Central Hampshire Sub-Region Housing Viability Study

Basingstoke and Deane Borough Council
East Hampshire District Council
Winchester City Council

Version 9.0

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Contents

	Executive Summary	
1.	About This Study	1
2.	Policy Context	4
3.	Study Approach and Assumptions	12
4.	Results of Viability Model on Mainstream Sites	23
5.	The Viability of Small Sites	33
6.	Policy Implications	38

Appendices

APPENDIX 1	-	The Impact of Value Areas on Viability
APPENDIX 2	-	The Impact of Grant on Viability
APPENDIX 3	-	The Impact of Density on Viability
APPENDIX 4	-	The Impact of Affordability Housing Tenure Mix on Viability
APPENDIX 5	-	The Viability of Small Sites
APPENDIX 6	-	The Impacts of Tariffs on Viability
APPENDIX 7	-	The Internal Rate of Return; Explanatory Notes
APPENDIX 8	-	Unit Mix Assumptions
APPENDIX 9	-	Central Hampshire House Price Areas
APPENDIX 10	-	Development Appraisal Toolkits

Executive Summary

1 This study, prepared by DTZ during the course of 2007, has been undertaken to inform the development of affordable housing policies Basingstoke & Deane Borough Council, East Hampshire District Council and Winchester City Council. It examines the impact of affordable housing policies on the viability of housing development.

2 The report assesses the viability of sites of different sizes and locations, and in areas with different prevailing values of land and new homes, under a number of different scenarios based on different required levels of affordable housing (30%, 40% and 50%) and different levels of grant aid for affordable housing grant, including nil grant.

3 The approach used has been to identify a suite of archetypal sites – hypothetical sites that are typical of the size and location (urban, suburban and rural) of sites coming forward in the study area. The modelling takes account of the divergence in land values and new homes values across the study area by examining viability in high value, medium value and lower value zones. Viability is assessed in terms of the return made by the developer.

4 The study has also examined the impact that density has on the viability of development. Likewise the impact on viability of changing the balance of social rented housing and shared ownership within the affordable housing mix has been considered. Special attention has also been given to small sites that will deliver fewer than 10 new homes.

5 The viability testing indicates that a 40% affordable housing target should be deliverable without grant in high value areas, but that grant would probably be needed to support this level of provision in medium value areas. With the level of grant tested in this study, low value areas would still struggle to meet this target even with grant at the highest assumed level.

6 However, it may be possible for schemes in medium and lower value areas to establish a new benchmark in terms of value, that implies a higher new build premium over existing values. This is more realistic on large sites that are creating a new environment and offering a different lifestyle and housing product to that generally available in the area.

7 It is also important to note that the viability testing has been run on the basis of that developers have to pay the open market value of land with residential permission, which throughout the area exceeds £2.7 million per hectare. In practice part of the returns that many developers make are associated with the land value uplift of securing permission for development.

8 DTZ concludes that the prevailing land and new homes values in an area are the key determinant of viability with a given affordable housing requirement. However it is not practical to set affordable policies by reference to value zones, so DTZ recommend that the authorities move towards an affordable housing quota that:

- Either continues with the practice of a number of the authorities of specifying different affordable housing requirements in different settlements or geographies, since these often broadly reflect value zones
- Or adopt a single quota that is uniform across the District but acknowledges that scheme economics will vary, and that this can be taken into account in negotiations and access to grant aid.

9 Across the study area a 40% target for affordable housing, based on a presumption that grant is not available, would be consistent with the findings of this study, provided some degree of flexibility is built in, in terms of access to grant aid, or ability to reduce other commitments in lower value areas or at times when the market is depressed.

10 The study brief has also examined if affordable housing policies should be extended to sites of less than 15 units in order to generate a greater supply of affordable housing. The study concludes that small sites are no less viable than larger sites; and have similar ability to deliver affordable housing without or with grant. There is no reason therefore in terms of economic viability not to extend affordable housing policies to all residential developments.

11 If affordable housing requirements are extended to sites involving development of less than 15 units, the expectation should be that the affordable homes are provided on site. However on smaller sites (less than 10 units) the application of a fixed quota will often imply provision of a certain number of units and a fractional part of the unit.

12 Viability on small sites is very sensitive to treatment of whether the fractional unit is rounded up or down. The study concludes that provision should always be rounded down, but there is the option of seeking a financial contribution to offsite provision linked to the fact that the fractional unit is not being provided on site. This will ensure that all developers are treated equally.

13 In parallel with the assessment of the viability of small sites, an assessment has been made of whether it might be appropriate to apply a tariff to small sites that would contribute to off-site provision of affordable housing. This represents an alternative way of achieving the same objective of increasing the supply of affordable housing by bringing small sites within the scope of affordable housing policy requiring on-site provision.

14 The study has calculated the tariff that should be applied that is equivalent in terms of its impact on viability to a 40% affordable housing requirement. It is probable that some form of tariff system would need to be run in parallel with the application of affordable housing requirements to small sites, to allow for those cases where on-site provision is not realistic and also to gather contributions relating to requirements for ‘fractional’ units of affordable housing.

15 While the study indicates that the extension of affordable housing policies to small sites should in general continue to provide adequate returns to developers, there are a wide range of practical issues of implementation of such a policy that would need to be addressed to establish that it will achieves the policy objective of delivering more affordable housing. Further work is required on these issues.

16 The study also considered whether changes in density could deliver a higher level of affordable housing. In general the middle range of densities assumed – which are based on those most typical of new developments in recent times – deliver the highest returns, indicating that there is little scope for increased affordable housing provision to be made by encouraging development at different densities. Only on rural schemes would higher densities deliver higher returns and hence possibly increase the scope for affordable housing provision.

17 Increasing the proportion of shared ownership in a scheme generally improves viability but only very marginally. Changing the mix of affordable housing provision, from the assumed

level of 70% social rented housing and 30% shared ownership, to higher levels of shared ownership, would not therefore greatly increase affordable housing provision overall. The flexibility to change the mix may however be valuable in negotiating affordable housing provision in cases where development is marginal.

18 Throughout the study DTZ have had regard to the fact that not all aspects of viability can be captured in a structured modelling exercise such as that undertaken. The modelling informs rather than dictates policy development, and in the process of making assumptions, interpreting results and developing recommendations, DTZ have had regard to the need to make robust recommendations, that can be suited to changes in the market environment.

19 The majority of the analysis was undertaken during the buoyant housing market conditions of the first half of 2007. However DTZ's view is that the local authorities in establishing an appropriate target for affordable housing provision, should not be unduly swayed by the current problems of the housing market; rather they should establish a policy in terms of affordable housing quota that is robust in that it can be applied, with some flexibility, whatever the prevailing sentiment in the development market.

20 In achieving this objective the availability of grant aid should, if possible, be used flexibly to help achieve the policy objective at different stages in the market cycle. When the market is buoyant there should be less need to use grant aid on mainstream sites; when the market is depressed grant aid may need to be used to secure development even on mainstream sites. National government – through the Housing Corporation and, in future, the Homes and Communities Agency – should also adapt policy on grant levels to market conditions.

1. About This Study

1.1 DTZ was commissioned in March 2007 by Basingstoke & Deane Borough Council, East Hampshire District Council and Winchester City Council to examine the likely impact of a range of potential affordable housing policies on development viability.

1.2 The study has been undertaken alongside the Central Hampshire Strategic Housing Market Assessment (SHMA), also prepared by DTZ, commissioned by the same local authorities as have commissioned this study, plus New Forest District Council and Test Valley Borough Council.

Study Purpose and Objectives

1.3 A growing proportion of affordable housing is delivered via Section 106 Agreements. It is increasingly important therefore that local affordable housing policy is realistic and credible, taking into account the local housing market, house prices, supply, demand and need issues. Hence this viability study sits alongside and is informed by the work of the SHMA.

1.4 However, the SHMA does not consider the impact of affordable housing policies on viability. This is the purpose of this study. The viability assessment is designed to ensure that any policy proposals for affordable housing put forward by the authorities are not so onerous that they thereby prevent sites from coming forward and stifle development of, not only affordable housing, but also open market housing.

1.5 The specific objectives of the study as set out in the terms of reference are to assess the impact on economic viability of the following variations to your affordable housing policy:

1. On sites capable of achieving 15 or more units whether a minimum 40% affordable housing target be retained or could this be increased to 50% or some intermediate point? To consider the impact of achieving these targets with and without grant subsidy, at three different levels, and the impact of other S.106 obligations.

2. On sites capable of achieving 10-14 units, what would be the maximum proportion of affordable housing that could be achieved on site both with and without grant assistance/other S.106 contributions?

3. On sites capable of delivering between 1 and 9 units, whether some form of standardised charge/tariff be levied and at what level should this be set?

4. Whether the current tenure split between intermediate and social rented units of 70% to 30% is appropriate, or whether a different tenure split would assist in delivery of a greater overall proportion of affordable housing.

Study Approach

1.6 It has been important for the study to test viability of different types of sites in different locations, in order to understand how viability varies with site size, different values of the housing developed and in different locations. It has therefore been necessary to develop a typology of the different types of sites that are likely to come forward for housing provision and to test the viability of development under a set of different development scenarios.

1.7 The typology of sites to be assessed was developed in conjunction with the client local authorities to reflect the authorities' own experience of the range of type of sites and locations which they would envisage will come forward through the planning system for future provision of housing. There was also a specific desire to test viability for small sites eg small sites of less than 15 units, and this has been the subject of specific study.

1.8 The resultant typology has allowed viability to be tested on sites that differ in terms of site values, site size and whether the hypothetical development is located in a predominantly urban, suburban or rural location. This approach allows different policy options to be tested in a consistent manner across a range of likely development scenarios. This would not be possible in the same way had the study focused on actual sites where the particular features of those sites would inevitably have made it difficult to generalise about viability.

1.9 Central to the assessment of the viability of housing development is the concept of residual land value[1.] Residual land value is the value that can be attributed to the land, when the total costs of the development, including an allowance for profit, is deducted from the sales values of the housing built on the site. If the residual land value is higher than the existing use value then the development can be deemed viable; if it is below then the development will not be considered viable by the market.

1.10 The majority of developers assess the viability of a prospective development by calculating residual land value. Having calculated its residual present value, developers use discounted cash flow[2] analysis to calculate the Internal Rate of Return (IRR)[3] for the project (see also Appendix 7). IRR calculation is a technique that allows different investment options to be compared on a like for like basis. The higher a project's IRR, the more desirable it is to undertake.

1.11 For the purpose of this study DTZ have assumed, based on our experience of working with developers, that a developer will require a minimum IRR of 10% if they are to proceed with the development of a small scheme, defined as being of less than 50 units; and that the developer will require an IRR of 12.5% when developing sites of more than 50 units. The higher level required for larger sites reflects the higher risks associated with larger developments.

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 Cash Flow (DCF) valuation approach is used to value a project using the concept of the time value of money. All estimated future cash flows are discounted by a % value usually representing interest on finance to return the future cash flows 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.

Developments that would yield less than these thresholds are deemed not to be viable since they do not generate the target rate of return.

1.12 In summary, the key questions the study addresses are whether the level of affordable housing and the balance of tenure proposed is deliverable, whether a particular level of affordable housing provision will inhibit development generally, and, by implication, what level of affordable housing provision can delivered with and without subsidy. The study shows how viability is affected, when subsidy is likely to be required, and the level of subsidy that would be required to render the development viable.

Report Structure

1.13 The rest of this report is structured as follows:

- Section 2 presents information on the policy context of this study, in terms of national policy on affordable housing provision, focusing particularly on the assessment of viability; and the current affordable housing policies of the three client authorities
- Section 3 sets out in more detail the study approach and the assumptions that underpin the viability analysis
- Section 4 presents the results of the analysis of mainstream sites, that is, sites capable of delivering over 15 units
- Section 5 presents the results of the analysis of sites of less than 15 units in terms of their ability to provide affordable housing on site, or off-site through a tariff mechanism
- Section 6 draws out the implications for policy of the results and makes recommendations to the client authorities for their consideration.

2. Policy Context

2.1 This section provides context for the subsequent assessment of viability. It first examines national policy guidance on planning for affordable housing provision and the relevance of viability to policy making. The section then goes on to consider the current affordable housing policies of the three local authorities that commissioned this study. In every case the current policies are subject to review as the authorities move towards completion of the Local Development Framework process.

National Planning Policy and Affordable Housing Provision

2.2 The key statement of the Government's policies for planning and affordable housing provision is Planning Policy Statement 3: Housing, published in November 2006. Affordable housing in PPS3 is defined as follows:

'Affordable housing includes social rented and intermediate housing, provided to specified eligible households whose needs are not met by the market. Affordable housing should:

- *Meet the needs of eligible households including availability at a cost low enough for them to afford, determined with regard to local incomes and house prices.*
- *Include provision for the home to remain at an affordable price for the future eligible households or, if these restrictions are lifted, for the subsidy to be recycled for alternative affordable housing provision'.*

2.3 PPS3 makes it clear that the Government aims to ensure that the planning system ensures that enough land is identified and brought forward for development of new housing in line with targets established by government and determined through the Regional Spatial Planning process. But the Government recognises that in order to do so, land values must be high enough to encourage landowners to sell land for housing.

2.4 The Government therefore requires local authorities not to impose a burden of planning gain and affordable housing that is so great as to depress the land value below that which is sufficient to bring land forward. This is reflected in PPS3 (paragraph 29) which places a requirement on local authorities to set a target for affordable housing provision to be delivered through Section 106 policies that takes into account the need for development to be viable, once allowance is made for factors such as the availability of grant funding.

2.5 PPS3 indicates that local authority affordable housing policies need to be developed on the basis of a robust evidence base. Policy must be deliverable, not merely aspirational. However, while detailed guidance is available on the assessment of housing need and demand, there is no formal government guidance on how viability should be tested. PPS3 was prepared before the current slowdown in the housing market and the government has not advised local authorities on how they should respond to changes in market context as they develop their policies.

2.6 This report was prepared in 2007, before the current downturn in the market took hold. DTZ's view is that it is inevitable that viability studies will be undertaken at a particular point in time, and reflect a particular set of market circumstances, but the information they yield on how viability varies by site size, development context etc remains useful for policy making even in a changed market environment. Planning policies for affordable housing also need to be set for the long term, and should have sufficient flexibility to cope with short term changes in the market.

2.7 This does imply, however, that authorities need a degree of flexibility in the application of their affordable housing policies. The existing system allows for developers to make the case to authorities that a policy requirement cannot be delivered on a particular site given the particular circumstances of that site. Some inherent flexibility into how policy requirements for affordable housing can be met is built into the system by options to change the tenure mix (between social rented and intermediate housing for sale) and availability of grant.

2.8 However it is well known that developers, when acquiring sites in a competitive situation, do not always fully allow for the costs full affordable housing provision in accordance with policy. Similarly, developers will not immediately adjust their bid prices to reflect changes in affordable housing and/or planning policy. It should not be the role of planning policy to compensate developers who have overpaid for land or misjudged other aspects of development costs or revenues by simply adjusting the level of affordable housing that should be delivered on a site.

2.9 Local authorities need therefore to appreciate how development viability is assessed, and to be in a position to negotiate where necessary over affordable housing requirements, while seeking to ensure that policies can be applied to the majority of developments. The balance between being sufficiently robust and forceful to ensure that every application is not the subject of negotiation, while being sufficiently flexible to recognise special circumstances is a difficult balance to strike, but it is in the interests of both the development industry and local authorities to find the right balance.

2.10 Government could greatly help authorities by providing greater guidance on how to translate the findings of viability studies into local policy, and by ensuring flexibility in the funding of affordable housing – so that affordable housing provision is not totally dependent on provision through Section 106 agreements, and by ensuring there is flexibility in when grant for affordable housing provision will be available.

Basingstoke and Deane Borough Council

Definition of Affordable Housing

2.11 Basingstoke and Deane Borough Council's 'Affordable Housing Draft Supplementary Planning Document, May 2007' uses the following definition of affordable housing from the Local Plan: *'Affordable housing is that provided, with subsidy, both for rent and low cost market housing, for people who are unable to resolve their housing requirements in the general housing market because of the relationship between local housing costs and incomes.'*

Site-size thresholds

2.12 Policy C2 of the Local Plan requires that affordable housing be provided as part of any development of:

- 25 or more dwellings or on a site of 1 hectare or more, within Basingstoke town.
- 15 dwellings or 0.5 hectares within settlements with a population of at least 3,000 outside Basingstoke town; and
- 7 dwellings or 0.2 hectares for those settlements with fewer than 3,000 population.

2.13 Those settlements outside Basingstoke town with a population of at least 3,000 and to which the 15 dwellings or 0.5 hectare threshold apply are identified as:

- Bramley
- Kingsclere
- Oakley
- Old Basing
- Overton
- Tadley / Baughurst / Plamber Heath
- Whitchurch

2.14 Consideration as to whether a development meets the threshold for providing affordable housing is on the basis of net increase in the number of dwellings on the site.

2.15 On the basis of 'PPS3: Housing' it is proposed that the minimum site size threshold applied to sites in Basingstoke town will be reduced to 15 dwellings from 1st April 2007.

Provision

2.16 Local Plan Policy C2 confirms that the Council will negotiate the provision of an element of affordable housing on all housing sites above the identified threshold taking into account the specific circumstances of each site. Policy C2 confirms that, whilst accepting levels may vary on a site-by-site basis, the starting point for negotiation will be that 40% of the total dwellings on the site should be provided as affordable housing.

2.17 The council will take into account the range of other planning obligations and costs associated with a particular development as part of the negotiations on the proportion of affordable housing to be required. Where there are disagreements between the Council and the developer over issues of viability, the developer will be expected to provide a full financial appraisal to demonstrate their case.

2.18 If the council is satisfied that the financial appraisal confirms that the affordable housing cannot be provided in line with Policy C2, the council will agree an alteration in the tenure mix required, and if the proposal is still not considered viable, may consequently agree to a reduction in the overall affordable housing requirement.

Size and Tenure

2.19 The precise type, size and standard of affordable housing will be subject to negotiation with the developer and will be dependent on the housing need at the time of the planning application, based on a consideration of the Housing Register, Housing Needs Assessment, and Rural Housing surveys.

2.20 The starting point for negotiation is that at least 25% of each development should comprise affordable housing for rent and that at least a further 15% should comprise intermediate housing.

2.21 The Council considers that where a requirement for affordable housing is considered appropriate, it should be provided on-site as part of the development. However, there may be exceptional circumstances that would justify a financial or other contribution towards the provision of affordable housing elsewhere in the Borough.

Rural Exceptions

2.22 Policy D8 of the Local Plan states that the Council seeks to provide the means whereby housing for local people in rural locations can be provided where open market housing would not normally be allowed. In smaller rural settlements (below 3,000 population) exception sites should not exceed 0.4ha; for larger settlements (over 3,000 population) sites should not exceed 0.8ha.

East Hampshire District Council

Definition of Affordable Housing

2.23 Affordable housing is defined in the East Hampshire District Local Plan: Second Review, March 2006 as: '*Housing available over the long term to local households who are not able to meet their own housing needs through buying or renting on the open market'*

Site-Size Threshold and Provision

2.24 The policy document *'Implementation of the Policy for Affordable Housing (2006)'* states that the Council expects to achieve a 35% affordable housing quota:

i) in settlements with a population of more than 3,000 developments of 15 dwellings or more, or sites of 0.5 hectares or more;
ii) in settlements with a population of 3,000 or less, developments of 5 dwellings or more or sites of 0.15 hectare or more.

Size, Type and Standard

2.25 The affordable dwellings will be required to be provided to a type, size and standard agreed by the Council. The type and size of dwelling will be expected to reflect the identified housing need. The Council will expect all social rented homes to comply with the Housing Corporation's Scheme Development Standards.

2.26 The Council's minimum space standards for affordable housing are set out below:

Dwelling Type	1 Bed F	1 Bed H	2 Bed F	2 Bed H	3 Bed H	4 Bed H
Min size	45sq.m	51sq.m	65sq.m	76sq.m	86sq.m	101sq.m

Tenure

2.27 The Council's preferred tenure is affordable homes for social rent. On larger sites the council will seek a range of tenures, including both social rent and intermediate housing. The mix will be determined on a site by site basis, depending on local demand, but housing for rent will continue to be the predominant tenure required to help those in greatest housing need.

2.28 The Council will encourage the development and management of affordable housing schemes by or in partnership with Housing Associations, as this ensures that dwellings are available to local people and funding can be sought to ensure that the housing meets local need.

Developer Contributions

A *'Guide to Developers' Contributions and other Planning Requirements'* has been produced by the Council setting out the Council's adopted policies for developer contributions to infrastructure, open space and community and amenity facilities. The development must comply with the open space standards set out in the Policy R3 of the adopted Second Review of the Local Plan.

Winchester City Council

Definition of Affordable Housing

2.29 The Winchester District Local Plan Review 2006 defines affordable housing as '*housing provided, with subsidy, for people who are unable to resolve their housing requirements in the local housing market because of the relationship between housing costs and incomes' (Para 6.44).*

Provision and Site-Size Threshold

2.30 Policy H.5 of the District Local Plan Review states that WCC will permit housing development on suitable sites subject to the following affordable housing provision:

i) Where 15 or more dwellings are proposed, or the site is 0.5 hectares or more
- 40% provision within the defined built-up area of Winchester
- 30% provision within the defined built-up areas of the other larger settlements.

ii) 40% provision within the Major Development Area at Waterlooville and the Strategic Reserve Major Development Areas at Waterlooville and Winchester City (North), if confirmed.

iii) 30% provision within the defined built-up areas of the smaller settlements and elsewhere in the District, where the site can accommodate 5 or more dwellings, or exceeds 0.17 hectares

iv) 35% of the housing within the Local Reserve housing sites (should the need for the release of any of these sites be confirmed) at:

- Pitt Manor, Winchester
- Worthy Road/Francis Gardens, Winchester
- Little Frenchies Field, Denmead;
- Spring Gardens, Alresford.

2.31 Policy H.5 goes on to indicate that the number, type and tenure of the affordable dwellings will be negotiated for each development, taking into account the need for affordable housing, market and site conditions, and other relevant factors.

2.32 The Winchester District Affordable Housing Supplementary Planning Document (adopted February 2008) amplifies how Local Plan Policy H.5 will be operated, by providing guidance on the affordable housing development process and the design of affordable homes through 13 SPD policies. The vast majority of households on the housing registers need, and can only realistically afford, social rented housing. The priority is, therefore, the provision of social rented housing. The SPD defines the Council's priorities as:

- Priority 1: To meet Council objectives by providing additional social rented housing
- Priority 2: To meet Council objectives by promoting high quality affordable housing that contributes towards sustainability, provides a suitable range of housing types and sizes, and helps create mixed and balanced communities.

2.33 Provision should, preferably, be by a partner RSL although an alternative provider may be agreed with the Council. Affordable housing land should be made available clean and serviced, and at nil cost. Reasonable build costs can be required.

Size and Type

2.34 Policy 1 of the District Affordable Housing Supplementary Planning Document indicates that a variety of affordable dwelling types and sizes should be provided to meet the wide range of identified housing needs.

