10	✓
P	5	-22	<25	£186,000	£500,000	-£314,000	0	✓
Q	5	12	50	£260,000	£263,000	-£3,000	40	✓
R	9	-6	25	£411,000	£600,000	-£189,000	20	✓
S	9	7	35	£574,000	£692,000	-£118,000	35	✓

7.55 The above table illustrates that when appraising all the selected sites the two approaches are generally in agreement in terms of their financially viability when based on the same broad assumptions used in the study.

7.56 The residual land approach of the Toolkit, where the quota of affordable housing yields a residual land value greater than the existing use value, generally accords with the results of the study. The Toolkit reports a slightly lower viable quota in some instances which is likely to be the result of the divergence of the two approaches to appraising the sites.