2.35 The mix of housing required on individual sites will be determined by the City Council taking account of local housing needs and the character of the remainder of the development and neighbourhood. The affordable housing element will be of a similar size (in terms of bedrooms) and character to the market dwellings on the development site, unless identified housing needs indicate an alternative dwelling type is required.

2.36 Most developments will be expected to provide a range of housing sizes and/or types, including a significant proportion of family homes. As a general rule, smaller homes will be acceptable in city centre locations, whereas in suburban areas a greater emphasis will be put on providing houses. Local Planning Policy H.7 requires that at least 50% of the total number of dwellings (market and affordable) will be either 1 or 2 bed.

Tenure

2.37 Policy 2 of the District Affordable Housing Supplementary Planning Document indicates that priority is given to the provision of affordable housing for social rent. Where five or less affordable dwellings are to be provided all should be for social rent. Any additional dwellings should be split evenly between social rented and intermediate tenures.

2.38 Where more than five dwellings are proposed then, unless there are local reasons to suggest otherwise, such as housing need or neighbourhood tenure mix, the split between any affordable dwellings should be 50% social rented, 50% intermediate affordable housing.

Layout

2.39 Policy 3 of the District Affordable Housing Supplementary Planning Document states that affordable housing should be well integrated with market housing, in a way which results in different kinds of housing being in close proximity to each other. Large groupings of single tenure dwellings and dwelling types should be avoided. As a guide there should normally be no groupings or more than 5 affordable dwellings, except when they are provided as flats, when a higher number may be appropriate.

Design Requirements

2.40 Policy 4 of the District Affordable Housing Supplementary Planning Document states that affordable dwellings should be indistinguishable from market housing in terms of appearance. Dwellings should meet the Housing Corporation Design and Quality Standards and achieve, at least, Code for Sustainable Homes Level 3 (or equivalent Housing Corporation requirements) to secure funding. Developers should work to these standards and to individual RSL design briefs. Dwellings should be built to Lifetime Home Standards unless there are demonstrable reasons why this cannot be achieved in a particular site.

Public Subsidy

2.41 Policy 11 of the SPD states that affordable housing should be delivered free of public subsidy, unless the use of subsidy would improve the number or mix of dwellings, in which case the level of subsidy needed should be minimised.

Off-site Contribution

2.42 The SPD states that affordable housing should be provided on-site except in the following circumstances:

- Where the proportion sought would result in a part of the dwelling being required (e.g.10.2) then a financial contribution may be offered in lieu of that part (0.2).
- In smaller developments off-site contributions will be sought if this is a more effective way of achieving affordable housing provision, having regard to site and viability considerations.
- Where an applicant wishes to displace all or part of the affordable housing requirement (whole dwellings only) to another site. This will only be permitted where:

a Alternative provision is proposed that would allow priority needs to be better met and better support the creation of mixed and balanced communities, or;

b Provision on-site would necessitate an unacceptable level of alteration to a listed building.

2.43 Where an off-site contribution is accepted a developer should make a contribution of clean serviced land (in the same settlement, unless alternative provision would better meet needs) with the necessary planning permission at nil cost.

3. Study Approach and Assumptions

3.1 The approach adopted in this study to appraise viability uses standard techniques of development appraisal such as are common place in the development industry. These use Discounted Cash Flow analysis to calculate the Internal Rate of Return (IRR) for developments with particular characteristics (see Appendix 7 for a more detailed explanation of the IRR calculation and DCF analysis)

3.2 The study calculates the IRR under a range of different development scenarios in terms of the location, sales value, density of archetypal developments designed to be broadly representative of the type of sites likely to come forward for development in the study area. A scheme is deemed to be viable if it achieves a certain defined IRR – 10% on sites yielding less than 50 dwellings, and 12.5% on sites entailing development of more than 50 dwellings.

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

- Stage 1 involved market research to determine land values, unit sizes, unit mixes and capital values of both the private and affordable units. The selection of the development scenarios to be examined was also informed by a policy review undertaken in this initial stage (see Section 2).
- In Stage 2 DTZ agreed the assumptions regarding key variables with the client authorities, based upon the evidence gathered in Stage 1. At this stage DTZ also agreed with the client authorities the archetypal sites to be used in the testing of viability. The financial appraisal model used to test viability was developed in this Stage of work.
- Stage 3 involved a series of runs of the financial model to test the viability of development on the archetypal sites, and how this would be affected by the application of different requirements for affordable housing provision (30%, 40% and 50% requirements, and tests for different splits in social rented and shared ownership provision).

3.4 The study approach is therefore tailored to the specific requirements of the brief. It takes account of the range of different circumstances applying across the study area, but does not seek to capture of analyse the specific circumstances of hundreds of individual housing sites in the study area. To do this would have been impossible in practical terms and inappropriate to a strategic study designed to inform policy development.

3.5 Instead by focusing on the development of a suite of archetypical sites that capture much of the variety of the range of housing sites likely to come forward in the study area, it has been possible to analyse different sites on a consistent basis. This allows conclusions to be drawn in answer to questions such as '*how does increasing the affordable housing requirement from 30% t0 40% affect viability?*'; and '*does allowing a higher proportion of shared ownership in the affordable housing mix improve viability?*'

3.6 By implication the study does not analyse viability on a specific housing site that might come forward in future. There will always be a wide range of specific circumstances that will affect viability on a particular site, and a developer will assess these in determining whether to proceed. In addition developers are not homogenous. They vary in their appetite for risk, and have different requirements in terms of returns. Indeed those requirements may change in different market contexts. The development appraisal technique developed for this study could however be readily applied to an individual site if required.

3.7 It is important also to note that the analysis undertaken for the study was prepared during the course of 2007, and the data on land values, sales prices and a number of other variables relate to the first half of 2007. Some of these variables will have changed since the analysis was undertaken. The housing market is a dynamic market, always changing, and any study can only provide a snapshot of viability. The approach adopted in this study, however, illuminates the relationship of viability to particular variables and is therefore of particular value in informing the development of policy that will need to be robust enough to be applied in all the changing seasons of the housing market.

3.8 The rest of this section sets out the assumptions on which the analysis is based, and the sources of information that underpin those assumptions. In a strategic study such as this it is necessary to generalise, but where appropriate we comment on how the specific circumstances of particular sites, the expectations of the developer, or the costs and revenues of a project may vary from the assumption and hence affect the viability of that particular development. This helps to illuminate some of the issues that will apply in the application of policy and feeds through into the discussion of policy implications in Section 6.

General Assumptions

3.9 The study tests viability on the basis of current costs and revenues as applicable in the first half (January to June) of 2007. The model tests viability on the assumption that the sites subject to testing have secured planning permission and there are no abnormal costs associated with their development. It has been important to use this as the basis of analysis to allow like for like comparison of how different policy options affect viability. In reality each site will be different and there are always elements of costs that are specific to development of a particular site, but these can only be assessed on a site by site basis. Developer returns are also often a composite of the actual development of the residential component of site, and returns on the process of securing land value enhancement through securing change of use permission on this site.

3.10 The generic assumption has been made that developers of sites generating less than 50 dwellings will require a minimum return (IRR) of 10% and those developing sites generating 50 or more dwellings will require a return (IRR) of 12.5%. These are the typical minimum rates of return, based on DTZ's experience that developers of residential schemes will require. Schemes that fall below these target rates of return are deemed not to be viable, and those that meet or exceed the target rate of return are deemed to be viable. The higher level of return on larger schemes is required because of the higher risk entailed.

3.11 It is important to acknowledge, however, that the returns sought by different developers and how they secure it through the whole development process will vary. Developers will take into account a range of factors relating to the risk profile of a scheme, such as scheme size, time to delivery, location and other market factors, in determining what is an acceptable rate of return. As noted, developers may secure their return through a composite process of land assembly, securing permission for development, and the actual development process; and the target rates of return may differ as market conditions change. Such complexity cannot be modelled in a strategic study such as this, but has been taken into account in interpreting the results of the modelling and in the formulation of recommendations.

3.12 Finally it has been necessary as part of the appraisal to make assumptions about sales rates and interest rates. The sales rates and interest rates used in the model are those applying in the first half of 2007. At the time this report has been finalised in 2008, sales rates on current developments have generally fallen, so the average time taken to sell new homes has increased in most areas. This will have a substantial effect on a development cash flows and the developer's expected returns. However, the focus of this study is on informing policy that must endure through many different phases of the housing market so it has not been deemed appropriate to try to model different movements in the financial and housing markets. This need for policy to be robust during the different phases of the housing market cycle has been taken into account in the development of recommendations.

The Key Variables for Scenario Testing

3.13 The focus of the study has been testing viability for three different levels of affordable housing provision (30%, 40% and 50%). These levels were tested because they deviate from current policy whilst remaining realistic.

3.14 The key variables that have been used for testing the core elements of the viability model are as follows:

- Site size
- Location
- Density and Dwelling Mix
- Value Area
  - land values
  - sales values of new market homes
  - sales values of new affordable housing units
- Affordable Housing mix
- Housing Corporation Grant.

Site Size

3.15 The main analysis has focused on assessing viability on sites of 0.5 ha, 1.0 ha and 3.0 ha. The number of units that these sites yield depends on the application of the appropriate density assumption. Density assumptions vary between urban, suburban and rural locations (see below). A separate analysis has been undertaken of small sites comprising development of between 1 and 9 dwellings to determine the impact on viability of different affordable housing quotas.

Location

3.16 Key variables which affect viability such as the price paid for land, the sales value of new homes, unit mix, density and Section 106 costs vary systematically with location. It was therefore agreed with the clients that it was important to test viability in different sorts of location, given that across the study area there are cities, towns and villages of varying sizes.

The categorisation agreed upon that would encompass the systematic differences in key variables by location was to consider sites in urban (city and town centre) locations, suburban locations and rural locations.

3.17 The tripartite classification of sites into urban, suburban and rural categories was chosen in preference to choosing specific geographic areas or neighbourhoods, since it was decided that often sales values do not vary hugely within different neighbourhoods in a particular authority or even within a larger swathe of the district. Adopting the tripartite characterisation of location, and combining this with definition of different value areas (see below) provided an opportunity to test a wider range options in terms of viability.

Density and Dwelling Mix

3.18 The density of development on a site affects the overall number of units provided for a given land area and hence is a key factor determining the sales values to be derived from a particular plot of land. The absolute number of affordable units provided, whatever the quota, is also determined by the overall number of units to be built, and hence is also affected by the density of development.

3.19 The density of development varies systematically with site location (urban, suburban, and rural). DTZ has therefore needed to identify the development densities that should be applied to sites in each of these locations. The figures used are based on typical densities of recent development in each type of location, with a high, medium and low density figure identified so as to enable testing of the degree to which changes in density affect viability.

3.20 The density assumptions, expressed as dwellings per hectare (dph), are as follows:

Urban -	High Density	-	80 dph
	Mid Density	-	70 dph
	Low Density	-	60 dph
Suburban -	High Density	-	55 dph
	Mid Density	-	45 dph
	Low Density	-	35 dph
Rural -	High Density	-	40 dph
	Mid Density	-	35 dph
	Low Density	-	30 dph

3.21 Within each location and density DTZ have made assumptions on unit mix based on experiences within the market and consultation with the authorities. As the affordable provision stems directly from the overall mix of units, this has a significant effect on viability. These assumptions are included in Appendix 8.

Value Area

3.22 The study area is extensive covering the whole of three district councils all of which cover a large area. Values, in terms both of sales values of new homes, and land values, vary across the study area, and this will have a significant effect on the viability of new housing development in these different geographies. It was decided to identify three ‘value areas’, defined simply as high, medium and low value areas, and for these identify the relevant sales values and land values that should be applied in the viability testing (see below under headings Land Values and Sales Values of Private and Affordable Housing).

3.23 Broadly these value areas can be identified with the pattern of average house prices across the study area. These are described in detail in the Strategic Housing Market Assessment. The map in Appendix 9 shows how house prices have been used to identify higher, medium and lower value areas. However it should be noted that new development, particularly on large schemes can, under some circumstances, establish new value levels that are not constrained by existing second hand housing prices.

3.24 Data on land values and sales values was collected from actual developments and through contact with agents. Information relates to January-June 2007, but recognising the potential impact of the slow down in the housing market, DTZ was conservative in the attribution of values in order to accommodate fluctuations in the property market that may occur in the short to medium term. However, depending on the depth and duration of the housing market slowdown, these may not be applicable during 2008 and for future years until the market recovers.

Land Value

3.25 This study has worked on the basis that the cost of land used in the viability appraisal should be an input to the viability assessment. The cost of land has therefore based on the actual price being paid for land by developers. Information on the value of residential building land has been sourced from the Valuation Office Agency property market report (July 2007), and this has been checked with local land agents.

3.26 A developer buying residential land will have taken into account development costs, including affordable housing, when preparing their residual valuation of the land. This valuation will have informed their bid price for the land. Land prices therefore incorporate a discount based on the developer's expectation of how much affordable housing they will have to provide. DTZ would expect land values in the study area to be discounted to reflect current policy requirements for affordable provision equivalent to 30 -40% of the units being built.

3.27 In reality a developer may not have fully allowed for provision of the level of affordable housing required in policy believing that they can negotiate a lower level of provision. Where land has been acquired historically and policy has moved on, often this will be compensated for by rising land values. Where a developer has acquired land, perhaps because of intense competition for land, and not made full allowance for provision of affordable housing in the price they have paid, policy should not seek to compensate for this miscalculation. Nevertheless this might result in a reluctance on behalf of the developer to bring forward the site for development until land values have increased sufficiently to offset their miscalculation.

3.28 The land values used as inputs to the modelling are as follows:

Urban Sites

High Value	£3,500,000 per ha
Mid Value	£3,400,000 per ha
Low Value	£3,300,000 per ha

Suburban Sites

High Value	£3,200,000 per ha
Mid Value	£3,100,000 per ha
Low Value	£3,000,000 per ha

Rural Sites

High Value	£2,900,000 per ha
Mid Value	£2,800,000 per ha
Low Value	£2,700,000 per ha

Sales Values of New Market Homes

3.29 Average sales values of new market homes (expressed on a £ per square foot basis) are based on data for new housing developments across the study area. The sales values assumed are set out in Table 3.1 for different sized units, in high, medium and low value areas in the study area, differentiated for urban, suburban and rural sites.

Table 3.1 Private Revenue Assumptions

Unit		Area sq ft (sq m)	Urban	Suburb	Rural
1 Bed Flat	High	500 (46)	£ 205,000	£ 190,000	£ 180,000
	Mid		£ 192,500	£ 170,000	£ 165,000
	Low		£ 180,000	£ 155,000	£ 150,000
2 Bed Flat	High	650 (60)	£ 260,000	£ 240,500	£ 227,500
	Mid		£ 240,500	£ 217,750	£ 214,500
	Low		£ 227,500	£ 195,000	£ 195,000
3 Bed Flat	High	800 (74)	£ 320,000	£ 296,000	£ 280,000
	Mid		£ 296,000	£ 268,000	£ 264,000
	Low		£ 280,000	£ 240,000	£ 240,000
1 Bed House	High	600 (56)	£ 222,000	£ 216,000	£ 198,000
	Mid		£ 210,000	£ 204,000	£ 186,000
	Low		£ 198,000	£ 192,000	£ 174,000
2 Bed House	High	800 (74)	£ 296,000	£ 288,000	£ 264,000
	Mid		£ 280,000	£ 272,000	£ 248,000
	Low		£ 264,000	£ 256,000	£ 232,000
3 Bed House	High	1000 (93)	£ 370,000	£ 360,000	£ 330,000
	Mid		£ 350,000	£ 340,000	£ 310,000
	Low		£ 330,000	£ 320,000	£ 290,000
4 Bed House	High	1300 (121)	£ 468,000	£ 455,000	£ 416,000
	Mid		£ 455,000	£ 429,000	£ 390,000
	Low		£ 416,000	£ 403,000	£ 364,000
5 Bed House	High	1600 (149)	£ 576,000	£ 560,000	£ 512,000
	Mid		£ 560,000	£ 528,000	£ 480,000
	Low		£ 512,000	£ 496,000	£ 448,000

Revenues from Affordable Housing Provision

3.30 A developer also generates revenues from the sales of affordable housing units to housing associations. DTZ has derived estimates of these revenues from talking to housing associations, notably those that are development partners of the three study authorities. These include Drum, Swaythling, Homegroup, Atlantic (Winchester), Hyde and Sentinel associations.

3.31 The revenues generated from sales of affordable housing differ depending on whether the unit is for social renting or is a shared ownership unit. Table 3.2 sets out the assumed revenues generated from the development of new social rented housing, estimated for different value areas, site locations and dwelling type. Table 3.3 sets out the same information regarding revenues generated from sale of shared ownership units. It has been assumed that all intermediate housing takes the form of shared ownership, with 40% of the equity being sold to the occupier and 60% retained by the association.

3.32 It has been assumed in this study that all affordable homes will find an RSL buyer. It is worth noting however that RSLs may be disinclined to buy (or be party to development of) small numbers of units, where these would be inefficient for them to manage. This would be most likely to be an issue where a scheme only produces a very small number of affordable housing units. This issue needs to be taken into account in thinking about the practicality of applying affordable housing targets to very small schemes and sites, though it is not an insuperable difficulty.

Table 3.2 Revenues Generated from New Social Rented Homes

Unit		Area (sq ft) (sq m)	Urban	Suburb	Rural
1 Bed Flat	High	500 (46)	£ 85,000	£ 75,000	£ 67,500
	Mid		£ 77,500	£ 70,000	£ 62,500
	Low		£ 70,000	£ 65,000	£ 57,500
2 Bed Flat	High	650 (60)	£ 107,250	£ 94,250	£ 81,250
	Mid		£ 97,500	£ 87,750	£ 78,000
	Low		£ 87,750	£ 81,250	£ 74,750
3 Bed Flat	High	800 (74)	£ 132,000	£ 116,000	£ 100,000
	Mid		£ 120,000	£ 108,000	£ 96,000
	Low		£ 108,000	£ 100,000	£ 92,000
1 Bed House	High	600 (56)	£ 96,000	£ 93,000	£ 87,000
	Mid		£ 93,000	£ 87,000	£ 81,000
	Low		£ 90,000	£ 81,000	£ 75,000
2 Bed House	High	800 (74)	£ 128,000	£ 124,000	£ 116,000
	Mid		£ 124,000	£ 116,000	£ 108,000
	Low		£ 120,000	£ 108,000	£ 100,000
3 Bed House	High	1000 (93)	£ 155,000	£ 150,000	£ 135,000
	Mid		£ 145,000	£ 140,000	£ 130,000
	Low		£ 135,000	£ 130,000	£ 125,000
4 Bed House	High	1300 (121)	£ 201,500	£ 195,000	£ 175,500
	Mid		£ 188,500	£ 182,000	£ 169,000
	Low		£ 175,500	£ 169,000	£ 162,500
5 Bed House	High	1600 (149)	£ 248,000	£ 240,000	£ 216,000
	Mid		£ 232,000	£ 224,000	£ 208,000
	Low		£ 216,000	£ 208,000	£ 200,000

Table 3.3 Revenues Generated from New Shared Ownership Homes

Unit		Area sq ft (sq m)	Urban	Suburb	Rural
1 Bed Flat	High	500 (46)	£ 105,000	£ 95,000	£ 90,000
	Mid		£ 95,000	£ 85,000	£ 80,000
	Low		£ 85,000	£ 75,000	£ 70,000
2 Bed Flat	High	650 (60)	£ 136,500	£ 123,500	£ 117,000
	Mid		£ 123,500	£ 110,500	£ 104,000
	Low		£ 110,500	£ 97,500	£ 91,000
3 Bed Flat	High	800 (74)	£ 168,000	£ 152,000	£ 144,000
	Mid		£ 152,000	£ 136,000	£ 128,000
	Low		£ 136,000	£ 120,000	£ 112,000
1 Bed House	High	600 (56)	£ 120,000	£ 114,000	£ 108,000
	Mid		£ 108,000	£ 102,000	£ 96,000
	Low		£ 96,000	£ 90,000	£ 84,000
2 Bed House	High	800 (74)	£ 160,000	£ 152,000	£ 144,000
	Mid		£ 144,000	£ 136,000	£ 128,000
	Low		£ 128,000	£ 120,000	£ 112,000
3 Bed House	High	1000 (93)	£ 200,000	£ 190,000	£ 180,000
	Mid		£ 180,000	£ 170,000	£ 160,000
	Low		£ 160,000	£ 150,000	£ 140,000
4 Bed House	High	1300 (121)	£ 260,000	£ 247,000	£ 234,000
	Mid		£ 234,000	£ 221,000	£ 208,000
	Low		£ 208,000	£ 195,000	£ 182,000
5 Bed House	High	1600 (149)	£ 320,000	£ 304,000	£ 288,000
	Mid		£ 288,000	£ 272,000	£ 256,000
	Low		£ 256,000	£ 240,000	£ 224,000

Affordable Housing Mix

3.33 The base assumption used in the modelling exercise has been that 70% of the affordable housing built will be for social renting and 30% for shared ownership. However consideration has been given to the impact on viability of changing this proportion with options of 60% social rent/40% shared ownership and 50% social rent/50% shared ownership being tested.

Housing Corporation Grant Funding

3.34 The base assumption for the modelling has been that grant is not available for affordable housing provision. However, it is important to understand the extent to which grant can enhance viability where this is a problem, through provision of grant aid. Thus three different scenarios, based on bids submitted to the 2006-2008 National Affordable Housing Programme, and checked with representatives of the Housing Corporation and the local authorities, have been examined. De facto, the additional income associated with grant aid is additional income to the development, being added to the price paid by the RSLs when units are handed over.

3.35 The three scenarios examined are:

- Grant 1 - £40,000 per social rented unit, £0 per shared ownership unit
- Grant 2 - £40,000 per social rented unit, £15,000 per shared ownership unit
- Grant 3 - £50,000 per social rented unit, £25,000 per shared ownership unit.

Other Assumptions

3.36 The model incorporates a number of other assumptions which have been held constant for all aspects of the viability. These are as follows:

3.37 **Building Costs:** The building costs used in the viability model are taken from the average residential costs on BCIS[1], re-based using a location index of 102 for Hampshire. The assessment uses the build cost per square foot of gross internal area, excluding external works and contingencies and with preliminaries apportioned by cost. These rates were correct as of September 2007. Build costs for affordable housing have been presumed at a higher rate to meet current design and space standards such as construction to Sustainable Homes Level 3 standards

3.38 On the basis set out above, building costs used in the modelling for private and affordable flats and houses are:

- Private Flat - £120 per sq ft (£1,292 per sq m)
- Private House - £110 per sq ft (£1,184 per sq m)
- Affordable Flat - £140 per sq ft (£1,507 per sq m)
- Affordable House - £130 per sq ft (£1,399 per sq m).

3.39 It is acknowledged that for any particular scheme build costs will be affected by site conditions, the configuration of the scheme and the target market at which it is aimed. Large schemes may be able to achieve significant economies of scale. Building costs will also be affected by cost of materials and fuel, but are also likely to reflect the level of activity in the construction sector. However, for the purposes of a strategic study, it is necessary to use typical build costs.

3.40 **Section 106 Costs other than Affordable Housing**: Most residential developments will not only be expected to provide affordable housing as part of a Section 106 agreement but to also

[1] The Building Cost Information Service 9BICS) 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 location and build function specific.

contribute to other costs imposed by the public sector on the development, such as highway works, provision of community facilities etc. These represent an additional cost imposed on the development and therefore need to be taken into account.

3.41 Based on consultation with the client authorities it has been assumed that the following additional costs will be incurred in connection with Section 106 agreements:

- Urban - £6,000 per unit
- Suburban - £5,000 per unit
- Rural - £4,000 per unit

3.42 **Demolition Costs and Site Preparation Costs**: An allowance of £1.50 per sq ft (£16 per sq m) has been made for demolition and site preparation costs. Site preparation costs on a site with contamination would be significantly higher and this would affect viability on any such site being considered for residential development. However the extent of such costs and the effect on viability would need to be assessed on a site specific basis.

3.43 **Other Costs**: Other standard allowances and costs made in the modelling exercise are as follows:

- Cost of finance of 6.75% per annum has been assumed
- Professional fees assumed at 10% of construction cost
- Disposal costs including marketing and sales expenses for private units assumed at 3% of Gross Development Value
- Site acquisition costs of 6% of land value
- Inflation of 3.5% on costs and 2.5% on revenue.

The Scope of this Study

3.44 It is important to appreciate that a strategic viability model such as that developed is not designed to test the viability of specific sites. One of the features of residential development is that character of sites is varied, and the level of costs and the revenues that apply to development on a specific site will vary. This should however be reflected in the price that is paid for the land. Even so costs and revenues are often not predictable, and of course assumptions about the future change in costs and revenues may be proved wrong, delivering either above expected returns or below expected returns.

3.45 This study cannot seek to encompass all the potential differences in individual site circumstances that affect viability. What it can do, and does do, is provide a broad assessment of viability in the study area. This is what is needed to inform the setting of affordable housing and other policies. Those policies will, however, need to be sufficiently flexible to take into consideration changes in the market context, especially if they are long lived; but also changes in national policy relating to planning and affordable housing provision.

4. Results of Viability Model on Mainstream Sites

4.1 This section focuses on the results of the viability modelling on sites of more than 15 dwellings. The findings are presented for a number of different scenarios and tests designed to elucidate particular policy issues with regard to affordable housing policy and viability.

Scenario 1: The Importance of Value Areas

4.2 Scenario 1 focuses on how viability varies according to the prevailing pattern of land values and house prices in an area – referred to as the value zones. The scenario tests how changing the affordable housing requirement from 30% to 40% to 50% affects viability on presumption that grant is not available to fund affordable housing. The initial scenario, Scenario 1a, tests viability on a 30% affordable housing requirement; Scenario 1b tests viability with a 40% requirement; and Scenario 1c tests viability with a 50% requirement.

4.3 The scenarios test viability for three different sizes of sites in three different locations:

- Sites of 0.5ha, 1 ha, and 3ha
- Sites in urban, suburban and rural locations

4.4 It should be remembered that different density assumptions are applied to sites in urban, suburban and rural locations and therefore sites of the same size but in different locations provide different numbers of new housing.

4.5 All other variables in this scenario are held constant. Thus:

- The density assumptions applied to the different locations (urban, suburban, rural) are the mid-range density assumptions
- The analysis is based on mid-range land values
- It is assumed that affordable housing will be delivered in the proportion of 70% social rented housing and 30% shared ownership
- Required rate of return of 10% on sites entailing development of less than 50 dwellings and 12.5% on sites entailing development of 50 or more units.

4.6 Throughout the analysis a series of 'traffic lights' – colour codes - are used to indicate if schemes are clearly viable, clearly not viable or close to the viability target. These colour codes are as follows:

- Green where the scheme is comfortably viable - where the IRR is more than 2.5% points above the target rate of return
- Red, where the scheme is clearly not viable – where the IRR is less than 2.5% below the target rate of return
- Yellow, where the scheme is close to the margins of viability and hence particular features of an individual site and scheme are likely to be important to whether it achieves viability (target IRR + 2.5% or – 2.5%)

Results of Scenario 1a

4.7 Scenario 1a tests test the impact on viability, given the above assumptions, of requiring a 30% provision of affordable housing, with no grant. Table 4.1 summarises the results, showing the Internal Rate of Return.

4.8 The message that this scenario conveys is that a 30% affordable housing quota with no grant towards affordable housing provision should definitely be achievable across all the areas defined as high value zones and, though the picture is more marginal in the medium value zone, it should be achievable across the medium value zones. It is only in the low value zones where achieving this level of affordable housing without grant would render development not viable.

Table 4.1: Scenario 1a - Viability with 30% Affordable Housing Requirement (with no grant)

IRR Viability Target 10% pm on sites <50 units, 12.5% on sites of 50 & over units					
IRR >2.5% above target		IRR ± 2.5% from target		IRR > 2.5% below target	
			Value Zone		
Location	Site Size in ha	No of Dwellings	High % IRR	Mid %IRR	Low %IRR
Urban	0.5	35	19.1	13.6	8.8
	1.0	70	18.8	13.2	8.2
	3.0	210	16.1	11.1	6.6
Suburban	0.5	23	19.1	7.6	8.7
	1.0	45	16.6	11.4	6.3
	3.0	135	14.4	9.8	5.1
Rural	0.5	18	20.5	16.1	11.5
	1.0	35	16.5	12.1	7.4
	3.0	105	15.4	11.5	7.4

Results of Scenario 1b

4.9 Scenario 1b tests test the impact on viability, given the above assumptions, of requiring a 40% provision of affordable housing, with no grant. Table 4.2 presents the results. The message that this scenario conveys is that a 40% affordable housing quota with no grant towards affordable housing provision would only be achievable in the high value zones, and even here in some circumstances, particularly on the larger sites, and the suburban areas, this renders a number of schemes marginal in terms of viability.

Table 4.2: Scenario 1B - Viability with 40% Affordable Housing Requirement (with no grant)

IRR Viability Target 10% pm on sites <50 units, 12.5% on sites of 50 & over units					
IRR >2.5% above target		IRR ± 2.5% from target		IRR > 2.5% below target	
			Value Zone		
Location	Site Size in ha	No of Dwellings	High % IRR	Mid %IRR	Low %IRR
Urban	0.5	35	16.1	10.5	5.5
	1.0	70	12.5	6.7	1.4
	3.0	210	11.2	5.9	1.1
Suburban	0.5	23	10.4	4.9	-0.7
	1.0	45	9.8	4.5	-0.9
	3.0	135	9.2	4.4	-0.5
Rural	0.5	18	13.6	8.7	3.5
	1.0	35	11.5	7.0	2.4
	3.0	105	11.4	7.3	3.1

Results of Scenario 1c

4.1 Scenario 1c tests test the impact on viability, given the above assumptions, of requiring a 50% provision of affordable housing, with no grant. The results presented below indicate that a 50% requirement for affordable housing without grant aid would render development unviable across all the value geographies and site sizes.

Table 4.3: Scenario 1c - Viability with 50% Affordable Housing Requirement (with no grant)

IRR Viability Target 10% pm on sites <50 units, 12.5% on sites of 50 & over units					
IRR >2.5% above target		IRR ± 2.5% from target		IRR > 2.5% below target	
			Value Zone		
Location	Site Size in ha	No of Dwellings	High % IRR	Mid %IRR	Low %IRR
Urban	0.5	35	4.5	-1.8	-7.7
	1.0	70	6.8	0.7	-4.9
	3.0	210	6.3	0.8	-4.3
Suburban	0.5	23	4.3	-3.9	-7.1
	1.0	45	4.9	-0.8	-6.4
	3.0	135	5.1	0.1	-5.0
Rural	0.5	18	6.9	1.9	-3.4
	1.0	35	6.2	1.4	-3.6
	3.0	105	5.7	1.4	-3.1

Indicative Conclusions from Scenario 1

4.10 Scenario 1, testing the effect of different affordable housing quotas without grant on viability for different value zones yields the following broad conclusions:

- The value zone in which a scheme is located is a key variable in determining viability. The analysis suggests it would be difficult to achieve even 30% affordable housing without grant in low value zones if new development in those zones are constrained by the pattern of prevailing land values and prices.
- However, across high value areas which encompass much of the sub-region the analysis would indicate it should definitely be possible to achieve a 30% affordable housing provision without grant, and probably 40%. However, a 40% target without grant renders development in medium and low value zones non-viable.
- On the basis of the analysis a 50% affordable housing requirement without grant would significantly deter development since it would render development non-viable across all different geographies.

4.11 It is interesting to note that the small sites (0.5 ha) yield consistently higher returns than medium sized sites (1.0 ha), which in turn yield higher returns than large sites (3.0 ha). There is also a systematic pattern that suburban sites generally provided lower returns than urban or rural sites.

4.12 The analysis points to importance of the prevailing values to viability. For the purposes of this study, it has been assumed that the prevailing values in an area (used to define the value zones) do impinge on the sales values that can be achieved for new housing. Logically this must be true to some extent – the second hand market in a local market does constrain the values that can be secured for new housing.

4.13 However to some extent existing values may be determined by the existing mix of the stock and therefore new homes may be able to achieve a bigger premium over existing values than in other areas. New developments may also be able to establish new value levels that are different to the prevailing norms by providing quite a different style and quality of development that establishes a new market in a locality. This is more likely to be possible on larger development sites than small sites.

4.14 This consideration needs to be weighed in the formulation of policy and the consideration of whether affordable housing targets should vary between value zones.

Scenario 2: The Impact of Introducing Grant Aid for Social Housing

4.15 Scenario 2 continues the analysis presented in Scenario 1 and uses exactly the same assumptions with one exception; namely the assumption that grant is not available is relaxed. For the purposes of this section, the assumed level of grant is £40,000 grant per unit for social rented units and no grant for shared ownership units.

4.16 Analysis of the impact on viability for two other grant scenarios have also been undertaken and are presented in Appendix 2 as follows:

– Scenario 3 £40,000 grant per unit for social rented units and £15,000 grant for shared ownership units

– Scenario 4 £50,000 grant per unit for social rented units and £15,000 grant for shared ownership units.

4.17 For each scenario the analysis looks at how the provision of grant aid affects viability when the affordable housing requirement is set respectively at 30%, 40% and 50%. Only the results for Scenario 2 (£40,000 rant per units for social rented units and no grant for shared ownership units) are presented in diagrammatic form in this section using a the traffic lights system. This system is used to show how grant aid of the specified amount changes the viability of schemes in different locations, site size and in different value zones, compared to the situation with no grant.

4.18 Thus in Scenario 2a (grant of £40,000 per social housing unit) Figure 4.4, shows how grant at this level changes viability when there is an affordable housing requirement of 30%. Figure 4.5 replicates this for when the affordable housing level is 40% and Figure 4.6 shows the results when the affordable housing requirement is 50%. The equivalent charts for Scenarios 3 and 4, which relate to higher levels of grant aid, along with the accrual IRR figures are presented in Appendix 2. The traffic light system is replicated in Appendix 2 for Scenarios 3 and 4 using background shading.

4.19 Table 4.4 shows that with a 30% affordable housing requirement, £40,000 grant for social housing but no grant for shared ownership, brings most schemes in lower value areas into the right territory (yellow dots) for viability to be achieved, where without grant aid the majority of schemes were clearly not viable (red dots). Similarly the availability of grant improves viability in the medium value areas making all schemes that fell below the target rate of return (albeit marginally) generate returns above the target rate (see Appendix 2). In high value areas such grant aid was not required for viability, so grant merely improves the return available to the developer.

Table 4.4: Scenario 2a – Impact on Viability with 30% Affordable Housing Requirement and Grant Aid of £40,000 per Social Housing Unit and No Grant for shared ownership

IRR Viability Target 10% pm on sites <50 units, 12.5% on sites of 50 & over units

🟢 **IRR >2.5% above target** 🟡 **IRR ± 2.5% from target** 🔴 **IRR > 2.5% below target**

			Value Zone					
Location	**Site Size in ha**	**No of Dwellings**	**High**		**Mid**		**Low**	
			Without Grant	**With Grant**	**Without Grant**	**With Grant**	**Without Grant**	**With Grant**
Urban	0.5	35	🟢	🟢	🟢	🟢	🟡	🟢
	1.0	70	🟢	🟢	🟡	🟢	🔴	🟡
	3.0	210	🟢	🟢	🟡	🟡	🔴	🔴
Suburban	0.5	23	🟢	🟢	🟡	🟡	🔴	🟡
	1.0	45	🟢	🟢	🟡	🟢	🔴	🟡
	3.0	135	🟡	🟢	🔴	🟡	🔴	🔴
Rural	0.5	18	🟢	🟢	🟢	🟢	🟡	🟢
	1.0	35	🟢	🟢	🟡	🟢	🔴	🟡
	3.0	105	🟢	🟢	🟡	🟡	🔴	🔴

4.20 Table 4.5 shows that with a <u>40%</u> affordable housing requirement, £40,000 grant for social housing but no grant for shared ownership, brings all schemes in higher value areas into full viability, and brings schemes in mid-value areas into the right territory in terms of viability. It does not do enough however to improve the returns to render development in low value areas viable with a 40% affordable housing requirement.

Table 4.5: Scenario 2a - Impact on Viability with 40% Affordable Housing Requirement and Grant Aid of £40,000 per Social Housing Unit and No Grant for Shared Ownership

IRR Viability Target 10% pm on sites <50 units, 12.5% on sites of 50 & over units

🟢 **IRR >2.5% above target** 🟡 **IRR ± 2.5% from target** 🔴 **IRR > 2.5% below target**

			Value Zone					
Location	**Site Size in ha**	**No of Dwellings**	**High**		**Mid**		**Low**	
			Without Grant	**With Grant**	**Without Grant**	**With Grant**	**Without Grant**	**With Grant**
Urban	0.5	35	🟢	🟢	🟡	🟢	🔴	🟡
	1.0	70	🟡	🟢	🔴	🟡	🔴	🔴
	3.0	210	🟡	🟢	🔴	🟡	🔴	🔴
Suburban	0.5	23	🟡	🟢	🔴	🔴	🔴	🔴
	1.0	45	🟡	🟢	🔴	🟡	🔴	🔴
	3.0	135	🔴	🟡	🔴	🔴	🔴	🔴
Rural	0.5	18	🟢	🟢	🟡	🟡	🔴	🔴
	1.0	35	🟡	🟢	🔴	🟡	🔴	🔴
	3.0	105	🟡	🟡	🔴	🟡	🔴	🔴

4.21 Table 4.6 shows that with a 50% affordable housing requirement, £40,000 grant for social housing but no grant for shared ownership, moves most schemes from being clearly not viable, to render them at or close to viability, and the more detailed tabulations in Appendix 2 shows that this level of grant moves four out of the 9 scheme types in high value areas up to the target level of return required for viability, when none achieved that without grant, and brings another three within close range. However this level of grant does not do enough to render all schemes in high value areas fully viable. This level of grant is also insufficient to render any of the schemes in mid or low value areas viable.

Table 4.6: Scenario 2a – Impact on Viability with 50% Affordable Housing Requirement and Grant Aid of £40,000 per Social Housing Unit and No Grant for Shared Ownership

IRR Viability Target 10% pm on sites <50 units, 12.5% on sites of 50 & over units

🟢 **IRR >2.5% above target** 🟡 **IRR ± 2.5% from target** 🔴 **IRR > 2.5% below target**

			Value Zone					
Location	**Site Size in ha**	**No of Dwellings**	**High**		**Mid**		**Low**	
			Without Grant	**With Grant**	**Without Grant**	**With Grant**	**Without Grant**	**With Grant**
Urban	0.5	35	🔴	🟡	🔴	🔴	🔴	🔴
	1.0	70	🔴	🟡	🔴	🔴	🔴	🔴
	3.0	210	🔴	🟡	🔴	🔴	🔴	🔴
Suburban	0.5	23	🔴	🟡	🔴	🔴	🔴	🔴
	1.0	45	🔴	🟡	🔴	🔴	🔴	🔴
	3.0	135	🔴	🔴	🔴	🔴	🔴	🔴
Rural	0.5	18	🔴	🟡	🔴	🔴	🔴	🔴
	1.0	35	🔴	🟡	🔴	🔴	🔴	🔴
	3.0	105	🔴	🔴	🔴	🔴	🔴	🔴

4.22 Scenario 3 examines the impact on viability of making available grants for affordable housing at the level of £40,000 per unit for social rented unit, and £15,000 per shared ownership unit. The availability of the additional grant on social ownership units improves returns by between 0.3 and 0.9 percentage points but does not deliver any fundamental change in viability across the different types of scheme or levels of affordable housing provision. In terms of the colour coding of viability this scenario produces the same pattern as presented in Tables 4.4, 4.5 and 4.6 presented in relation to Scenario 2. The actual tables showing the level of return are presented in Appendix 2

4.23 Scenario 4 examines the impact on viability of making available grants for affordable housing at the level of £50,000 per unit for social rented unit, and £25,000 per shared ownership unit. Key points to emerge from the analysis in this scenario are:

- With this level of grant support, it becomes possible to achieve 50% provision of affordable housing in high value areas, where this would not be achievable without grant; but it does not sufficiently offset the disadvantage of low and medium price area to bring schemes into viability.
- At the level of 40% affordable housing provision, this sort of grant provision brings most sites in medium value areas into viability, where most would not be viable were no grant

- available. It still does not overcome viability issues in low value areas. In high value areas the grant boosts returns to well above target rates.
- At the level of 30% affordable housing provision this level of grant brings the majority of sites in low value areas into viability; and merely boosts returns to well above target rates for sites in high and medium value areas.

4.24 The effect of £50,000 grant per unit of social housing and £25,000 grant per shared ownership unit can broadly be summarised as bringing one set of sites into viability for each of the assumed level of affordable housing provision; that is:

- At the 50% level of provision it renders schemes in high value areas viable
- At the 40% level of provision it renders schemes in medium value areas viable
- At the 30% level of provision it renders schemes in low value areas viable.

Indicative Conclusions from Scenario 2

4.25 The analysis undertaken for Scenario 2 indicates that grant aid can have a significant impact on the viability of schemes, and will have a material bearing on the achievement of higher levels of affordable housing provision. Grant aid of £50,000 per social housing unit and £25,000 per shared ownership unit would be widely required to deliver a 50% affordable housing target, and would be important in allowing delivery of 40% affordable housing targets in mid value areas (it does not do enough to improve viability for low value areas).

4.26 The level of grant aid for social housing units is more significant than that for shared ownership units. This is because the central assumption has been that social housing units account for 70% of affordable housing provision and shared ownership for only 30%; and the level of grant assumed for social housing units is greater than the market premium paid for shared ownership units. This has the potential to produce an interesting outcome – that where grant is available, viability can sometimes be enhanced by building a higher proportion of social rented homes. Whether this is desirable will be influenced by the housing needs of the area concerned and 'value for money' considerations.

The Impact of the Density of Development on Viability

4.27 As part of the study DTZ also tested whether changing the density of development affects viability. This is an interesting issue, since if there were to be a systematic pattern by which viability is enhanced by increasing or reducing density, then the local authorities might wish to take this into account in developing policy. That is, they might wish to encourage more dense development if that would enhance viability and hence allow greater provision of affordable housing; or they might be willing to accept lower density development if that meant that scheme could go ahead and deliver some affordable housing without grant, where they might get no affordable housing if the scheme stalls because it is not viable.

4.28 The analysis presented in Appendix 3 examines rates of return on development assuming different densities on different sized sites in urban, suburban and rural locations. The implications for viability of seeking different levels of affordable housing provision given different density assumptions are examined; and the implications of no grant and each of the three different scenarios for grant aid for affordable housing are considered.

4.29 The overall results are very consistent regardless of whether grant is available or not, and do not vary with the level of affordable housing provision sought. In general both increasing and decreasing densities from the middle density assumption of 70 dwellings per hectare (dph) in urban areas and 45 dph in suburban areas reduces rates of return. In contrast, where densities for schemes in rural areas are to be increased from the mid-range assumption of 35 dph, to 40 dph this would improve rates of return. In rural areas reductions in densities from the mid range assumption to 30 dph reduce returns as they do in urban and suburban areas.

4.30 These results are interesting. The mid-range density assumptions are based on the levels that have been typical of developments in recent years. The results therefore suggest that the development industry – working interactively with the planning system – has in urban and suburban areas – been delivering development at levels that maximise returns. While changes in the market context and the relative price of different types of new housing may shift the relative advantage of developing at different densities, it suggests that the market has been working efficiently to maximise development value in urban and suburban areas.

4.31 In urban and suburban areas the analysis would indicate there is no scope therefore to enhance the prospect of affordable housing provision by varying density requirements. In rural areas there is, however, the possibility of enhancing viability and thereby securing more affordable housing provision by allowing somewhat denser development than has undertaken in the past. Whether this is consistent with other planning policies designed to ensure new development is in keeping with the character of the area would, of course, be a consideration in whether such a shift in development patterns was deemed desirable in overall terms.

The Impact of Affordable Housing Mix on Viability

4.32 The study has also examined the impact that changing the mix of affordable housing has on viability. The base assumption in most of the modelling has been a split of 70% social rented housing and 30% shared ownership. The implications for rates of return of changing this mix to 60% social rented units and 40% shared ownership and 50% social rented units and 50% shared ownership have also been considered.

4.33 The implications were examined of such changes for rates of return have been examined under circumstances where no grant has been given and where £50,000 grant for social rented units and £25,000 grant have been available. The implications of change under the scenarios of 30%, 40% and 50% affordable housing requirement have been examined.

4.34 The results (see Appendix 4) indicate that changes in the mix of affordable housing have very little impact on viability, only producing marginal differences in the rates of return secured under both with grant and without grant scenarios, and with different affordable housing quotas. The direction of change also varies, with increased proportions of shared ownership delivering slight increases in return under some circumstances and slight decreases in returns in other circumstances.

4.35 The analysis would indicate that the notion that increasing the proportion of shared ownership necessarily improves viability is invalid. There are circumstances where it does so – but the impact on viability is modest even there. But there are circumstances where increasing the proportion of shared ownership does not add value. This probably reflects the fairly complex way in which scheme mix (in terms of unit size) and the returns available for units of different size interact.

4.36 The implication for policy is that flexibility regarding tenure mix in both directions (that is to increase or decrease the proportion of shared ownership) may make sense in helping to bring forward marginal schemes, but will only benefit schemes really at the margins of viability given the small impact such changes have on rates of return. Such a policy stance may also be helpful since the demand for shared ownership can wax and wane with market sentiment and the cost and availability of finance.

5. The Viability of Small Sites

5.1 The commissioning authorities have a particular interest in exploring the contribution that smaller sites – those that will deliver fewer than 15 dwellings – could make to affordable housing provision. In the past such sites have been exempt from affordable housing provision. Key issues are:

- Whether these sites can sustain the same level of affordable housing quota as larger sites or whether the quota for smaller sites would have to be different to those for larger sites
- Whether some form of standardised tariff or charge might be levied in lieu of affordable housing provision, though the general presumption of the client authorities is that on-site provision of affordable housing is to be preferred.

5.2 Particular attention has been focused in the study on sites yielding less than 10 units. However the conclusions reached regarding sites of this size are likely to apply to sites that will deliver between 10 and 14 units.

Key Assumptions

5.3 On small sites the application of a standard quota for the provision of affordable housing has the effect in many cases of indicating that 'part units' should be delivered. A 40% quota applied to a site of 9 dwellings for example would indicate that 3.6 affordable housing units should be provided. It is necessary to decide how the issue of 'part units' of affordable housing should be addressed.

5.4 For the purposes of the viability appraisal provision of affordable housing units as indicated by a certain quota has been rounded up or down to the nearest whole unit. Table 5.1 shows how many units should be provided for different affordable housing quotas if part units could be delivered; and the number of whole units which it has been assumed will be provided by the scheme given its size.

Table 5.1: Assumed Number of Whole Units to be Provided on Small Sites by Reference to the Affordable Housing Quota

	Number of Affordable Units Provided					
Units	**30%**		**40%**		**50%**	
	Decimal	**Units**	**Decimal**	**Units**	**Decimal**	**Units**
9	2.7	3	3.6	4	4.5	4
7	2.1	2	2.8	3	3.5	3
5	1.5	2	2	2	2.5	2
4	1.2	1	1.6	2	2	2
3	0.9	1	1.2	1	1.5	1

5.5 Where the affordable housing quota would indicate provision of 0.5 of a unit, (eg sites on which an odd number of units will be delivered, but a 50% quota has been applied) the provision of affordable housing units has been rounded down. Thus it has always been assumed that the developer will provide more, or an equal number of private units, compared with affordable units. Thus on a site with 5 units with a 50% affordable housing requirement the developer will provide three units of private housing and two affordable homes.

5.6 The viability modelling has been undertaken on the basis that the small sites being tested are being developed in medium value areas, at middle range densities. The analysis is undertaken for urban, suburban and rural sites and for scenarios involving no grant, and grant at each of the three levels of provision as explained in Section 3. The target rate of return is taken to be an IRR of 10%.

Results from the Viability Testing

5.7 The viability testing indicates that the small sites tested – those comprising 3, 4, 5, 7 and 9 units - consistently show better returns than those for larger sites. Table 5.2 summarises viability for the different locations of schemes without grant and with grant of £40,000 per social housing unit and no grant for shared ownership (in practice given a 70/30 split the schemes are all dominated by social housing provision). These small sites are consistently more likely to meet the viability threshold than the larger sites tested in the previous stages of the study, even where grant is not available.

Table 5.2: Viability of Affordable Housing Provision without Grant and with Grant of £40,000 per Social Housing Unit and No Grant for Shared Ownership Unit

IRR Viability Target 10% pm on sites <50 units, 12.5% on sites of 50 & over units

● (green) **IRR >2.5% above target** ● (yellow) **IRR ± 2.5% from target** ● (red) **IRR > 2.5% below target**

		Level of Affordable Housing Provision					
		30%		**40%**		**50%**	
Location	**Site Size in Units**	**Without Grant**	**With Grant**	**Without Grant**	**With Grant**	**Without Grant**	**With Grant**
	3	Red	Green	Red	Green	Red	Green
	4	Yellow	Green	Red	Red	Red	Red
Urban	5	Red	Yellow	Red	Yellow	Red	Yellow
	7	Green	Green	Green	Green	Green	Green
	9	Green	Green	Yellow	Green	Yellow	Green
	3	Green	Green	Green	Green	Green	Green
	4	Green	Green	Yellow	Green	Yellow	Green
Suburban	5	Red	Yellow	Red	Yellow	Red	Yellow
	7	Green	Green	Red	Yellow	Red	Yellow
	9	Green	Green	Yellow	Green	Yellow	Green
	3	Green	Green	Green	Green	Green	Green
	4	Green	Green	Yellow	Red	Yellow	Red
Rural	5	Green	Green	Green	Green	Green	Green
	7	Green	Green	Green	Green	Green	Green
	9	Green	Green	Yellow	Green	Yellow	Green

5.8 The evidence points to viability being significantly affected where the number of units to be provided is rounded to the nearest whole number because the application of the quota produces a figure comprising a part unit for provision. Rounding up (from anything over 0.5 of a unit to a whole unit) damages viability, often significantly. Rounding down, especially from anything just below 0.5 unit to the nearest whole unit, enhances viability.

5.9 The sensitivity of viability to this process of rounding following application of the affordable housing quota suggests that a better policy solution would be always to round down the number of affordable housing units to be provided; but then to seek a contribution to affordable housing provision through application of a tariff, proportional to the part unit to be provided. It is generally to be expected that affordable housing units would be provided on site, but clearly the contributions relating to part units would build up a fund to support off-site provision.

Off-site Affordable Housing Tariff

5.10 The client authorities are also interested in understanding whether a tariff-based system would work. This could apply to sites of less than 10 units that would generate contributions to affordable housing provision instead of requiring on-site provision. This would secure a contribution to affordable housing provision on all development in an authority's area, even from development of a single dwelling. Guidance was sought on what level of tariff it would be appropriate to apply. Further discussion of this topic is contained in Section 6.

5.11 In developing the understanding of how a tariff system would work, DTZ considered the experience of other authorities who have implemented a similar policy. A tariff system needs to be simple and transparent so that developers can readily understand how their contribution will be calculated and where the money raised will be spent. Consideration needs to be given to how the tariff will be adjusted as market conditions change – and the data which will enable such changes to monitored and then used to adjust the tariff.

5.12 For the purpose of this study it was agreed that the tariff should capture the difference in the revenue that a site developed without affordable housing would generate for a developer, compared with a site developed in accordance with one that is policy compliant. This analysis was undertaken on the basis of a 40% affordable housing requirement without grant. In essence the figure to be calculated is the Gross Development Value (GDV) of the site with no affordable housing, less the value of the affordable housing when provided as 40% of the total number of units.

5.13 A study of five small sites in different locations was undertaken resulting in an average revenue difference for each site and location. In order to establish a figure that was applicable to sites of varying sizes, the revenue differential has been expressed on the basis of a per unit, per habitable room and per square foot basis (see Appendix 5 for results). The average difference broken down per unit, per habitable room and per square foot can be seen in Table 5.3.

Table 5.3: Revenue Difference between Small Sites Developed without Affordable Housing and Sites Developed with 40% Housing

Revenue Difference Per Unit	
Urban Location	£51,770
Suburban Location	£66,160
Rural Location	£76,410

Revenue Difference Per Habitable Room	
Urban Location	£19,350
Suburban Location	£18,920
Rural Location	£17,930

Revenue Difference Per Sq Ft of Gross Internal Area (Sq M)	
Urban Location	£68 (£732)
Suburban Location	£69 (£743)
Rural Location	£66 (£710)

5.14 The data presented in Table 5.3 was then used for a range of tariff options for 3, 4, 5, 7 and 9 unit schemes in urban, suburban and rural locations to establish the maximum tariff that could be applied while ensuring that development remains viable. Table 5.4 summarises the findings of the analysis, presenting figures on a unit, habitable rooms or net internal floor area basis. Figures are presented both for the level of tariff that, if applied, would render all schemes viable, and the level would render the majority of developments viable.

5.15 The analysis would indicate that in general a significantly higher tariff could be applied in rural and suburban areas than in urban areas. It is likely to be of particular interest to the local authorities that the tariff system looks as if it would yield significant contributions per unit or per habitable room in rural areas, given that such areas are more likely to have a higher proportion of new housing development in the form of development on small sites.

Table 5.4: Indicative Levels of Tariff Consistent with Maintaining Development Viability

Tariff Per Unit		
	All Sites	**Majority**
Urban	£30,000	£40,000
Suburban	£65,000	£75,000
Rural	£80,000	£80,000

Tariff Per Habitable Room		
	All Sites	**Majority**
Urban	£12,500	£15,000
Suburban	£17,500	£20,000
Rural	£20,000	£20,000

Tariff Per Sq Ft (Sq M)		
	All Sites	**Majority**
Urban	£40 (£430.6)	£55 (£592)
Suburban	£70 (£753.5)	£80 (£861.1)
Rural	£75 (£807.3)	£75 (£807.3)

6. Policy Implications

6.1 The purpose of this study is to inform the development of the affordable housing policies of the three commissioning authorities, Basingstoke & Deane Borough Council, Winchester City Council and East Hampshire District Council. The study addresses four key issues:

- What level of affordable housing provision is achievable on sites of more than 15 units and in specific circumstances should authorities seek to move from the current emerging policy proposal of 40% provision of affordable housing to a 50% affordable housing requirement or some intermediate level of requirement?
- Should affordable housing quotas be extended to sites capable of delivering less than 15 units of new housing and if so at what level?
- Should a standardised charge or tariff be developed to secure contributions to affordable housing provision from developments of less than 10 units; if so at what level should this tariff be charged?
- Could changing the tenure split between social rented housing and shared ownership or other intermediate housing, currently a 70/30 split, help deliver a higher proportion of affordable housing overall?

6.2 This final section of the report addresses these issues in turn. In doing so, DTZ draw upon the findings of the study, the analysis contained in the Central Hampshire Strategic Housing Market Assessment, and wider experience of the operation of affordable housing policies.

Policy Implications for Affordable Housing Quotas

6.3 The three commissioning authorities were, during 2007, generally securing quotas of around 30-40% of affordable housing in residential developments of more than 15 units, and policy is moving in the direction of seeking a 40% affordable housing quota without grant.

6.4 The viability study shows that increasing the quota of affordable housing by 10% typically decreases scheme profitability (IRR) in the region of 3% – 10% points. It also highlights that the key variable affecting viability with different levels of affordable housing quota is the value area in which a scheme is located.

6.5 The viability testing would indicate that a 40% affordable housing target should be deliverable without grant in high value areas, but that grant would probably be needed to support this level of provision in medium value areas. With the level of grant tested in this study low value areas would still struggle to meet this target even with grant at the highest assumed level.

6.6 It has been noted, however, that it may be possible for schemes in medium and lower value areas to establish a new benchmark in terms of value, that implies a higher new build premium over existing values. This is more realistic on large sites that are creating a new environmental context and offering a different lifestyle and housing product to that generally available in the area.

6.7 It is also important to note that the viability testing has been run on the basis of that developers have to pay the open market value of land with residential permission, which throughout the area exceeds £2.7 million per hectare. In practice part of the returns that many developers make are associated with the land value uplift of securing permission for development.

6.8 However, in deciding the level of affordable housing provision to be sought it is also important to consider what weight should be placed upon the current (2008) slow down in the housing market. Even if house prices have not fallen very far in Central Hampshire, sales rates of new homes have significantly slowed and this has an impact on development viability. But to what extent should policy reflect what may be a slow down of only two years duration?

6.9 DTZ's view is that the local authorities in establishing an appropriate target for affordable housing provision, should not be unduly swayed by the current problems of the housing market; rather they should establish a policy in terms of affordable housing quota that is robust in that it can be applied, with some flexibility, whatever the prevailing sentiment in the development market.

6.10 In achieving this objective the availability of grant aid should, if possible, be used flexibly to help achieve the policy objective at different stages in the market cycle. When the market is buoyant there should be less need to use grant aid on mainstream sites; when the market is depressed grant aid may need to be used to secure development even on mainstream sites. National government – through the Housing Corporation and, in future, the Homes and Communities Agency – should also adapt policy on grant levels to market conditions.

6.11 The level of other Section 106 contributions provide another area where flexibility can be applied to enable a particular policy on the level of provision of affordable housing to be applied in different housing market contexts, with willingness to rein back on imposing obligations at times when development is marginal; but seeking full contributions when the market is buoyant. Flexibility on the tenure mix of affordable housing provision can also help viability, though the way this helps viability is very specific to particular sites and potentially to vary with market conditions.

6.12 The analysis contained in this study would indicate that the following policies would be justified:

- A standard quota of 40% without subsidy or 50% with subsidy in high value areas
- A standard quota of 30% without subsidy or 40% with subsidy in medium value areas
- A standard quota of 20% without subsidy or 30% with subsidy in low value areas

6.13 However, DTZ anticipate problems embedding the notion of differential policies in different value areas in policy for four reasons:

- First, this will require definition of the value areas, and the reality is that value areas do not have hard and fast boundaries; they blend into each other
- Second, value areas can change over time and to have a policy based on value areas would imply the need for some system of updating

- Third, there is the likelihood that some schemes, as noted above, are not constrained by the value geography in which they are located and can establish new values
- Finally, the use of value areas would create complexity for developers, when in reality developers would probably prefer simplicity, since that can then inform what they pay for land.

6.14 In view of these considerations DTZ would recommend that the authorities move towards an affordable housing quota that:

- Either continues with the practice of a number of the authorities of specifying different affordable housing requirements in different settlements or geographies, since these broadly reflect value zones
- Or adopt a single quota that is uniform across the District but acknowledges that scheme economics will vary, and that this can be taken into account in negotiations and access to grant aid.

6.15 Broadly across the study area a 40% target for affordable housing, based on a presumption that grant is not available would be consistent with the findings of this study, provided some degree of flexibility is built in, in terms of access to grant aid, or ability to reduce other commitments in lower value areas or at times when the market is depressed. A somewhat lower target (eg 35%) might be appropriate in lower value large settlements, where a higher target (eg 45%) might be appropriate in higher value areas. A 50% target without grant would present difficulties in delivery.

Affordable Housing Provision on Small Sites

6.16 The study brief asked if affordable housing policies should be extended to sites of less than 15 units in order to generate a greater supply of affordable housing.

6.16 One clear message from the study is that the viability of small sites is very sensitive to the application of a quota to a site. Where the application of a quota results in a requirement for a part of a unit, it can produce a significant adverse effect on viability if the requirement is rounded up to the nearest unit.

6.17 Thus if affordable housing quotas are to be applied to small sites, the provision expected should always be rounded down to the nearest unit, and never upwards. An option is to seek a financial contribution in relation to the fractions affordable housing that arise from the application of quotas to small sites.

6.18 This is already embedded in adopted policy in Winchester, and if it is applied as policy in all three authorities, the broad message of the analysis is that small sites are no less viable than larger sites; and have similar ability to deliver affordable housing without or with grant. There is no reason therefore in terms of economic viability not to extend affordable housing policies to all residential developments.

6.19 Interestingly the study indicates that there is greater potential to provide affordable housing on small sites in locations where larger properties are developed, that is in rural and suburban sites, because of the higher revenues generated by large private dwellings. Given that rural areas are probably more reliant on small sites than large sites, the extension of affordable housing requirements to small schemes could make a particular contribution to housing provision in rural areas.

6.20 However, some caution must be adopted in rushing to extend affordable housing requirements to smaller sites. Firstly, the smaller the site, the more very specific site characteristics may dominate viability, and the less generic assumptions on costs and values may hold true. This may be more likely to be an issue for rural schemes than urban and suburban schemes, particularly if they do not, as assumed, deliver larger units.

6.21 There may, also, be reasons other than viability why it would be problematic to apply policy to smaller sites. First it remains the case that not all smaller sites can support development without grant aid. Yet it might well be administratively complex to deliver grant aid to such small schemes. Existing RSLs might not want to incur the burden of negotiating and bidding to provide units on sites that would deliver only two or three units.

6.22 Similarly, associations could be reluctant to take on management of small numbers of affordable homes, pepperpotted across communities, especially in locations where they have little existing stock, though this is not reported to be an issue in the study area. Associations naturally prefer to manage schemes where significant numbers of units are clustered together. It could be costly under existing arrangements to manage a portfolio of affordable housing units widely distributed across a large geography

6.23 Such problems are not insurmountable but could call for innovative approaches. For example it might be necessary to establish some form of block grant arrangement with delegated approval systems to deliver grant aid to small sites for one, two or three projects. Similarly it might be necessary to put in place some form of tailored management arrangements perhaps using local letting agents.

6.24 There will be additional revenue costs if such arrangements have to be adopted and the means will need to be found to fund such arrangements. There are parallels with the support provided by authorities to bring empty homes back into use or encourage care and repair of homes owned by elderly or disabled people. One source of revenue funding for such an initiative might be the developer contributions that relate to part units that cannot be built on site.

6.25 In view of these issues, if the authorities wish to pursue the idea of extending affordable housing to sites that will deliver less than 15 dwellings, DTZ would recommend further study be undertaken to establish the practical outworkings of such a policy in terms of how it would be run, the impact on the type of builders who undertake smaller schemes, and a deeper consideration of how viability varies on small sites. This should build upon the experience of Winchester City Council's existing policy of seeking affordable housing on sites of five or more dwellings.

6.26 However, DTZ believes this would be a fruitful line of enquiry, given the possibility that over time small sites could make an important contribution to affordable housing provision, possibly in areas with limited options for alternative provision.

Developing a Tariff-Based System for Affordable Housing Contributions

6.27 As discussed above, the application of affordable housing quotas to small sites has promise but raises a number of delivery issues. This study has therefore also considered the impact of adopting a standardised tariff contribution on sites of fewer than 10 units.

6.28 Whilst PPS3 encourages the on-site provision of affordable housing to create mixed communities, there are some instances where any off-site contribution might deliver a better housing outcome. This is specifically relevant if the authorities intend to extend the affordable housing requirement to all developments, since under certain circumstances on-site provision may not be possible for financial and management reasons. In these circumstances a tariff to support off-site development could be a better way to support the provision of affordable housing.

6.29 Broadly the patterns of profitability on small sites are the same whether assessed in terms of their ability to deliver affordable housing on-site or their ability to make an off-site contribution through a tariff. As reported in Section 6 and Appendix 6, the impact of range of tariff levels on viability were tested, on the presumption that schemes should be assessed on the basis of equivalence with the return they would generate if meeting a 40% affordable housing requirement.

6.30 In developing a tariff it would be important to create a simple and transparent scheme so that small developers and builders know precisely what they will be expected to contribute. It would probably be important to set a single tariff applicable across the district set at a level which ensures that all, or the greater majority of schemes, are viable and will not deter development.

6.31 The indicative *maximum* tariffs that would achieve this objective, based on the general assumptions made throughout the study are set out in Table 6.1. This would indicate that a tariff system could generate a useful level of funds to support affordable housing provision. In practice there might well be merit in establishing the principle of a tariff system starting with a lower level of tariff to explore how it works in practice. But the potential scale of funds that might be realised suggests that further work to establish how in practice a tariff scheme would work would be worthwhile.

Table 6.1 Indicative Levels of Tariff Consistent with Maintaining Development Viability

	Tariff Per Unit	
	All Sites	**Majority**
Urban	£30,000	£40,000
Suburban	£65,000	£75,000
Rural	£80,000	£80,000

	Tariff Per Habitable Room	
	All Sites	**Majority**
Urban	£12,500	£15,000
Suburban	£17,500	£20,000
Rural	£20,000	£20,000

Tariff Per Sq Ft (Sq M)		
	All Sites	**Majority**
Urban	£40 (£430.6)	£55 (£592)
Suburban	£70 (£753.5)	£80 (£861.1)
Rural	£75 (£807.3)	£75 (£807.3)

6.32 One of the key considerations would be to determine whether the tariff should be applied on a unit, habitable rooms or on the basis of net internal floorspace (measured in sq m or sq ft). A tariff per square foot yields the greatest contribution but may not be practical to implement. A tariff per unit is perhaps the simplest, but yields the minimum contribution and does not account for unit size variations, which this report suggests is a major factor determining returns on sites of this size.

6.33 At this stage DTZ would view a tariff based on a per habitable room basis as having the most merit. This would allow differentiation between developments of larger and smaller units, with higher contributions being secured from larger units than small units, reflecting their greater profitability in most situations. However, a tariff based on habitable rooms is relatively easy for developers to understand and for the authorities to apply without dispute, provided the definition of habitable rooms is clearly specified.

6.34 Another issue is whether the tariff is fixed or is capable of variation by reference to some external measure of, for example, sales values. The basis of the tariff should be clear and ideally be able to take account of changes in market values based on generally accepted publicly available information. Some authorities for example have established a system that relates the tariff to the average house price in the district. A new benchmark is published on an annual basis and the tariff updated in the light of this change. It might also be possible to adopt the same principle but to base the tariff on the prices of new homes.

6.35 While this study has established that in most cases a tariff could be sustained, further work would also be required to refine the analysis to decide the appropriate level of the tariff as well as the practical issues of implementation and how it would play out in different locations with divergent land and property prices. It is helpful that Winchester City Council already has some experience of applying tariffs and any study can draw upon the experience in Winchester in making broader recommendations for the whole study area.

6.36 One specific issue that would merit further investigation is the apparent evidence that rural areas would sustain a higher tariff than urban and suburban areas. This needs to be tested since it is inter-linked with assumptions that larger units, which generate more revenue, can be developed in rural areas. It is important to test this because a tariff approach could be particularly helpful in generating contributions to affordable housing issues from developments in rural areas and could be applied to meet rural housing need.

Establishing Viability on a Scheme by Scheme Basis

6.37 This study has, as explained previously, examined viability at a strategic level looking at viability on archetypal sites across the sub-region using a consistent basis of assumptions tailored to different site and locational characteristics. It does not seek to establish viability on particular sites. The three authorities can expect developers to seek reductions in the affordable housing they are expected to provide, arguing that their scheme is not viable with the level of affordable housing implied by policy. It is important that authorities are equipped to handle the resultant negotiations.

6.38 As part of this study DTZ was asked to review and comment on existing models for individual site appraisals. In essence there are three tools available to assist in appraising the impact of affordable housing provision on site viability. The three tools available are:

a **The Housing Corporation '*Economic Appraisal Tool'***: This uses an economic assessment of the site to predict and agree the viability of proposed levels of affordable housing and to demonstrate the additionality that grant investment will deliver over and above on-site developer contributions whilst ensuring the grant doesn't inflate residual land value.

b **The GLA '*Three Dragons'* Toolkit**: This was produced for the Greater London Council and contains specific default settings for London. As with the Housing Corporation tool, the main output of this toolkit is a residual value. The toolkit estimates the impact of different quotas of affordable housing on residual land value. It is then up to the judgement of the user as to implications of this impact on land value.

c **Argus Circle Developer**: Circle Developer is the industry standard development appraisal software. It allows for multi-phasing and in depth analysis of project make up. The output as with other models is a residual land value with a detailed cash flow. This is the tool used by the majority of developers for undertaking their own financial appraisals.

6.39 The three chosen toolkits have very similar outputs. The authorities will need to make a decision as to where their priorities lie with regards to which financial appraisal best suits their specific objectives.

- The most accurate and widely used in the market is Circle Developer. This however is costly to buy and requires a degree of specialist expertise to use. At present the software also lacks a user guide which is overcome by a helpline, but this is often difficult to access so organisations rely on in-house expertise.
- The GLA 'Three Dragons' toolkit is a useful benchmarking tool for the London Boroughs but lacks the functionality of Circle and the Housing Corporation model. DTZ suggests there is potential here to adapt the GLA toolkit and apply specific default values for the region. This adaption would have to be undertaken by the vendor, but we would not foresee this being too costly to implement.

6.40 On balance DTZ recommend that that the authorities explore acquiring access to the Three Dragons tool kit, but recommend that consideration be given to joint procurement by the Hampshire authorities as a whole or some similar consortium. This would provide efficiencies in purchasing and in the development of the necessary skill set to use the model. Consideration might be given to identifying one or two 'super users' who build up expertise in the use of the software and can provide assistance to other users when necessary.

Executive Summary

1 This study, prepared by DTZ during the course of 2007, has been undertaken to inform the development of affordable housing policies Basingstoke & Deane Borough Council, East Hampshire District Council and Winchester City Council. It examines the impact of affordable housing policies on the viability of housing development.

2 The report assesses the viability of sites of different sizes and locations, and in areas with different prevailing values of land and new homes, under a number of different scenarios based on different required levels of affordable housing (30%, 40% and 50%) and different levels of grant aid for affordable housing grant, including nil grant.

3 The approach used has been to identify a suite of archetypal sites – hypothetical sites that are typical of the size and location (urban, suburban and rural) of sites coming forward in the study area. The modelling takes account of the divergence in land values and new homes values across the study area by examining viability in high value, medium value and lower value zones. Viability is assessed in terms of the return made by the developer.

4 The study has also examined the impact that density has on the viability of development. Likewise the impact on viability of changing the balance of social rented housing and shared ownership within the affordable housing mix has been considered. Special attention has also been given to small sites that will deliver fewer than 10 new homes.

5 The viability testing indicates that a 40% affordable housing target should be deliverable without grant in high value areas, but that grant would probably be needed to support this level of provision in medium value areas. With the level of grant tested in this study, low value areas would still struggle to meet this target even with grant at the highest assumed level.

6 However, it may be possible for schemes in medium and lower value areas to establish a new benchmark in terms of value, that implies a higher new build premium over existing values. This is more realistic on large sites that are creating a new environment and offering a different lifestyle and housing product to that generally available in the area.

7 It is also important to note that the viability testing has been run on the basis of that developers have to pay the open market value of land with residential permission, which throughout the area exceeds £2.7 million per hectare. In practice part of the returns that many developers make are associated with the land value uplift of securing permission for development.

8 DTZ concludes that the prevailing land and new homes values in an area are the key determinant of viability with a given affordable housing requirement. However it is not practical to set affordable policies by reference to value zones, so DTZ recommend that the authorities move towards an affordable housing quota that:

- Either continues with the practice of a number of the authorities of specifying different affordable housing requirements in different settlements or geographies, since these often broadly reflect value zones
- Or adopt a single quota that is uniform across the District but acknowledges that scheme economics will vary, and that this can be taken into account in negotiations and access to grant aid.

9 Across the study area a 40% target for affordable housing, based on a presumption that grant is not available, would be consistent with the findings of this study, provided some degree of flexibility is built in, in terms of access to grant aid, or ability to reduce other commitments in lower value areas or at times when the market is depressed.

10 The study brief has also examined if affordable housing policies should be extended to sites of less than 15 units in order to generate a greater supply of affordable housing. The study concludes that small sites are no less viable than larger sites; and have similar ability to deliver affordable housing without or with grant. There is no reason therefore in terms of economic viability not to extend affordable housing policies to all residential developments.

11 If affordable housing requirements are extended to sites involving development of less than 15 units, the expectation should be that the affordable homes are provided on site. However on smaller sites (less than 10 units) the application of a fixed quota will often imply provision of a certain number of units and a fractional part of the unit.

12 Viability on small sites is very sensitive to treatment of whether the fractional unit is rounded up or down. The study concludes that provision should always be rounded down, but there is the option of seeking a financial contribution to offsite provision linked to the fact that the fractional unit is not being provided on site. This will ensure that all developers are treated equally.

13 In parallel with the assessment of the viability of small sites, an assessment has been made of whether it might be appropriate to apply a tariff to small sites that would contribute to off-site provision of affordable housing. This represents an alternative way of achieving the same objective of increasing the supply of affordable housing by bringing small sites within the scope of affordable housing policy requiring on-site provision.

14 The study has calculated the tariff that should be applied that is equivalent in terms of its impact on viability to a 40% affordable housing requirement. It is probable that some form of tariff system would need to be run in parallel with the application of affordable housing requirements to small sites, to allow for those cases where on-site provision is not realistic and also to gather contributions relating to requirements for 'fractional' units of affordable housing.

15 While the study indicates that the extension of affordable housing policies to small sites should in general continue to provide adequate returns to developers, there are a wide range of practical issues of implementation of such a policy that would need to be addressed to establish that it will achieves the policy objective of delivering more affordable housing. Further work is required on these issues.

16 The study also considered whether changes in density could deliver a higher level of affordable housing. In general the middle range of densities assumed – which are based on those most typical of new developments in recent times – deliver the highest returns, indicating that there is little scope for increased affordable housing provision to be made by encouraging development at different densities. Only on rural schemes would higher densities deliver higher returns and hence possibly increase the scope for affordable housing provision.

17 Increasing the proportion of shared ownership in a scheme generally improves viability but only very marginally. Changing the mix of affordable housing provision, from the assumed

level of 70% social rented housing and 30% shared ownership, to higher levels of shared ownership, would not therefore greatly increase affordable housing provision overall. The flexibility to change the mix may however be valuable in negotiating affordable housing provision in cases where development is marginal.

18 Throughout the study DTZ have had regard to the fact that not all aspects of viability can be captured in a structured modelling exercise such as that undertaken. The modelling informs rather than dictates policy development, and in the process of making assumptions, interpreting results and developing recommendations, DTZ have had regard to the need to make robust recommendations, that can be suited to changes in the market environment.

19 The majority of the analysis was undertaken during the buoyant housing market conditions of the first half of 2007. However DTZ's view is that the local authorities in establishing an appropriate target for affordable housing provision, should not be unduly swayed by the current problems of the housing market; rather they should establish a policy in terms of affordable housing quota that is robust in that it can be applied, with some flexibility, whatever the prevailing sentiment in the development market.

20 In achieving this objective the availability of grant aid should, if possible, be used flexibly to help achieve the policy objective at different stages in the market cycle. When the market is buoyant there should be less need to use grant aid on mainstream sites; when the market is depressed grant aid may need to be used to secure development even on mainstream sites. National government – through the Housing Corporation and, in future, the Homes and Communities Agency – should also adapt policy on grant levels to market conditions.

1. About This Study

1.1 DTZ was commissioned in March 2007 by Basingstoke & Deane Borough Council, East Hampshire District Council and Winchester City Council to examine the likely impact of a range of potential affordable housing policies on development viability.

1.2 The study has been undertaken alongside the Central Hampshire Strategic Housing Market Assessment (SHMA), also prepared by DTZ, commissioned by the same local authorities as have commissioned this study, plus New Forest District Council and Test Valley Borough Council.

Study Purpose and Objectives

1.3 A growing proportion of affordable housing is delivered via Section 106 Agreements. It is increasingly important therefore that local affordable housing policy is realistic and credible, taking into account the local housing market, house prices, supply, demand and need issues. Hence this viability study sits alongside and is informed by the work of the SHMA.

1.4 However, the SHMA does not consider the impact of affordable housing policies on viability. This is the purpose of this study. The viability assessment is designed to ensure that any policy proposals for affordable housing put forward by the authorities are not so onerous that they thereby prevent sites from coming forward and stifle development of, not only affordable housing, but also open market housing.

1.5 The specific objectives of the study as set out in the terms of reference are to assess the impact on economic viability of the following variations to your affordable housing policy:

1. On sites capable of achieving 15 or more units whether a minimum 40% affordable housing target be retained or could this be increased to 50% or some intermediate point? To consider the impact of achieving these targets with and without grant subsidy, at three different levels, and the impact of other S.106 obligations.

2. On sites capable of achieving 10-14 units, what would be the maximum proportion of affordable housing that could be achieved on site both with and without grant assistance/other S.106 contributions?

3. On sites capable of delivering between 1 and 9 units, whether some form of standardised charge/tariff be levied and at what level should this be set?

4. Whether the current tenure split between intermediate and social rented units of 70% to 30% is appropriate, or whether a different tenure split would assist in delivery of a greater overall proportion of affordable housing.

Study Approach

1.6 It has been important for the study to test viability of different types of sites in different locations, in order to understand how viability varies with site size, different values of the housing developed and in different locations. It has therefore been necessary to develop a typology of the different types of sites that are likely to come forward for housing provision and to test the viability of development under a set of different development scenarios.

1.7 The typology of sites to be assessed was developed in conjunction with the client local authorities to reflect the authorities' own experience of the range of type of sites and locations which they would envisage will come forward through the planning system for future provision of housing. There was also a specific desire to test viability for small sites eg small sites of less than 15 units, and this has been the subject of specific study.

1.8 The resultant typology has allowed viability to be tested on sites that differ in terms of site values, site size and whether the hypothetical development is located in a predominantly urban, suburban or rural location. This approach allows different policy options to be tested in a consistent manner across a range of likely development scenarios. This would not be possible in the same way had the study focused on actual sites where the particular features of those sites would inevitably have made it difficult to generalise about viability.

1.9 Central to the assessment of the viability of housing development is the concept of residual land value[1.] Residual land value is the value that can be attributed to the land, when the total costs of the development, including an allowance for profit, is deducted from the sales values of the housing built on the site. If the residual land value is higher than the existing use value then the development can be deemed viable; if it is below then the development will not be considered viable by the market.

1.10 The majority of developers assess the viability of a prospective development by calculating residual land value. Having calculated its residual present value, developers use discounted cash flow[2] analysis to calculate the Internal Rate of Return (IRR)[3] for the project (see also Appendix 7). IRR calculation is a technique that allows different investment options to be compared on a like for like basis. The higher a project's IRR, the more desirable it is to undertake.

1.11 For the purpose of this study DTZ have assumed, based on our experience of working with developers, that a developer will require a minimum IRR of 10% if they are to proceed with the development of a small scheme, defined as being of less than 50 units; and that the developer will require an IRR of 12.5% when developing sites of more than 50 units. The higher level required for larger sites reflects the higher risks associated with larger developments.

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 Cash Flow (DCF) valuation approach is used to value a project using the concept of the time value of money. All estimated future cash flows are discounted by a % value usually representing interest on finance to return the future cash flows 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.

Developments that would yield less than these thresholds are deemed not to be viable since they do not generate the target rate of return.

1.12 In summary, the key questions the study addresses are whether the level of affordable housing and the balance of tenure proposed is deliverable, whether a particular level of affordable housing provision will inhibit development generally, and, by implication, what level of affordable housing provision can delivered with and without subsidy. The study shows how viability is affected, when subsidy is likely to be required, and the level of subsidy that would be required to render the development viable.

Report Structure

1.13 The rest of this report is structured as follows:

- Section 2 presents information on the policy context of this study, in terms of national policy on affordable housing provision, focusing particularly on the assessment of viability; and the current affordable housing policies of the three client authorities
- Section 3 sets out in more detail the study approach and the assumptions that underpin the viability analysis
- Section 4 presents the results of the analysis of mainstream sites, that is, sites capable of delivering over 15 units
- Section 5 presents the results of the analysis of sites of less than 15 units in terms of their ability to provide affordable housing on site, or off-site through a tariff mechanism
- Section 6 draws out the implications for policy of the results and makes recommendations to the client authorities for their consideration.

2. Policy Context

2.1 This section provides context for the subsequent assessment of viability. It first examines national policy guidance on planning for affordable housing provision and the relevance of viability to policy making. The section then goes on to consider the current affordable housing policies of the three local authorities that commissioned this study. In every case the current policies are subject to review as the authorities move towards completion of the Local Development Framework process.

National Planning Policy and Affordable Housing Provision

2.2 The key statement of the Government's policies for planning and affordable housing provision is Planning Policy Statement 3: Housing, published in November 2006. Affordable housing in PPS3 is defined as follows:

'Affordable housing includes social rented and intermediate housing, provided to specified eligible households whose needs are not met by the market. Affordable housing should:

- *Meet the needs of eligible households including availability at a cost low enough for them to afford, determined with regard to local incomes and house prices.*
- *Include provision for the home to remain at an affordable price for the future eligible households or, if these restrictions are lifted, for the subsidy to be recycled for alternative affordable housing provision'.*

2.3 PPS3 makes it clear that the Government aims to ensure that the planning system ensures that enough land is identified and brought forward for development of new housing in line with targets established by government and determined through the Regional Spatial Planning process. But the Government recognises that in order to do so, land values must be high enough to encourage landowners to sell land for housing.

2.4 The Government therefore requires local authorities not to impose a burden of planning gain and affordable housing that is so great as to depress the land value below that which is sufficient to bring land forward. This is reflected in PPS3 (paragraph 29) which places a requirement on local authorities to set a target for affordable housing provision to be delivered through Section 106 policies that takes into account the need for development to be viable, once allowance is made for factors such as the availability of grant funding.

2.5 PPS3 indicates that local authority affordable housing policies need to be developed on the basis of a robust evidence base. Policy must be deliverable, not merely aspirational. However, while detailed guidance is available on the assessment of housing need and demand, there is no formal government guidance on how viability should be tested. PPS3 was prepared before the current slowdown in the housing market and the government has not advised local authorities on how they should respond to changes in market context as they develop their policies.

2.6 This report was prepared in 2007, before the current downturn in the market took hold. DTZ's view is that it is inevitable that viability studies will be undertaken at a particular point in time, and reflect a particular set of market circumstances, but the information they yield on how viability varies by site size, development context etc remains useful for policy making even in a changed market environment. Planning policies for affordable housing also need to be set for the long term, and should have sufficient flexibility to cope with short term changes in the market.

2.7 This does imply, however, that authorities need a degree of flexibility in the application of their affordable housing policies. The existing system allows for developers to make the case to authorities that a policy requirement cannot be delivered on a particular site given the particular circumstances of that site. Some inherent flexibility into how policy requirements for affordable housing can be met is built into the system by options to change the tenure mix (between social rented and intermediate housing for sale) and availability of grant.

2.8 However it is well known that developers, when acquiring sites in a competitive situation, do not always fully allow for the costs full affordable housing provision in accordance with policy. Similarly, developers will not immediately adjust their bid prices to reflect changes in affordable housing and/or planning policy. It should not be the role of planning policy to compensate developers who have overpaid for land or misjudged other aspects of development costs or revenues by simply adjusting the level of affordable housing that should be delivered on a site.

2.9 Local authorities need therefore to appreciate how development viability is assessed, and to be in a position to negotiate where necessary over affordable housing requirements, while seeking to ensure that policies can be applied to the majority of developments. The balance between being sufficiently robust and forceful to ensure that every application is not the subject of negotiation, while being sufficiently flexible to recognise special circumstances is a difficult balance to strike, but it is in the interests of both the development industry and local authorities to find the right balance.

2.10 Government could greatly help authorities by providing greater guidance on how to translate the findings of viability studies into local policy, and by ensuring flexibility in the funding of affordable housing – so that affordable housing provision is not totally dependent on provision through Section 106 agreements, and by ensuring there is flexibility in when grant for affordable housing provision will be available.

Basingstoke and Deane Borough Council

Definition of Affordable Housing

2.11 Basingstoke and Deane Borough Council's 'Affordable Housing Draft Supplementary Planning Document, May 2007' uses the following definition of affordable housing from the Local Plan: *'Affordable housing is that provided, with subsidy, both for rent and low cost market housing, for people who are unable to resolve their housing requirements in the general housing market because* of *the relationship between local housing costs and incomes.'*

Site-size thresholds

2.12 Policy C2 of the Local Plan requires that affordable housing be provided as part of any development of:

- 25 or more dwellings or on a site of 1 hectare or more, within Basingstoke town.
- 15 dwellings or 0.5 hectares within settlements with a population of at least 3,000 outside Basingstoke town; and
- 7 dwellings or 0.2 hectares for those settlements with fewer than 3,000 population.

2.13 Those settlements outside Basingstoke town with a population of at least 3,000 and to which the 15 dwellings or 0.5 hectare threshold apply are identified as:

- Bramley
- Kingsclere
- Oakley
- Old Basing
- Overton
- Tadley / Baughurst / Plamber Heath
- Whitchurch

2.14 Consideration as to whether a development meets the threshold for providing affordable housing is on the basis of net increase in the number of dwellings on the site.

2.15 On the basis of 'PPS3: Housing' it is proposed that the minimum site size threshold applied to sites in Basingstoke town will be reduced to 15 dwellings from 1st April 2007.

Provision

2.16 Local Plan Policy C2 confirms that the Council will negotiate the provision of an element of affordable housing on all housing sites above the identified threshold taking into account the specific circumstances of each site. Policy C2 confirms that, whilst accepting levels may vary on a site-by-site basis, the starting point for negotiation will be that 40% of the total dwellings on the site should be provided as affordable housing.

2.17 The council will take into account the range of other planning obligations and costs associated with a particular development as part of the negotiations on the proportion of affordable housing to be required. Where there are disagreements between the Council and the developer over issues of viability, the developer will be expected to provide a full financial appraisal to demonstrate their case.

2.18 If the council is satisfied that the financial appraisal confirms that the affordable housing cannot be provided in line with Policy C2, the council will agree an alteration in the tenure mix required, and if the proposal is still not considered viable, may consequently agree to a reduction in the overall affordable housing requirement.

Size and Tenure

2.19 The precise type, size and standard of affordable housing will be subject to negotiation with the developer and will be dependent on the housing need at the time of the planning application, based on a consideration of the Housing Register, Housing Needs Assessment, and Rural Housing surveys.

2.20 The starting point for negotiation is that at least 25% of each development should comprise affordable housing for rent and that at least a further 15% should comprise intermediate housing.

2.21 The Council considers that where a requirement for affordable housing is considered appropriate, it should be provided on-site as part of the development. However, there may be exceptional circumstances that would justify a financial or other contribution towards the provision of affordable housing elsewhere in the Borough.

Rural Exceptions

2.22 Policy D8 of the Local Plan states that the Council seeks to provide the means whereby housing for local people in rural locations can be provided where open market housing would not normally be allowed. In smaller rural settlements (below 3,000 population) exception sites should not exceed 0.4ha; for larger settlements (over 3,000 population) sites should not exceed 0.8ha.

East Hampshire District Council

Definition of Affordable Housing

2.23 Affordable housing is defined in the East Hampshire District Local Plan: Second Review, March 2006 as: '*Housing available over the long term to local households who are not able to meet their own housing needs through buying or renting on the open market'*

Site-Size Threshold and Provision

2.24 The policy document *'Implementation of the Policy for Affordable Housing (2006)'* states that the Council expects to achieve a 35% affordable housing quota:

i) in settlements with a population of more than 3,000 developments of 15 dwellings or more, or sites of 0.5 hectares or more;
ii) in settlements with a population of 3,000 or less, developments of 5 dwellings or more or sites of 0.15 hectare or more.

Size, Type and Standard

2.25 The affordable dwellings will be required to be provided to a type, size and standard agreed by the Council. The type and size of dwelling will be expected to reflect the identified housing need. The Council will expect all social rented homes to comply with the Housing Corporation's Scheme Development Standards.

2.26 The Council's minimum space standards for affordable housing are set out below:

Dwelling Type	1 Bed F	1 Bed H	2 Bed F	2 Bed H	3 Bed H	4 Bed H
Min size	45sq.m	51sq.m	65sq.m	76sq.m	86sq.m	101sq.m

Tenure

2.27 The Council's preferred tenure is affordable homes for social rent. On larger sites the council will seek a range of tenures, including both social rent and intermediate housing. The mix will be determined on a site by site basis, depending on local demand, but housing for rent will continue to be the predominant tenure required to help those in greatest housing need.

2.28 The Council will encourage the development and management of affordable housing schemes by or in partnership with Housing Associations, as this ensures that dwellings are available to local people and funding can be sought to ensure that the housing meets local need.

Developer Contributions

A *'Guide to Developers' Contributions and other Planning Requirements'* has been produced by the Council setting out the Council's adopted policies for developer contributions to infrastructure, open space and community and amenity facilities. The development must comply with the open space standards set out in the Policy R3 of the adopted Second Review of the Local Plan.

Winchester City Council

Definition of Affordable Housing

2.29 The Winchester District Local Plan Review 2006 defines affordable housing as '*housing provided, with subsidy, for people who are unable to resolve their housing requirements in the local housing market because of the relationship between housing costs and incomes' (Para 6.44).*

Provision and Site-Size Threshold

2.30 Policy H.5 of the District Local Plan Review states that WCC will permit housing development on suitable sites subject to the following affordable housing provision:

i) Where 15 or more dwellings are proposed, or the site is 0.5 hectares or more
- 40% provision within the defined built-up area of Winchester
- 30% provision within the defined built-up areas of the other larger settlements.

ii) 40% provision within the Major Development Area at Waterlooville and the Strategic Reserve Major Development Areas at Waterlooville and Winchester City (North), if confirmed.

iii) 30% provision within the defined built-up areas of the smaller settlements and elsewhere in the District, where the site can accommodate 5 or more dwellings, or exceeds 0.17 hectares

iv) 35% of the housing within the Local Reserve housing sites (should the need for the release of any of these sites be confirmed) at:

- Pitt Manor, Winchester
- Worthy Road/Francis Gardens, Winchester
- Little Frenchies Field, Denmead;
- Spring Gardens, Alresford.

2.31 Policy H.5 goes on to indicate that the number, type and tenure of the affordable dwellings will be negotiated for each development, taking into account the need for affordable housing, market and site conditions, and other relevant factors.

2.32 The Winchester District Affordable Housing Supplementary Planning Document (adopted February 2008) amplifies how Local Plan Policy H.5 will be operated, by providing guidance on the affordable housing development process and the design of affordable homes through 13 SPD policies. The vast majority of households on the housing registers need, and can only realistically afford, social rented housing. The priority is, therefore, the provision of social rented housing. The SPD defines the Council's priorities as:

- Priority 1: To meet Council objectives by providing additional social rented housing
- Priority 2: To meet Council objectives by promoting high quality affordable housing that contributes towards sustainability, provides a suitable range of housing types and sizes, and helps create mixed and balanced communities.

2.33 Provision should, preferably, be by a partner RSL although an alternative provider may be agreed with the Council. Affordable housing land should be made available clean and serviced, and at nil cost. Reasonable build costs can be required.

Size and Type

2.34 Policy 1 of the District Affordable Housing Supplementary Planning Document indicates that a variety of affordable dwelling types and sizes should be provided to meet the wide range of identified housing needs.

2.35 The mix of housing required on individual sites will be determined by the City Council taking account of local housing needs and the character of the remainder of the development and neighbourhood. The affordable housing element will be of a similar size (in terms of bedrooms) and character to the market dwellings on the development site, unless identified housing needs indicate an alternative dwelling type is required.

2.36 Most developments will be expected to provide a range of housing sizes and/or types, including a significant proportion of family homes. As a general rule, smaller homes will be acceptable in city centre locations, whereas in suburban areas a greater emphasis will be put on providing houses. Local Planning Policy H.7 requires that at least 50% of the total number of dwellings (market and affordable) will be either 1 or 2 bed.

Tenure

2.37 Policy 2 of the District Affordable Housing Supplementary Planning Document indicates that priority is given to the provision of affordable housing for social rent. Where five or less affordable dwellings are to be provided all should be for social rent. Any additional dwellings should be split evenly between social rented and intermediate tenures.

2.38 Where more than five dwellings are proposed then, unless there are local reasons to suggest otherwise, such as housing need or neighbourhood tenure mix, the split between any affordable dwellings should be 50% social rented, 50% intermediate affordable housing.

Layout

2.39 Policy 3 of the District Affordable Housing Supplementary Planning Document states that affordable housing should be well integrated with market housing, in a way which results in different kinds of housing being in close proximity to each other. Large groupings of single tenure dwellings and dwelling types should be avoided. As a guide there should normally be no groupings or more than 5 affordable dwellings, except when they are provided as flats, when a higher number may be appropriate.

Design Requirements

2.40 Policy 4 of the District Affordable Housing Supplementary Planning Document states that affordable dwellings should be indistinguishable from market housing in terms of appearance. Dwellings should meet the Housing Corporation Design and Quality Standards and achieve, at least, Code for Sustainable Homes Level 3 (or equivalent Housing Corporation requirements) to secure funding. Developers should work to these standards and to individual RSL design briefs. Dwellings should be built to Lifetime Home Standards unless there are demonstrable reasons why this cannot be achieved in a particular site.

Public Subsidy

2.41 Policy 11 of the SPD states that affordable housing should be delivered free of public subsidy, unless the use of subsidy would improve the number or mix of dwellings, in which case the level of subsidy needed should be minimised.

Off-site Contribution

2.42 The SPD states that affordable housing should be provided on-site except in the following circumstances:

- Where the proportion sought would result in a part of the dwelling being required (e.g.10.2) then a financial contribution may be offered in lieu of that part (0.2).
- In smaller developments off-site contributions will be sought if this is a more effective way of achieving affordable housing provision, having regard to site and viability considerations.
- Where an applicant wishes to displace all or part of the affordable housing requirement (whole dwellings only) to another site. This will only be permitted where:

a Alternative provision is proposed that would allow priority needs to be better met and better support the creation of mixed and balanced communities, or;

b Provision on-site would necessitate an unacceptable level of alteration to a listed building.

2.43 Where an off-site contribution is accepted a developer should make a contribution of clean serviced land (in the same settlement, unless alternative provision would better meet needs) with the necessary planning permission at nil cost.

3. Study Approach and Assumptions

3.1 The approach adopted in this study to appraise viability uses standard techniques of development appraisal such as are common place in the development industry. These use Discounted Cash Flow analysis to calculate the Internal Rate of Return (IRR) for developments with particular characteristics (see Appendix 7 for a more detailed explanation of the IRR calculation and DCF analysis)

3.2 The study calculates the IRR under a range of different development scenarios in terms of the location, sales value, density of archetypal developments designed to be broadly representative of the type of sites likely to come forward for development in the study area. A scheme is deemed to be viable if it achieves a certain defined IRR – 10% on sites yielding less than 50 dwellings, and 12.5% on sites entailing development of more than 50 dwellings.

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

- Stage 1 involved market research to determine land values, unit sizes, unit mixes and capital values of both the private and affordable units. The selection of the development scenarios to be examined was also informed by a policy review undertaken in this initial stage (see Section 2).
- In Stage 2 DTZ agreed the assumptions regarding key variables with the client authorities, based upon the evidence gathered in Stage 1. At this stage DTZ also agreed with the client authorities the archetypal sites to be used in the testing of viability. The financial appraisal model used to test viability was developed in this Stage of work.
- Stage 3 involved a series of runs of the financial model to test the viability of development on the archetypal sites, and how this would be affected by the application of different requirements for affordable housing provision (30%, 40% and 50% requirements, and tests for different splits in social rented and shared ownership provision).

3.4 The study approach is therefore tailored to the specific requirements of the brief. It takes account of the range of different circumstances applying across the study area, but does not seek to capture of analyse the specific circumstances of hundreds of individual housing sites in the study area. To do this would have been impossible in practical terms and inappropriate to a strategic study designed to inform policy development.

3.5 Instead by focusing on the development of a suite of archetypical sites that capture much of the variety of the range of housing sites likely to come forward in the study area, it has been possible to analyse different sites on a consistent basis. This allows conclusions to be drawn in answer to questions such as '*how does increasing the affordable housing requirement from 30% t0 40% affect viability?*'; and '*does allowing a higher proportion of shared ownership in the affordable housing mix improve viability?*'

3.6 By implication the study does not analyse viability on a specific housing site that might come forward in future. There will always be a wide range of specific circumstances that will affect viability on a particular site, and a developer will assess these in determining whether to proceed. In addition developers are not homogenous. They vary in their appetite for risk, and have different requirements in terms of returns. Indeed those requirements may change in different market contexts. The development appraisal technique developed for this study could however be readily applied to an individual site if required.

3.7 It is important also to note that the analysis undertaken for the study was prepared during the course of 2007, and the data on land values, sales prices and a number of other variables relate to the first half of 2007. Some of these variables will have changed since the analysis was undertaken. The housing market is a dynamic market, always changing, and any study can only provide a snapshot of viability. The approach adopted in this study, however, illuminates the relationship of viability to particular variables and is therefore of particular value in informing the development of policy that will need to be robust enough to be applied in all the changing seasons of the housing market.

3.8 The rest of this section sets out the assumptions on which the analysis is based, and the sources of information that underpin those assumptions. In a strategic study such as this it is necessary to generalise, but where appropriate we comment on how the specific circumstances of particular sites, the expectations of the developer, or the costs and revenues of a project may vary from the assumption and hence affect the viability of that particular development. This helps to illuminate some of the issues that will apply in the application of policy and feeds through into the discussion of policy implications in Section 6.

General Assumptions

3.9 The study tests viability on the basis of current costs and revenues as applicable in the first half (January to June) of 2007. The model tests viability on the assumption that the sites subject to testing have secured planning permission and there are no abnormal costs associated with their development. It has been important to use this as the basis of analysis to allow like for like comparison of how different policy options affect viability. In reality each site will be different and there are always elements of costs that are specific to development of a particular site, but these can only be assessed on a site by site basis. Developer returns are also often a composite of the actual development of the residential component of site, and returns on the process of securing land value enhancement through securing change of use permission on this site.

3.10 The generic assumption has been made that developers of sites generating less than 50 dwellings will require a minimum return (IRR) of 10% and those developing sites generating 50 or more dwellings will require a return (IRR) of 12.5%. These are the typical minimum rates of return, based on DTZ's experience that developers of residential schemes will require. Schemes that fall below these target rates of return are deemed not to be viable, and those that meet or exceed the target rate of return are deemed to be viable. The higher level of return on larger schemes is required because of the higher risk entailed.

3.11 It is important to acknowledge, however, that the returns sought by different developers and how they secure it through the whole development process will vary. Developers will take into account a range of factors relating to the risk profile of a scheme, such as scheme size, time to delivery, location and other market factors, in determining what is an acceptable rate of return. As noted, developers may secure their return through a composite process of land assembly, securing permission for development, and the actual development process; and the target rates of return may differ as market conditions change. Such complexity cannot be modelled in a strategic study such as this, but has been taken into account in interpreting the results of the modelling and in the formulation of recommendations.

3.12 Finally it has been necessary as part of the appraisal to make assumptions about sales rates and interest rates. The sales rates and interest rates used in the model are those applying in the first half of 2007. At the time this report has been finalised in 2008, sales rates on current developments have generally fallen, so the average time taken to sell new homes has increased in most areas. This will have a substantial effect on a development cash flows and the developer's expected returns. However, the focus of this study is on informing policy that must endure through many different phases of the housing market so it has not been deemed appropriate to try to model different movements in the financial and housing markets. This need for policy to be robust during the different phases of the housing market cycle has been taken into account in the development of recommendations.

The Key Variables for Scenario Testing

3.13 The focus of the study has been testing viability for three different levels of affordable housing provision (30%, 40% and 50%). These levels were tested because they deviate from current policy whilst remaining realistic.

3.14 The key variables that have been used for testing the core elements of the viability model are as follows:

- Site size
- Location
- Density and Dwelling Mix
- Value Area
    - land values
    - sales values of new market homes
    - sales values of new affordable housing units
- Affordable Housing mix
- Housing Corporation Grant.

Site Size

3.15 The main analysis has focused on assessing viability on sites of 0.5 ha, 1.0 ha and 3.0 ha. The number of units that these sites yield depends on the application of the appropriate density assumption. Density assumptions vary between urban, suburban and rural locations (see below). A separate analysis has been undertaken of small sites comprising development of between 1 and 9 dwellings to determine the impact on viability of different affordable housing quotas.

Location

3.16 Key variables which affect viability such as the price paid for land, the sales value of new homes, unit mix, density and Section 106 costs vary systematically with location. It was therefore agreed with the clients that it was important to test viability in different sorts of location, given that across the study area there are cities, towns and villages of varying sizes.

The categorisation agreed upon that would encompass the systematic differences in key variables by location was to consider sites in urban (city and town centre) locations, suburban locations and rural locations.

3.17 The tripartite classification of sites into urban, suburban and rural categories was chosen in preference to choosing specific geographic areas or neighbourhoods, since it was decided that often sales values do not vary hugely within different neighbourhoods in a particular authority or even within a larger swathe of the district. Adopting the tripartite characterisation of location, and combining this with definition of different value areas (see below) provided an opportunity to test a wider range options in terms of viability.

Density and Dwelling Mix

3.18 The density of development on a site affects the overall number of units provided for a given land area and hence is a key factor determining the sales values to be derived from a particular plot of land. The absolute number of affordable units provided, whatever the quota, is also determined by the overall number of units to be built, and hence is also affected by the density of development.

3.19 The density of development varies systematically with site location (urban, suburban, and rural). DTZ has therefore needed to identify the development densities that should be applied to sites in each of these locations. The figures used are based on typical densities of recent development in each type of location, with a high, medium and low density figure identified so as to enable testing of the degree to which changes in density affect viability.

3.20 The density assumptions, expressed as dwellings per hectare (dph), are as follows:

Urban -	High Density	-	80 dph
	Mid Density	-	70 dph
	Low Density	-	60 dph
Suburban -	High Density	-	55 dph
	Mid Density	-	45 dph
	Low Density	-	35 dph
Rural -	High Density	-	40 dph
	Mid Density	-	35 dph
	Low Density	-	30 dph

3.21 Within each location and density DTZ have made assumptions on unit mix based on experiences within the market and consultation with the authorities. As the affordable provision stems directly from the overall mix of units, this has a significant effect on viability. These assumptions are included in Appendix 8.

Value Area

3.22 The study area is extensive covering the whole of three district councils all of which cover a large area. Values, in terms both of sales values of new homes, and land values, vary across the study area, and this will have a significant effect on the viability of new housing development in these different geographies. It was decided to identify three 'value areas', defined simply as high, medium and low value areas, and for these identify the relevant sales values and land values that should be applied in the viability testing (see below under headings Land Values and Sales Values of Private and Affordable Housing).

3.23 Broadly these value areas can be identified with the pattern of average house prices across the study area. These are described in detail in the Strategic Housing Market Assessment. The map in Appendix 9 shows how house prices have been used to identify higher, medium and lower value areas. However it should be noted that new development, particularly on large schemes can, under some circumstances, establish new value levels that are not constrained by existing second hand housing prices.

3.24 Data on land values and sales values was collected from actual developments and through contact with agents. Information relates to January-June 2007, but recognising the potential impact of the slow down in the housing market, DTZ was conservative in the attribution of values in order to accommodate fluctuations in the property market that may occur in the short to medium term. However, depending on the depth and duration of the housing market slowdown, these may not be applicable during 2008 and for future years until the market recovers.

Land Value

3.25 This study has worked on the basis that the cost of land used in the viability appraisal should be an input to the viability assessment. The cost of land has therefore based on the actual price being paid for land by developers. Information on the value of residential building land has been sourced from the Valuation Office Agency property market report (July 2007), and this has been checked with local land agents.

3.26 A developer buying residential land will have taken into account development costs, including affordable housing, when preparing their residual valuation of the land. This valuation will have informed their bid price for the land. Land prices therefore incorporate a discount based on the developer's expectation of how much affordable housing they will have to provide. DTZ would expect land values in the study area to be discounted to reflect current policy requirements for affordable provision equivalent to 30 -40% of the units being built.

3.27 In reality a developer may not have fully allowed for provision of the level of affordable housing required in policy believing that they can negotiate a lower level of provision. Where land has been acquired historically and policy has moved on, often this will be compensated for by rising land values. Where a developer has acquired land, perhaps because of intense competition for land, and not made full allowance for provision of affordable housing in the price they have paid, policy should not seek to compensate for this miscalculation. Nevertheless this might result in a reluctance on behalf of the developer to bring forward the site for development until land values have increased sufficiently to offset their miscalculation.

3.28 The land values used as inputs to the modelling are as follows:

Urban Sites

High Value	£3,500,000 per ha
Mid Value	£3,400,000 per ha
Low Value	£3,300,000 per ha

Suburban Sites

High Value	£3,200,000 per ha
Mid Value	£3,100,000 per ha
Low Value	£3,000,000 per ha

Rural Sites

High Value	£2,900,000 per ha
Mid Value	£2,800,000 per ha
Low Value	£2,700,000 per ha

Sales Values of New Market Homes

3.29 Average sales values of new market homes (expressed on a £ per square foot basis) are based on data for new housing developments across the study area. The sales values assumed are set out in Table 3.1 for different sized units, in high, medium and low value areas in the study area, differentiated for urban, suburban and rural sites.

Table 3.1 Private Revenue Assumptions

Unit		Area sq ft (sq m)	Urban	Suburb	Rural
1 Bed Flat	High	500 (46)	£ 205,000	£ 190,000	£ 180,000
	Mid		£ 192,500	£ 170,000	£ 165,000
	Low		£ 180,000	£ 155,000	£ 150,000
2 Bed Flat	High	650 (60)	£ 260,000	£ 240,500	£ 227,500
	Mid		£ 240,500	£ 217,750	£ 214,500
	Low		£ 227,500	£ 195,000	£ 195,000
3 Bed Flat	High	800 (74)	£ 320,000	£ 296,000	£ 280,000
	Mid		£ 296,000	£ 268,000	£ 264,000
	Low		£ 280,000	£ 240,000	£ 240,000
1 Bed House	High	600 (56)	£ 222,000	£ 216,000	£ 198,000
	Mid		£ 210,000	£ 204,000	£ 186,000
	Low		£ 198,000	£ 192,000	£ 174,000
2 Bed House	High	800 (74)	£ 296,000	£ 288,000	£ 264,000
	Mid		£ 280,000	£ 272,000	£ 248,000
	Low		£ 264,000	£ 256,000	£ 232,000
3 Bed House	High	1000 (93)	£ 370,000	£ 360,000	£ 330,000
	Mid		£ 350,000	£ 340,000	£ 310,000
	Low		£ 330,000	£ 320,000	£ 290,000
4 Bed House	High	1300 (121)	£ 468,000	£ 455,000	£ 416,000
	Mid		£ 455,000	£ 429,000	£ 390,000
	Low		£ 416,000	£ 403,000	£ 364,000
5 Bed House	High	1600 (149)	£ 576,000	£ 560,000	£ 512,000
	Mid		£ 560,000	£ 528,000	£ 480,000
	Low		£ 512,000	£ 496,000	£ 448,000

Revenues from Affordable Housing Provision

3.30 A developer also generates revenues from the sales of affordable housing units to housing associations. DTZ has derived estimates of these revenues from talking to housing associations, notably those that are development partners of the three study authorities. These include Drum, Swaythling, Homegroup, Atlantic (Winchester), Hyde and Sentinel associations.

3.31 The revenues generated from sales of affordable housing differ depending on whether the unit is for social renting or is a shared ownership unit. Table 3.2 sets out the assumed revenues generated from the development of new social rented housing, estimated for different value areas, site locations and dwelling type. Table 3.3 sets out the same information regarding revenues generated from sale of shared ownership units. It has been assumed that all intermediate housing takes the form of shared ownership, with 40% of the equity being sold to the occupier and 60% retained by the association.

3.32 It has been assumed in this study that all affordable homes will find an RSL buyer. It is worth noting however that RSLs may be disinclined to buy (or be party to development of) small numbers of units, where these would be inefficient for them to manage. This would be most likely to be an issue where a scheme only produces a very small number of affordable housing units. This issue needs to be taken into account in thinking about the practicality of applying affordable housing targets to very small schemes and sites, though it is not an insuperable difficulty.

Table 3.2 Revenues Generated from New Social Rented Homes

Unit		Area (sq ft) (sq m)	Urban	Suburb	Rural
1 Bed Flat	High	500 (46)	£ 85,000	£ 75,000	£ 67,500
	Mid		£ 77,500	£ 70,000	£ 62,500
	Low		£ 70,000	£ 65,000	£ 57,500
2 Bed Flat	High	650 (60)	£ 107,250	£ 94,250	£ 81,250
	Mid		£ 97,500	£ 87,750	£ 78,000
	Low		£ 87,750	£ 81,250	£ 74,750
3 Bed Flat	High	800 (74)	£ 132,000	£ 116,000	£ 100,000
	Mid		£ 120,000	£ 108,000	£ 96,000
	Low		£ 108,000	£ 100,000	£ 92,000
1 Bed House	High	600 (56)	£ 96,000	£ 93,000	£ 87,000
	Mid		£ 93,000	£ 87,000	£ 81,000
	Low		£ 90,000	£ 81,000	£ 75,000
2 Bed House	High	800 (74)	£ 128,000	£ 124,000	£ 116,000
	Mid		£ 124,000	£ 116,000	£ 108,000
	Low		£ 120,000	£ 108,000	£ 100,000
3 Bed House	High	1000 (93)	£ 155,000	£ 150,000	£ 135,000
	Mid		£ 145,000	£ 140,000	£ 130,000
	Low		£ 135,000	£ 130,000	£ 125,000
4 Bed House	High	1300 (121)	£ 201,500	£ 195,000	£ 175,500
	Mid		£ 188,500	£ 182,000	£ 169,000
	Low		£ 175,500	£ 169,000	£ 162,500
5 Bed House	High	1600 (149)	£ 248,000	£ 240,000	£ 216,000
	Mid		£ 232,000	£ 224,000	£ 208,000
	Low		£ 216,000	£ 208,000	£ 200,000

Table 3.3 Revenues Generated from New Shared Ownership Homes

Unit		Area sq ft (sq m)	Urban	Suburb	Rural
1 Bed Flat	High	500 (46)	£ 105,000	£ 95,000	£ 90,000
	Mid		£ 95,000	£ 85,000	£ 80,000
	Low		£ 85,000	£ 75,000	£ 70,000
2 Bed Flat	High	650 (60)	£ 136,500	£ 123,500	£ 117,000
	Mid		£ 123,500	£ 110,500	£ 104,000
	Low		£ 110,500	£ 97,500	£ 91,000
3 Bed Flat	High	800 (74)	£ 168,000	£ 152,000	£ 144,000
	Mid		£ 152,000	£ 136,000	£ 128,000
	Low		£ 136,000	£ 120,000	£ 112,000
1 Bed House	High	600 (56)	£ 120,000	£ 114,000	£ 108,000
	Mid		£ 108,000	£ 102,000	£ 96,000
	Low		£ 96,000	£ 90,000	£ 84,000
2 Bed House	High	800 (74)	£ 160,000	£ 152,000	£ 144,000
	Mid		£ 144,000	£ 136,000	£ 128,000
	Low		£ 128,000	£ 120,000	£ 112,000
3 Bed House	High	1000 (93)	£ 200,000	£ 190,000	£ 180,000
	Mid		£ 180,000	£ 170,000	£ 160,000
	Low		£ 160,000	£ 150,000	£ 140,000
4 Bed House	High	1300 (121)	£ 260,000	£ 247,000	£ 234,000
	Mid		£ 234,000	£ 221,000	£ 208,000
	Low		£ 208,000	£ 195,000	£ 182,000
5 Bed House	High	1600 (149)	£ 320,000	£ 304,000	£ 288,000
	Mid		£ 288,000	£ 272,000	£ 256,000
	Low		£ 256,000	£ 240,000	£ 224,000

Affordable Housing Mix

3.33 The base assumption used in the modelling exercise has been that 70% of the affordable housing built will be for social renting and 30% for shared ownership. However consideration has been given to the impact on viability of changing this proportion with options of 60% social rent/40% shared ownership and 50% social rent/50% shared ownership being tested.

Housing Corporation Grant Funding

3.34 The base assumption for the modelling has been that grant is not available for affordable housing provision. However, it is important to understand the extent to which grant can enhance viability where this is a problem, through provision of grant aid. Thus three different scenarios, based on bids submitted to the 2006-2008 National Affordable Housing Programme, and checked with representatives of the Housing Corporation and the local authorities, have been examined. De facto, the additional income associated with grant aid is additional income to the development, being added to the price paid by the RSLs when units are handed over.

3.35 The three scenarios examined are:

- Grant 1 **-** £40,000 per social rented unit, £0 per shared ownership unit
- Grant 2 **-** £40,000 per social rented unit, £15,000 per shared ownership unit
- Grant 3 **-** £50,000 per social rented unit, £25,000 per shared ownership unit.

Other Assumptions

3.36 The model incorporates a number of other assumptions which have been held constant for all aspects of the viability. These are as follows:

3.37 **Building Costs:** The building costs used in the viability model are taken from the average residential costs on BCIS[1], re-based using a location index of 102 for Hampshire. The assessment uses the build cost per square foot of gross internal area, excluding external works and contingencies and with preliminaries apportioned by cost. These rates were correct as of September 2007. Build costs for affordable housing have been presumed at a higher rate to meet current design and space standards such as construction to Sustainable Homes Level 3 standards

3.38 On the basis set out above, building costs used in the modelling for private and affordable flats and houses are:

- Private Flat **-** £120 per sq ft (£1,292 per sq m)
- Private House **-** £110 per sq ft (£1,184 per sq m)
- Affordable Flat **-** £140 per sq ft (£1,507 per sq m)
- Affordable House **-** £130 per sq ft (£1,399 per sq m).

3.39 It is acknowledged that for any particular scheme build costs will be affected by site conditions, the configuration of the scheme and the target market at which it is aimed. Large schemes may be able to achieve significant economies of scale. Building costs will also be affected by cost of materials and fuel, but are also likely to reflect the level of activity in the construction sector. However, for the purposes of a strategic study, it is necessary to use typical build costs.

3.40 **Section 106 Costs other than Affordable Housing**: Most residential developments will not only be expected to provide affordable housing as part of a Section 106 agreement but to also

[1] The Building Cost Information Service 9BICS) 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 location and build function specific.

contribute to other costs imposed by the public sector on the development, such as highway works, provision of community facilities etc. These represent an additional cost imposed on the development and therefore need to be taken into account.

3.41 Based on consultation with the client authorities it has been assumed that the following additional costs will be incurred in connection with Section 106 agreements:

- Urban - £6,000 per unit
- Suburban - £5,000 per unit
- Rural - £4,000 per unit

3.42 **Demolition Costs and Site Preparation Costs**: An allowance of £1.50 per sq ft (£16 per sq m) has been made for demolition and site preparation costs. Site preparation costs on a site with contamination would be significantly higher and this would affect viability on any such site being considered for residential development. However the extent of such costs and the effect on viability would need to be assessed on a site specific basis.

3.43 **Other Costs**: Other standard allowances and costs made in the modelling exercise are as follows:

- Cost of finance of 6.75% per annum has been assumed
- Professional fees assumed at 10% of construction cost
- Disposal costs including marketing and sales expenses for private units assumed at 3% of Gross Development Value
- Site acquisition costs of 6% of land value
- Inflation of 3.5% on costs and 2.5% on revenue.

The Scope of this Study

3.44 It is important to appreciate that a strategic viability model such as that developed is not designed to test the viability of specific sites. One of the features of residential development is that character of sites is varied, and the level of costs and the revenues that apply to development on a specific site will vary. This should however be reflected in the price that is paid for the land. Even so costs and revenues are often not predictable, and of course assumptions about the future change in costs and revenues may be proved wrong, delivering either above expected returns or below expected returns.

3.45 This study cannot seek to encompass all the potential differences in individual site circumstances that affect viability. What it can do, and does do, is provide a broad assessment of viability in the study area. This is what is needed to inform the setting of affordable housing and other policies. Those policies will, however, need to be sufficiently flexible to take into consideration changes in the market context, especially if they are long lived; but also changes in national policy relating to planning and affordable housing provision.

4. Results of Viability Model on Mainstream Sites

4.1 This section focuses on the results of the viability modelling on sites of more than 15 dwellings. The findings are presented for a number of different scenarios and tests designed to elucidate particular policy issues with regard to affordable housing policy and viability.

Scenario 1: The Importance of Value Areas

4.2 Scenario 1 focuses on how viability varies according to the prevailing pattern of land values and house prices in an area – referred to as the value zones. The scenario tests how changing the affordable housing requirement from 30% to 40% to 50% affects viability on presumption that grant is not available to fund affordable housing. The initial scenario, Scenario 1a, tests viability on a 30% affordable housing requirement; Scenario 1b tests viability with a 40% requirement; and Scenario 1c tests viability with a 50% requirement.

4.3 The scenarios test viability for three different sizes of sites in three different locations:

- Sites of 0.5ha, 1 ha, and 3ha
- Sites in urban, suburban and rural locations

4.4 It should be remembered that different density assumptions are applied to sites in urban, suburban and rural locations and therefore sites of the same size but in different locations provide different numbers of new housing.

4.5 All other variables in this scenario are held constant. Thus:

- The density assumptions applied to the different locations (urban, suburban, rural) are the mid-range density assumptions
- The analysis is based on mid-range land values
- It is assumed that affordable housing will be delivered in the proportion of 70% social rented housing and 30% shared ownership
- Required rate of return of 10% on sites entailing development of less than 50 dwellings and 12.5% on sites entailing development of 50 or more units.

4.6 Throughout the analysis a series of 'traffic lights' – colour codes - are used to indicate if schemes are clearly viable, clearly not viable or close to the viability target. These colour codes are as follows:

- Green where the scheme is comfortably viable - where the IRR is more than 2.5% points above the target rate of return
- Red, where the scheme is clearly not viable – where the IRR is less than 2.5% below the target rate of return
- Yellow, where the scheme is close to the margins of viability and hence particular features of an individual site and scheme are likely to be important to whether it achieves viability (target IRR + 2.5% or – 2.5%)

Results of Scenario 1a

4.7 Scenario 1a tests test the impact on viability, given the above assumptions, of requiring a 30% provision of affordable housing, with no grant. Table 4.1 summarises the results, showing the Internal Rate of Return.

4.8 The message that this scenario conveys is that a 30% affordable housing quota with no grant towards affordable housing provision should definitely be achievable across all the areas defined as high value zones and, though the picture is more marginal in the medium value zone, it should be achievable across the medium value zones. It is only in the low value zones where achieving this level of affordable housing without grant would render development not viable.

Table 4.1: Scenario 1a - Viability with 30% Affordable Housing Requirement (with no grant)

IRR Viability Target 10% pm on sites <50 units, 12.5% on sites of 50 & over units					
IRR >2.5% above target		IRR ± 2.5% from target		IRR > 2.5% below target	
			Value Zone		
Location	Site Size in ha	No of Dwellings	High % IRR	Mid %IRR	Low %IRR
Urban	0.5	35	19.1	13.6	8.8
	1.0	70	18.8	13.2	8.2
	3.0	210	16.1	11.1	6.6
Suburban	0.5	23	19.1	7.6	8.7
	1.0	45	16.6	11.4	6.3
	3.0	135	14.4	9.8	5.1
Rural	0.5	18	20.5	16.1	11.5
	1.0	35	16.5	12.1	7.4
	3.0	105	15.4	11.5	7.4

Results of Scenario 1b

4.9 Scenario 1b tests test the impact on viability, given the above assumptions, of requiring a 40% provision of affordable housing, with no grant. Table 4.2 presents the results. The message that this scenario conveys is that a 40% affordable housing quota with no grant towards affordable housing provision would only be achievable in the high value zones, and even here in some circumstances, particularly on the larger sites, and the suburban areas, this renders a number of schemes marginal in terms of viability.

Table 4.2: Scenario 1B - Viability with 40% Affordable Housing Requirement (with no grant)

IRR Viability Target 10% pm on sites <50 units, 12.5% on sites of 50 & over units

IRR >2.5% above target | IRR ± 2.5% from target | IRR > 2.5% below target

Location	Site Size in ha	No of Dwellings	Value Zone High % IRR	Value Zone Mid %IRR	Value Zone Low %IRR
Urban	0.5	35	16.1	10.5	5.5
	1.0	70	12.5	6.7	1.4
	3.0	210	11.2	5.9	1.1
Suburban	0.5	23	10.4	4.9	-0.7
	1.0	45	9.8	4.5	-0.9
	3.0	135	9.2	4.4	-0.5
Rural	0.5	18	13.6	8.7	3.5
	1.0	35	11.5	7.0	2.4
	3.0	105	11.4	7.3	3.1

Results of Scenario 1c

4.1 Scenario 1c tests test the impact on viability, given the above assumptions, of requiring a 50% provision of affordable housing, with no grant. The results presented below indicate that a 50% requirement for affordable housing without grant aid would render development unviable across all the value geographies and site sizes.

Table 4.3: Scenario 1c - Viability with 50% Affordable Housing Requirement (with no grant)

IRR Viability Target 10% pm on sites <50 units, 12.5% on sites of 50 & over units

IRR >2.5% above target | IRR ± 2.5% from target | IRR > 2.5% below target

Location	Site Size in ha	No of Dwellings	Value Zone High % IRR	Value Zone Mid %IRR	Value Zone Low %IRR
Urban	0.5	35	4.5	-1.8	-7.7
	1.0	70	6.8	0.7	-4.9
	3.0	210	6.3	0.8	-4.3
Suburban	0.5	23	4.3	-3.9	-7.1
	1.0	45	4.9	-0.8	-6.4
	3.0	135	5.1	0.1	-5.0
Rural	0.5	18	6.9	1.9	-3.4
	1.0	35	6.2	1.4	-3.6
	3.0	105	5.7	1.4	-3.1

Indicative Conclusions from Scenario 1

4.10 Scenario 1, testing the effect of different affordable housing quotas without grant on viability for different value zones yields the following broad conclusions:

- The value zone in which a scheme is located is a key variable in determining viability. The analysis suggests it would be difficult to achieve even 30% affordable housing without grant in low value zones if new development in those zones are constrained by the pattern of prevailing land values and prices.
- However, across high value areas which encompass much of the sub-region the analysis would indicate it should definitely be possible to achieve a 30% affordable housing provision without grant, and probably 40%. However, a 40% target without grant renders development in medium and low value zones non-viable.
- On the basis of the analysis a 50% affordable housing requirement without grant would significantly deter development since it would render development non-viable across all different geographies.

4.11 It is interesting to note that the small sites (0.5 ha) yield consistently higher returns than medium sized sites (1.0 ha), which in turn yield higher returns than large sites (3.0 ha). There is also a systematic pattern that suburban sites generally provided lower returns than urban or rural sites.

4.12 The analysis points to importance of the prevailing values to viability. For the purposes of this study, it has been assumed that the prevailing values in an area (used to define the value zones) do impinge on the sales values that can be achieved for new housing. Logically this must be true to some extent – the second hand market in a local market does constrain the values that can be secured for new housing.

4.13 However to some extent existing values may be determined by the existing mix of the stock and therefore new homes may be able to achieve a bigger premium over existing values than in other areas. New developments may also be able to establish new value levels that are different to the prevailing norms by providing quite a different style and quality of development that establishes a new market in a locality. This is more likely to be possible on larger development sites than small sites.

4.14 This consideration needs to be weighed in the formulation of policy and the consideration of whether affordable housing targets should vary between value zones.

Scenario 2: The Impact of Introducing Grant Aid for Social Housing

4.15 Scenario 2 continues the analysis presented in Scenario 1 and uses exactly the same assumptions with one exception; namely the assumption that grant is not available is relaxed. For the purposes of this section, the assumed level of grant is £40,000 grant per unit for social rented units and no grant for shared ownership units.

4.16 Analysis of the impact on viability for two other grant scenarios have also been undertaken and are presented in Appendix 2 as follows:

- Scenario 3 £40,000 grant per unit for social rented units and £15,000 grant for shared ownership units
- Scenario 4 £50,000 grant per unit for social rented units and £15,000 grant for shared ownership units.

4.17 For each scenario the analysis looks at how the provision of grant aid affects viability when the affordable housing requirement is set respectively at 30%, 40% and 50%. Only the results for Scenario 2 (£40,000 rant per units for social rented units and no grant for shared ownership units) are presented in diagrammatic form in this section using a the traffic lights system. This system is used to show how grant aid of the specified amount changes the viability of schemes in different locations, site size and in different value zones, compared to the situation with no grant.

4.18 Thus in Scenario 2a (grant of £40,000 per social housing unit) Figure 4.4, shows how grant at this level changes viability when there is an affordable housing requirement of 30%. Figure 4.5 replicates this for when the affordable housing level is 40% and Figure 4.6 shows the results when the affordable housing requirement is 50%. The equivalent charts for Scenarios 3 and 4, which relate to higher levels of grant aid, along with the accrual IRR figures are presented in Appendix 2. The traffic light system is replicated in Appendix 2 for Scenarios 3 and 4 using background shading.

4.19 Table 4.4 shows that with a 30% affordable housing requirement, £40,000 grant for social housing but no grant for shared ownership, brings most schemes in lower value areas into the right territory (yellow dots) for viability to be achieved, where without grant aid the majority of schemes were clearly not viable (red dots). Similarly the availability of grant improves viability in the medium value areas making all schemes that fell below the target rate of return (albeit marginally) generate returns above the target rate (see Appendix 2). In high value areas such grant aid was not required for viability, so grant merely improves the return available to the developer.

Table 4.4: Scenario 2a – Impact on Viability with 30% Affordable Housing Requirement and Grant Aid of £40,000 per Social Housing Unit and No Grant for shared ownership

IRR Viability Target 10% pm on sites <50 units, 12.5% on sites of 50 & over units

🟢 **IRR >2.5% above target** 🟡 **IRR ± 2.5% from target** 🔴 **IRR > 2.5% below target**

			Value Zone					
Location	**Site Size in ha**	**No of Dwellings**	**High**		**Mid**		**Low**	
			Without Grant	**With Grant**	**Without Grant**	**With Grant**	**Without Grant**	**With Grant**
Urban	0.5	35	🟢	🟢	🟢	🟢	🟡	🟢
	1.0	70	🟢	🟢	🟡	🟢	🔴	🟡
	3.0	210	🟢	🟢	🟡	🟡	🔴	🔴
Suburban	0.5	23	🟢	🟢	🟡	🟡	🔴	🟡
	1.0	45	🟢	🟢	🟡	🟢	🔴	🟡
	3.0	135	🟡	🟢	🔴	🟡	🔴	🔴
Rural	0.5	18	🟢	🟢	🟢	🟢	🟡	🟢
	1.0	35	🟢	🟢	🟡	🟢	🔴	🟡
	3.0	105	🟢	🟢	🟡	🟡	🔴	🔴

4.20 Table 4.5 shows that with a <u>40%</u> affordable housing requirement, £40,000 grant for social housing but no grant for shared ownership, brings all schemes in higher value areas into full viability, and brings schemes in mid-value areas into the right territory in terms of viability. It does not do enough however to improve the returns to render development in low value areas viable with a 40% affordable housing requirement.

Table 4.5: Scenario 2a - Impact on Viability with 40% Affordable Housing Requirement and Grant Aid of £40,000 per Social Housing Unit and No Grant for Shared Ownership

IRR Viability Target 10% pm on sites <50 units, 12.5% on sites of 50 & over units

🟢 **IRR >2.5% above target** 🟡 **IRR ± 2.5% from target** 🔴 **IRR > 2.5% below target**

			Value Zone					
Location	**Site Size in ha**	**No of Dwellings**	**High**		**Mid**		**Low**	
			Without Grant	**With Grant**	**Without Grant**	**With Grant**	**Without Grant**	**With Grant**
Urban	0.5	35	🟢	🟢	🟡	🟢	🔴	🟡
	1.0	70	🟡	🟢	🔴	🟡	🔴	🔴
	3.0	210	🟡	🟢	🔴	🟡	🔴	🔴
Suburban	0.5	23	🟡	🟢	🔴	🔴	🔴	🔴
	1.0	45	🟡	🟢	🔴	🟡	🔴	🔴
	3.0	135	🔴	🟡	🔴	🔴	🔴	🔴
Rural	0.5	18	🟢	🟢	🟡	🟡	🔴	🔴
	1.0	35	🟡	🟢	🔴	🟡	🔴	🔴
	3.0	105	🟡	🟡	🔴	🟡	🔴	🔴

4.21 Table 4.6 shows that with a 50% affordable housing requirement, £40,000 grant for social housing but no grant for shared ownership, moves most schemes from being clearly not viable, to render them at or close to viability, and the more detailed tabulations in Appendix 2 shows that this level of grant moves four out of the 9 scheme types in high value areas up to the target level of return required for viability, when none achieved that without grant, and brings another three within close range. However this level of grant does not do enough to render all schemes in high value areas fully viable. This level of grant is also insufficient to render any of the schemes in mid or low value areas viable.

Table 4.6: Scenario 2a – Impact on Viability with 50% Affordable Housing Requirement and Grant Aid of £40,000 per Social Housing Unit and No Grant for Shared Ownership

IRR Viability Target 10% pm on sites <50 units, 12.5% on sites of 50 & over units

🟢 **IRR >2.5% above target** 🟡 **IRR ± 2.5% from target** 🔴 **IRR > 2.5% below target**

			Value Zone					
Location	**Site Size in ha**	**No of Dwellings**	**High**		**Mid**		**Low**	
			Without Grant	**With Grant**	**Without Grant**	**With Grant**	**Without Grant**	**With Grant**
Urban	0.5	35	🔴	🟡	🔴	🔴	🔴	🔴
	1.0	70	🔴	🟡	🔴	🔴	🔴	🔴
	3.0	210	🔴	🟡	🔴	🔴	🔴	🔴
Suburban	0.5	23	🔴	🟡	🔴	🔴	🔴	🔴
	1.0	45	🔴	🟡	🔴	🔴	🔴	🔴
	3.0	135	🔴	🔴	🔴	🔴	🔴	🔴
Rural	0.5	18	🔴	🟡	🔴	🔴	🔴	🔴
	1.0	35	🔴	🟡	🔴	🔴	🔴	🔴
	3.0	105	🔴	🔴	🔴	🔴	🔴	🔴

4.22 Scenario 3 examines the impact on viability of making available grants for affordable housing at the level of £40,000 per unit for social rented unit, and £15,000 per shared ownership unit. The availability of the additional grant on social ownership units improves returns by between 0.3 and 0.9 percentage points but does not deliver any fundamental change in viability across the different types of scheme or levels of affordable housing provision. In terms of the colour coding of viability this scenario produces the same pattern as presented in Tables 4.4, 4.5 and 4.6 presented in relation to Scenario 2. The actual tables showing the level of return are presented in Appendix 2

4.23 Scenario 4 examines the impact on viability of making available grants for affordable housing at the level of £50,000 per unit for social rented unit, and £25,000 per shared ownership unit. Key points to emerge from the analysis in this scenario are:

– With this level of grant support, it becomes possible to achieve 50% provision of affordable housing in high value areas, where this would not be achievable without grant; but it does not sufficiently offset the disadvantage of low and medium price area to bring schemes into viability.

– At the level of 40% affordable housing provision, this sort of grant provision brings most sites in medium value areas into viability, where most would not be viable were no grant available. It still does not overcome viability issues in low value areas. In high value areas the grant boosts returns to well above target rates.

- At the level of 30% affordable housing provision this level of grant brings the majority of sites in low value areas into viability; and merely boosts returns to well above target rates for sites in high and medium value areas.

4.24 The effect of £50,000 grant per unit of social housing and £25,000 grant per shared ownership unit can broadly be summarised as bringing one set of sites into viability for each of the assumed level of affordable housing provision; that is:

- At the 50% level of provision it renders schemes in high value areas viable
- At the 40% level of provision it renders schemes in medium value areas viable
- At the 30% level of provision it renders schemes in low value areas viable.

Indicative Conclusions from Scenario 2

4.25 The analysis undertaken for Scenario 2 indicates that grant aid can have a significant impact on the viability of schemes, and will have a material bearing on the achievement of higher levels of affordable housing provision. Grant aid of £50,000 per social housing unit and £25,000 per shared ownership unit would be widely required to deliver a 50% affordable housing target, and would be important in allowing delivery of 40% affordable housing targets in mid value areas (it does not do enough to improve viability for low value areas).

4.26 The level of grant aid for social housing units is more significant than that for shared ownership units. This is because the central assumption has been that social housing units account for 70% of affordable housing provision and shared ownership for only 30%; and the level of grant assumed for social housing units is greater than the market premium paid for shared ownership units. This has the potential to produce an interesting outcome – that where grant is available, viability can sometimes be enhanced by building a higher proportion of social rented homes. Whether this is desirable will be influenced by the housing needs of the area concerned and 'value for money' considerations.

The Impact of the Density of Development on Viability

4.27 As part of the study DTZ also tested whether changing the density of development affects viability. This is an interesting issue, since if there were to be a systematic pattern by which viability is enhanced by increasing or reducing density, then the local authorities might wish to take this into account in developing policy. That is, they might wish to encourage more dense development if that would enhance viability and hence allow greater provision of affordable housing; or they might be willing to accept lower density development if that meant that scheme could go ahead and deliver some affordable housing without grant, where they might get no affordable housing if the scheme stalls because it is not viable.

4.28 The analysis presented in Appendix 3 examines rates of return on development assuming different densities on different sized sites in urban, suburban and rural locations. The implications for viability of seeking different levels of affordable housing provision given different density assumptions are examined; and the implications of no grant and each of the three different scenarios for grant aid for affordable housing are considered.

4.29 The overall results are very consistent regardless of whether grant is available or not, and do not vary with the level of affordable housing provision sought. In general both increasing and decreasing densities from the middle density assumption of 70 dwellings per hectare (dph) in urban areas and 45 dph in suburban areas reduces rates of return. In contrast, where densities for schemes in rural areas are to be increased from the mid-range assumption of 35 dph, to 40 dph this would improve rates of return. In rural areas reductions in densities from the mid range assumption to 30 dph reduce returns as they do in urban and suburban areas.

4.30 These results are interesting. The mid-range density assumptions are based on the levels that have been typical of developments in recent years. The results therefore suggest that the development industry – working interactively with the planning system – has in urban and suburban areas – been delivering development at levels that maximise returns. While changes in the market context and the relative price of different types of new housing may shift the relative advantage of developing at different densities, it suggests that the market has been working efficiently to maximise development value in urban and suburban areas.

4.31 In urban and suburban areas the analysis would indicate there is no scope therefore to enhance the prospect of affordable housing provision by varying density requirements. In rural areas there is, however, the possibility of enhancing viability and thereby securing more affordable housing provision by allowing somewhat denser development than has undertaken in the past. Whether this is consistent with other planning policies designed to ensure new development is in keeping with the character of the area would, of course, be a consideration in whether such a shift in development patterns was deemed desirable in overall terms.

The Impact of Affordable Housing Mix on Viability

4.32 The study has also examined the impact that changing the mix of affordable housing has on viability. The base assumption in most of the modelling has been a split of 70% social rented housing and 30% shared ownership. The implications for rates of return of changing this mix to 60% social rented units and 40% shared ownership and 50% social rented units and 50% shared ownership have also been considered.

4.33 The implications were examined of such changes for rates of return have been examined under circumstances where no grant has been given and where £50,000 grant for social rented units and £25,000 grant have been available. The implications of change under the scenarios of 30%, 40% and 50% affordable housing requirement have been examined.

4.34 The results (see Appendix 4) indicate that changes in the mix of affordable housing have very little impact on viability, only producing marginal differences in the rates of return secured under both with grant and without grant scenarios, and with different affordable housing quotas. The direction of change also varies, with increased proportions of shared ownership delivering slight increases in return under some circumstances and slight decreases in returns in other circumstances.

4.35 The analysis would indicate that the notion that increasing the proportion of shared ownership necessarily improves viability is invalid. There are circumstances where it does so – but the impact on viability is modest even there. But there are circumstances where increasing the proportion of shared ownership does not add value. This probably reflects the fairly complex way in which scheme mix (in terms of unit size) and the returns available for units of different size interact.

4.36 The implication for policy is that flexibility regarding tenure mix in both directions (that is to increase or decrease the proportion of shared ownership) may make sense in helping to bring forward marginal schemes, but will only benefit schemes really at the margins of viability given the small impact such changes have on rates of return. Such a policy stance may also be helpful since the demand for shared ownership can wax and wane with market sentiment and the cost and availability of finance.

5. The Viability of Small Sites

5.1 The commissioning authorities have a particular interest in exploring the contribution that smaller sites – those that will deliver fewer than 15 dwellings – could make to affordable housing provision. In the past such sites have been exempt from affordable housing provision. Key issues are:

- Whether these sites can sustain the same level of affordable housing quota as larger sites or whether the quota for smaller sites would have to be different to those for larger sites
- Whether some form of standardised tariff or charge might be levied in lieu of affordable housing provision, though the general presumption of the client authorities is that on-site provision of affordable housing is to be preferred.

5.2 Particular attention has been focused in the study on sites yielding less than 10 units. However the conclusions reached regarding sites of this size are likely to apply to sites that will deliver between 10 and 14 units.

Key Assumptions

5.3 On small sites the application of a standard quota for the provision of affordable housing has the effect in many cases of indicating that 'part units' should be delivered. A 40% quota applied to a site of 9 dwellings for example would indicate that 3.6 affordable housing units should be provided. It is necessary to decide how the issue of 'part units' of affordable housing should be addressed.

5.4 For the purposes of the viability appraisal provision of affordable housing units as indicated by a certain quota has been rounded up or down to the nearest whole unit. Table 5.1 shows how many units should be provided for different affordable housing quotas if part units could be delivered; and the number of whole units which it has been assumed will be provided by the scheme given its size.

Table 5.1: Assumed Number of Whole Units to be Provided on Small Sites by Reference to the Affordable Housing Quota

	Number of Affordable Units Provided					
Units	**30%**		**40%**		**50%**	
	Decimal	**Units**	**Decimal**	**Units**	**Decimal**	**Units**
9	2.7	3	3.6	4	4.5	4
7	2.1	2	2.8	3	3.5	3
5	1.5	2	2	2	2.5	2
4	1.2	1	1.6	2	2	2
3	0.9	1	1.2	1	1.5	1

5.5 Where the affordable housing quota would indicate provision of 0.5 of a unit, (eg sites on which an odd number of units will be delivered, but a 50% quota has been applied) the provision of affordable housing units has been rounded down. Thus it has always been assumed that the developer will provide more, or an equal number of private units, compared with affordable units. Thus on a site with 5 units with a 50% affordable housing requirement the developer will provide three units of private housing and two affordable homes.

5.6 The viability modelling has been undertaken on the basis that the small sites being tested are being developed in medium value areas, at middle range densities. The analysis is undertaken for urban, suburban and rural sites and for scenarios involving no grant, and grant at each of the three levels of provision as explained in Section 3. The target rate of return is taken to be an IRR of 10%.

Results from the Viability Testing

5.7 The viability testing indicates that the small sites tested – those comprising 3, 4, 5, 7 and 9 units - consistently show better returns than those for larger sites. Table 5.2 summarises viability for the different locations of schemes without grant and with grant of £40,000 per social housing unit and no grant for shared ownership (in practice given a 70/30 split the schemes are all dominated by social housing provision). These small sites are consistently more likely to meet the viability threshold than the larger sites tested in the previous stages of the study, even where grant is not available.

Table 5.2: Viability of Affordable Housing Provision without Grant and with Grant of £40,000 per Social Housing Unit and No Grant for Shared Ownership Unit

IRR Viability Target 10% pm on sites <50 units, 12.5% on sites of 50 & over units

🟢 IRR >2.5% above target 🟡 IRR ± 2.5% from target 🔴 IRR > 2.5% below target

		Level of Affordable Housing Provision					
		30%		40%		50%	
Location	Site Size in Units	Without Grant	With Grant	Without Grant	With Grant	Without Grant	With Grant
	3	🔴	🟢	🔴	🟢	🔴	🟢
Urban	4	🟡	🟢	🔴	🔴	🔴	🔴
	5	🔴	🟡	🔴	🟡	🔴	🟡
	7	🟢	🟢	🟢	🟢	🟢	🟢
	9	🟢	🟢	🟡	🟢	🟡	🟢
Suburban	3	🟢	🟢	🟢	🟢	🟢	🟢
	4	🟢	🟢	🟡	🟢	🟡	🟢
	5	🔴	🟡	🔴	🟡	🔴	🟡
	7	🟢	🟢	🔴	🟡	🔴	🟡
	9	🟢	🟢	🟡	🟢	🟡	🟢
	3	🟢	🟢	🟢	🟢	🟢	🟢
Rural	4	🟢	🟢	🟡	🔴	🟡	🔴
	5	🟢	🟢	🟢	🟢	🟢	🟢
	7	🟢	🟢	🟢	🟢	🟢	🟢
	9	🟢	🟢	🟡	🟢	🟡	🟢

5.8 The evidence points to viability being significantly affected where the number of units to be provided is rounded to the nearest whole number because the application of the quota produces a figure comprising a part unit for provision. Rounding up (from anything over 0.5 of a unit to a whole unit) damages viability, often significantly. Rounding down, especially from anything just below 0.5 unit to the nearest whole unit, enhances viability.

5.9 The sensitivity of viability to this process of rounding following application of the affordable housing quota suggests that a better policy solution would be always to round down the number of affordable housing units to be provided; but then to seek a contribution to affordable housing provision through application of a tariff, proportional to the part unit to be provided. It is generally to be expected that affordable housing units would be provided on site, but clearly the contributions relating to part units would build up a fund to support off-site provision.

Off-site Affordable Housing Tariff

5.10 The client authorities are also interested in understanding whether a tariff-based system would work. This could apply to sites of less than 10 units that would generate contributions to affordable housing provision instead of requiring on-site provision. This would secure a contribution to affordable housing provision on all development in an authority's area, even from development of a single dwelling. Guidance was sought on what level of tariff it would be appropriate to apply. Further discussion of this topic is contained in Section 6.

5.11 In developing the understanding of how a tariff system would work, DTZ considered the experience of other authorities who have implemented a similar policy. A tariff system needs to be simple and transparent so that developers can readily understand how their contribution will be calculated and where the money raised will be spent. Consideration needs to be given to how the tariff will be adjusted as market conditions change – and the data which will enable such changes to monitored and then used to adjust the tariff.

5.12 For the purpose of this study it was agreed that the tariff should capture the difference in the revenue that a site developed without affordable housing would generate for a developer, compared with a site developed in accordance with one that is policy compliant. This analysis was undertaken on the basis of a 40% affordable housing requirement without grant. In essence the figure to be calculated is the Gross Development Value (GDV) of the site with no affordable housing, less the value of the affordable housing when provided as 40% of the total number of units.

5.13 A study of five small sites in different locations was undertaken resulting in an average revenue difference for each site and location. In order to establish a figure that was applicable to sites of varying sizes, the revenue differential has been expressed on the basis of a per unit, per habitable room and per square foot basis (see Appendix 5 for results). The average difference broken down per unit, per habitable room and per square foot can be seen in Table 5.3.

Table 5.3: Revenue Difference between Small Sites Developed without Affordable Housing and Sites Developed with 40% Housing

Revenue Difference Per Unit	
Urban Location	£51,770
Suburban Location	£66,160
Rural Location	£76,410

Revenue Difference Per Habitable Room	
Urban Location	£19,350
Suburban Location	£18,920
Rural Location	£17,930

Revenue Difference Per Sq Ft of Gross Internal Area (Sq M)	
Urban Location	£68 (£732)
Suburban Location	£69 (£743)
Rural Location	£66 (£710)

5.14 The data presented in Table 5.3 was then used for a range of tariff options for 3, 4, 5, 7 and 9 unit schemes in urban, suburban and rural locations to establish the maximum tariff that could be applied while ensuring that development remains viable. Table 5.4 summarises the findings of the analysis, presenting figures on a unit, habitable rooms or net internal floor area basis. Figures are presented both for the level of tariff that, if applied, would render all schemes viable, and the level would render the majority of developments viable.

5.15 The analysis would indicate that in general a significantly higher tariff could be applied in rural and suburban areas than in urban areas. It is likely to be of particular interest to the local authorities that the tariff system looks as if it would yield significant contributions per unit or per habitable room in rural areas, given that such areas are more likely to have a higher proportion of new housing development in the form of development on small sites.

Table 5.4: Indicative Levels of Tariff Consistent with Maintaining Development Viability

Tariff Per Unit		
	All Sites	**Majority**
Urban	£30,000	£40,000
Suburban	£65,000	£75,000
Rural	£80,000	£80,000

Tariff Per Habitable Room		
	All Sites	**Majority**
Urban	£12,500	£15,000
Suburban	£17,500	£20,000
Rural	£20,000	£20,000

Tariff Per Sq Ft (Sq M)		
	All Sites	**Majority**
Urban	£40 (£430.6)	£55 (£592)
Suburban	£70 (£753.5)	£80 (£861.1)
Rural	£75 (£807.3)	£75 (£807.3)

6. Policy Implications

6.1 The purpose of this study is to inform the development of the affordable housing policies of the three commissioning authorities, Basingstoke & Deane Borough Council, Winchester City Council and East Hampshire District Council. The study addresses four key issues:

- What level of affordable housing provision is achievable on sites of more than 15 units and in specific circumstances should authorities seek to move from the current emerging policy proposal of 40% provision of affordable housing to a 50% affordable housing requirement or some intermediate level of requirement?
- Should affordable housing quotas be extended to sites capable of delivering less than 15 units of new housing and if so at what level?
- Should a standardised charge or tariff be developed to secure contributions to affordable housing provision from developments of less than 10 units; if so at what level should this tariff be charged?
- Could changing the tenure split between social rented housing and shared ownership or other intermediate housing, currently a 70/30 split, help deliver a higher proportion of affordable housing overall?

6.2 This final section of the report addresses these issues in turn. In doing so, DTZ draw upon the findings of the study, the analysis contained in the Central Hampshire Strategic Housing Market Assessment, and wider experience of the operation of affordable housing policies.

Policy Implications for Affordable Housing Quotas

6.3 The three commissioning authorities were, during 2007, generally securing quotas of around 30-40% of affordable housing in residential developments of more than 15 units, and policy is moving in the direction of seeking a 40% affordable housing quota without grant.

6.4 The viability study shows that increasing the quota of affordable housing by 10% typically decreases scheme profitability (IRR) in the region of 3% – 10% points. It also highlights that the key variable affecting viability with different levels of affordable housing quota is the value area in which a scheme is located.

6.5 The viability testing would indicate that a 40% affordable housing target should be deliverable without grant in high value areas, but that grant would probably be needed to support this level of provision in medium value areas. With the level of grant tested in this study low value areas would still struggle to meet this target even with grant at the highest assumed level.

6.6 It has been noted, however, that it may be possible for schemes in medium and lower value areas to establish a new benchmark in terms of value, that implies a higher new build premium over existing values. This is more realistic on large sites that are creating a new environmental context and offering a different lifestyle and housing product to that generally available in the area.

6.7 It is also important to note that the viability testing has been run on the basis of that developers have to pay the open market value of land with residential permission, which throughout the area exceeds £2.7 million per hectare. In practice part of the returns that many developers make are associated with the land value uplift of securing permission for development.

6.8 However, in deciding the level of affordable housing provision to be sought it is also important to consider what weight should be placed upon the current (2008) slow down in the housing market. Even if house prices have not fallen very far in Central Hampshire, sales rates of new homes have significantly slowed and this has an impact on development viability. But to what extent should policy reflect what may be a slow down of only two years duration?

6.9 DTZ's view is that the local authorities in establishing an appropriate target for affordable housing provision, should not be unduly swayed by the current problems of the housing market; rather they should establish a policy in terms of affordable housing quota that is robust in that it can be applied, with some flexibility, whatever the prevailing sentiment in the development market.

6.10 In achieving this objective the availability of grant aid should, if possible, be used flexibly to help achieve the policy objective at different stages in the market cycle. When the market is buoyant there should be less need to use grant aid on mainstream sites; when the market is depressed grant aid may need to be used to secure development even on mainstream sites. National government – through the Housing Corporation and, in future, the Homes and Communities Agency – should also adapt policy on grant levels to market conditions.

6.11 The level of other Section 106 contributions provide another area where flexibility can be applied to enable a particular policy on the level of provision of affordable housing to be applied in different housing market contexts, with willingness to rein back on imposing obligations at times when development is marginal; but seeking full contributions when the market is buoyant. Flexibility on the tenure mix of affordable housing provision can also help viability, though the way this helps viability is very specific to particular sites and potentially to vary with market conditions.

6.12 The analysis contained in this study would indicate that the following policies would be justified:

- A standard quota of 40% without subsidy or 50% with subsidy in high value areas
- A standard quota of 30% without subsidy or 40% with subsidy in medium value areas
- A standard quota of 20% without subsidy or 30% with subsidy in low value areas

6.13 However, DTZ anticipate problems embedding the notion of differential policies in different value areas in policy for four reasons:

- First, this will require definition of the value areas, and the reality is that value areas do not have hard and fast boundaries; they blend into each other
- Second, value areas can change over time and to have a policy based on value areas would imply the need for some system of updating

- Third, there is the likelihood that some schemes, as noted above, are not constrained by the value geography in which they are located and can establish new values
- Finally, the use of value areas would create complexity for developers, when in reality developers would probably prefer simplicity, since that can then inform what they pay for land.

6.14 In view of these considerations DTZ would recommend that the authorities move towards an affordable housing quota that:

- Either continues with the practice of a number of the authorities of specifying different affordable housing requirements in different settlements or geographies, since these broadly reflect value zones
- Or adopt a single quota that is uniform across the District but acknowledges that scheme economics will vary, and that this can be taken into account in negotiations and access to grant aid.

6.15 Broadly across the study area a 40% target for affordable housing, based on a presumption that grant is not available would be consistent with the findings of this study, provided some degree of flexibility is built in, in terms of access to grant aid, or ability to reduce other commitments in lower value areas or at times when the market is depressed. A somewhat lower target (eg 35%) might be appropriate in lower value large settlements, where a higher target (eg 45%) might be appropriate in higher value areas. A 50% target without grant would present difficulties in delivery.

Affordable Housing Provision on Small Sites

6.16 The study brief asked if affordable housing policies should be extended to sites of less than 15 units in order to generate a greater supply of affordable housing.

6.16 One clear message from the study is that the viability of small sites is very sensitive to the application of a quota to a site. Where the application of a quota results in a requirement for a part of a unit, it can produce a significant adverse effect on viability if the requirement is rounded up to the nearest unit.

6.17 Thus if affordable housing quotas are to be applied to small sites, the provision expected should always be rounded down to the nearest unit, and never upwards. An option is to seek a financial contribution in relation to the fractions affordable housing that arise from the application of quotas to small sites.

6.18 This is already embedded in adopted policy in Winchester, and if it is applied as policy in all three authorities, the broad message of the analysis is that small sites are no less viable than larger sites; and have similar ability to deliver affordable housing without or with grant. There is no reason therefore in terms of economic viability not to extend affordable housing policies to all residential developments.

6.19 Interestingly the study indicates that there is greater potential to provide affordable housing on small sites in locations where larger properties are developed, that is in rural and suburban sites, because of the higher revenues generated by large private dwellings. Given that rural areas are probably more reliant on small sites than large sites, the extension of affordable housing requirements to small schemes could make a particular contribution to housing provision in rural areas.

6.20 However, some caution must be adopted in rushing to extend affordable housing requirements to smaller sites. Firstly, the smaller the site, the more very specific site characteristics may dominate viability, and the less generic assumptions on costs and values may hold true. This may be more likely to be an issue for rural schemes than urban and suburban schemes, particularly if they do not, as assumed, deliver larger units.

6.21 There may, also, be reasons other than viability why it would be problematic to apply policy to smaller sites. First it remains the case that not all smaller sites can support development without grant aid. Yet it might well be administratively complex to deliver grant aid to such small schemes. Existing RSLs might not want to incur the burden of negotiating and bidding to provide units on sites that would deliver only two or three units.

6.22 Similarly, associations could be reluctant to take on management of small numbers of affordable homes, pepperpotted across communities, especially in locations where they have little existing stock, though this is not reported to be an issue in the study area. Associations naturally prefer to manage schemes where significant numbers of units are clustered together. It could be costly under existing arrangements to manage a portfolio of affordable housing units widely distributed across a large geography

6.23 Such problems are not insurmountable but could call for innovative approaches. For example it might be necessary to establish some form of block grant arrangement with delegated approval systems to deliver grant aid to small sites for one, two or three projects. Similarly it might be necessary to put in place some form of tailored management arrangements perhaps using local letting agents.

6.24 There will be additional revenue costs if such arrangements have to be adopted and the means will need to be found to fund such arrangements. There are parallels with the support provided by authorities to bring empty homes back into use or encourage care and repair of homes owned by elderly or disabled people. One source of revenue funding for such an initiative might be the developer contributions that relate to part units that cannot be built on site.

6.25 In view of these issues, if the authorities wish to pursue the idea of extending affordable housing to sites that will deliver less than 15 dwellings, DTZ would recommend further study be undertaken to establish the practical outworkings of such a policy in terms of how it would be run, the impact on the type of builders who undertake smaller schemes, and a deeper consideration of how viability varies on small sites. This should build upon the experience of Winchester City Council's existing policy of seeking affordable housing on sites of five or more dwellings.

6.26 However, DTZ believes this would be a fruitful line of enquiry, given the possibility that over time small sites could make an important contribution to affordable housing provision, possibly in areas with limited options for alternative provision.

Developing a Tariff-Based System for Affordable Housing Contributions

6.27 As discussed above, the application of affordable housing quotas to small sites has promise but raises a number of delivery issues. This study has therefore also considered the impact of adopting a standardised tariff contribution on sites of fewer than 10 units.

6.28 Whilst PPS3 encourages the on-site provision of affordable housing to create mixed communities, there are some instances where any off-site contribution might deliver a better housing outcome. This is specifically relevant if the authorities intend to extend the affordable housing requirement to all developments, since under certain circumstances on-site provision may not be possible for financial and management reasons. In these circumstances a tariff to support off-site development could be a better way to support the provision of affordable housing.

6.29 Broadly the patterns of profitability on small sites are the same whether assessed in terms of their ability to deliver affordable housing on-site or their ability to make an off-site contribution through a tariff. As reported in Section 6 and Appendix 6, the impact of range of tariff levels on viability were tested, on the presumption that schemes should be assessed on the basis of equivalence with the return they would generate if meeting a 40% affordable housing requirement.

6.30 In developing a tariff it would be important to create a simple and transparent scheme so that small developers and builders know precisely what they will be expected to contribute. It would probably be important to set a single tariff applicable across the district set at a level which ensures that all, or the greater majority of schemes, are viable and will not deter development.

6.31 The indicative *maximum* tariffs that would achieve this objective, based on the general assumptions made throughout the study are set out in Table 6.1. This would indicate that a tariff system could generate a useful level of funds to support affordable housing provision. In practice there might well be merit in establishing the principle of a tariff system starting with a lower level of tariff to explore how it works in practice. But the potential scale of funds that might be realised suggests that further work to establish how in practice a tariff scheme would work would be worthwhile.

Table 6.1 Indicative Levels of Tariff Consistent with Maintaining Development Viability

	Tariff Per Unit	
	All Sites	**Majority**
Urban	£30,000	£40,000
Suburban	£65,000	£75,000
Rural	£80,000	£80,000

	Tariff Per Habitable Room	
	All Sites	**Majority**
Urban	£12,500	£15,000
Suburban	£17,500	£20,000
Rural	£20,000	£20,000

Tariff Per Sq Ft (Sq M)		
	All Sites	**Majority**
Urban	£40 (£430.6)	£55 (£592)
Suburban	£70 (£753.5)	£80 (£861.1)
Rural	£75 (£807.3)	£75 (£807.3)

6.32 One of the key considerations would be to determine whether the tariff should be applied on a unit, habitable rooms or on the basis of net internal floorspace (measured in sq m or sq ft). A tariff per square foot yields the greatest contribution but may not be practical to implement. A tariff per unit is perhaps the simplest, but yields the minimum contribution and does not account for unit size variations, which this report suggests is a major factor determining returns on sites of this size.

6.33 At this stage DTZ would view a tariff based on a per habitable room basis as having the most merit. This would allow differentiation between developments of larger and smaller units, with higher contributions being secured from larger units than small units, reflecting their greater profitability in most situations. However, a tariff based on habitable rooms is relatively easy for developers to understand and for the authorities to apply without dispute, provided the definition of habitable rooms is clearly specified.

6.34 Another issue is whether the tariff is fixed or is capable of variation by reference to some external measure of, for example, sales values. The basis of the tariff should be clear and ideally be able to take account of changes in market values based on generally accepted publicly available information. Some authorities for example have established a system that relates the tariff to the average house price in the district. A new benchmark is published on an annual basis and the tariff updated in the light of this change. It might also be possible to adopt the same principle but to base the tariff on the prices of new homes.

6.35 While this study has established that in most cases a tariff could be sustained, further work would also be required to refine the analysis to decide the appropriate level of the tariff as well as the practical issues of implementation and how it would play out in different locations with divergent land and property prices. It is helpful that Winchester City Council already has some experience of applying tariffs and any study can draw upon the experience in Winchester in making broader recommendations for the whole study area.

6.36 One specific issue that would merit further investigation is the apparent evidence that rural areas would sustain a higher tariff than urban and suburban areas. This needs to be tested since it is inter-linked with assumptions that larger units, which generate more revenue, can be developed in rural areas. It is important to test this because a tariff approach could be particularly helpful in generating contributions to affordable housing issues from developments in rural areas and could be applied to meet rural housing need.

Establishing Viability on a Scheme by Scheme Basis

6.37 This study has, as explained previously, examined viability at a strategic level looking at viability on archetypal sites across the sub-region using a consistent basis of assumptions tailored to different site and locational characteristics. It does not seek to establish viability on particular sites. The three authorities can expect developers to seek reductions in the affordable housing they are expected to provide, arguing that their scheme is not viable with the level of affordable housing implied by policy. It is important that authorities are equipped to handle the resultant negotiations.

6.38 As part of this study DTZ was asked to review and comment on existing models for individual site appraisals. In essence there are three tools available to assist in appraising the impact of affordable housing provision on site viability. The three tools available are:

a **The Housing Corporation '*Economic Appraisal Tool'***: This uses an economic assessment of the site to predict and agree the viability of proposed levels of affordable housing and to demonstrate the additionality that grant investment will deliver over and above on-site developer contributions whilst ensuring the grant doesn't inflate residual land value.

b **The GLA '*Three Dragons'* Toolkit**: This was produced for the Greater London Council and contains specific default settings for London. As with the Housing Corporation tool, the main output of this toolkit is a residual value. The toolkit estimates the impact of different quotas of affordable housing on residual land value. It is then up to the judgement of the user as to implications of this impact on land value.

c **Argus Circle Developer**: Circle Developer is the industry standard development appraisal software. It allows for multi-phasing and in depth analysis of project make up. The output as with other models is a residual land value with a detailed cash flow. This is the tool used by the majority of developers for undertaking their own financial appraisals.

6.39 The three chosen toolkits have very similar outputs. The authorities will need to make a decision as to where their priorities lie with regards to which financial appraisal best suits their specific objectives.

- The most accurate and widely used in the market is Circle Developer. This however is costly to buy and requires a degree of specialist expertise to use. At present the software also lacks a user guide which is overcome by a helpline, but this is often difficult to access so organisations rely on in-house expertise.
- The GLA 'Three Dragons' toolkit is a useful benchmarking tool for the London Boroughs but lacks the functionality of Circle and the Housing Corporation model. DTZ suggests there is potential here to adapt the GLA toolkit and apply specific default values for the region. This adaption would have to be undertaken by the vendor, but we would not foresee this being too costly to implement.

6.40 On balance DTZ recommend that that the authorities explore acquiring access to the Three Dragons tool kit, but recommend that consideration be given to joint procurement by the Hampshire authorities as a whole or some similar consortium. This would provide efficiencies in purchasing and in the development of the necessary skill set to use the model. Consideration might be given to identifying one or two 'super users' who build up expertise in the use of the software and can provide assistance to other users when necessary.