Tribal

Thurrock Council Affordable Housing Viability Assessment

Final Report February 2010





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1 Introduction

1.1 Background

- 1.1.1 PPS3 sets out the national planning policy framework for delivering the Government's housing objectives.
- 1.1.2 Local Planning Authorities are required by PPS3 (para 29) to set an overall (i.e. plan wide) target for the amount of affordable housing to be provided. PPS3 explains that affordable housing targets and any thresholds proposed should reflect an assessment of the likely economic viability of land for housing taking into account risks to delivery and draw on informed assessments of the likely levels of finance available for affordable housing, including public subsidy and the level of developer contribution that can reasonably be secured. This includes a consideration of
 - separate targets for social-rented and intermediate affordable housing;
 - size and type of affordable housing;
 - range of circumstances in which affordable housing is required including minimum site size threshold
 - approach to seeking developer contributions, and;
 - affordable housing in rural communities.
- 1.1.3 Regional Spatial Strategies (RSS) are required to set out regional approach to addressing affordable housing needs, including targets for the region and each housing market area.

1.2 The Brief

- 1.2.1 Thurrock Council commissioned Tribal to provide a robust assessment of the viability of the recommended needs / demand based policy targets that emerge from the Thames Gateway South Essex Strategic Housing Market Assessment (SHMA) and, if appropriate, recommend revised planning policy targets that are viable for consideration by Thurrock Council. The scope of the study is to test viability on types of site that are most relevant to overall delivery in Thurrock in order to report on the viability of delivering the affordable housing targets.
- 1.2.2 The focus of the assignment is to provide evidence to justify the policy ultimately adopted by the Council relating to affordable housing on appropriate sites across the Borough. The aim of the policy is to achieve the highest level of affordable housing possible whilst not discouraging the development of private market housing.

1.3 Outputs

- 1.3.1 The key outputs from this commission are:
 - An analysis of the impact of varying levels of affordable housing on scheme viability for a range of sites with a variety of characteristics.
 - The identification of a range of policy options based on the modelling and analysis which will support the Council's LDF process.
- 1.3.2 This report:

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- details the approach taken to establish economic viability.
- gives a description of the findings, and summary of key findings, from the economic viability analysis.
- makes recommendations on policy options in relation to affordable housing targets
- gives a summary view on the initial impact of affordable housing policy on developer profit, land values or house prices.

2 Economic Viability – Approach

2.1.1 In order to test and assess the economic viability of varying affordable housing targets and thresholds on a range of residential development site types, sizes and locations across the borough the HCA Economic Appraisal Tool was used. Sitting behind the model is a series of assumptions that drive the model outputs. These assumptions are detailed in Appendix B: Thurrock Affordable Housing Viability Assessment – Assumptions Document.

2.2 Model development

- 2.2.1 The basic structure and purpose of the model is to calculate a Residual Land Value (RLV). That RLV is then compared against 'benchmark' land values. These benchmark land values must be selected to reflect the expectations of land owners with regard to value, and are generally based upon existing or alternative use values for the sites in question. These may be agricultural, residential or business/ industrial values. The comparison of the RLV dropping out of the model against the market benchmarks is some measure of the likelihood of the landowner releasing the land at this price, and thus of the capacity of the sites to provide a particular level of affordable housing.
- 2.2.2 A key part of the Assessment is establishing benchmark site values, in a period where a settled view on land values is quite difficult to establish. Our views are based on advice from the District Valuer, other available recent research and evidence gathered at a seminar of the Development industry held in October 2009, together with our own observations of the residual land values emerging from our modelling.
- 2.2.3 It is clear that land values have fallen substantially since 2007, and that the peak values being paid in the run up to the summer of 2007 are no longer relevant. However, we have not reduced values as significantly as we might have done as it is important not to impact negatively on the amount of land being brought forward for residential development, and too low an assumption about the value level at which a landowner is prepared to release land could risk this. These assumptions are a starting point for the purposes of developing a workable policy, and should be subject to regular review and updating.

2.3 Assumptions

- 2.3.1 The assumptions that drive the model are a mixture of a number of fixed and a number of flexible assumptions. The fixed assumptions relate to assumptions such as: inflation; interest / cost of finance; s106 payments; build cost per square metre by unit type; marketing costs; developer profit. The flexible assumptions relate to those which may vary on a site by site basis. All the assumptions are detailed in the assumptions document which is attached at Appendix B.
- 2.3.2 The key flexible assumptions we have made include:
 - Phasing the length of development period is based upon site size (i.e. small sites 15 months; medium sized sites units 27 months; and large sites 39 months).
 - Unit mix We have assumed 23 typologies of sites based upon location and size. These are a combination of small/medium/large; greenfield/brownfield and low and high housing market demand areas.
 - Benchmark site values the following values are based on historic evidence taking into account the fall in land prices since 2007
 - Sites in higher value areas £800,000 per hectare



- Sites in lower value areas £300,000 per hectare
- Development tariff / section 106 costs. For the purposes of modelling the sites we have tested a standard cost of £5,000, £10,000 and £15,000 per dwelling. The lower level was the tariff level recommended in the TTGDC Draft Planning Obligations Strategy¹.
- Site abnormal costs these vary depending on whether the site is brownfield or greenfield. We have used £75,000 per hectare for contamination costs and £120,000 per hectare for Dereliction costs on brownfield sites, and between £3,000 £8,000 per unit for abnormal infrastructure costs on greenfield sites.
- Code for Sustainable Homes we have assumed that all affordable units developed on the sites will be built to a minimum of Sustainable Homes Code 4 standard.
- Sales values used in the model are based on peak new build prices less 15%. These range from £1,790 £1,925 per sq m in low demand areas to £2,970 £3,090 per sq m in medium / high demand areas.

2.4 Analysis

- 2.4.1 In order to understand the economic viability of affordable housing provision we undertook analysis of impacts on a range of sites across the Borough. Details of 23 sample sites were taken from the Strategic Housing Land Availability Assessment for analysis. These are sites that were considered to be representative of the range of housing sites across the Borough, including a range of locations, sizes and housing market areas.
- 2.4.2 The analysis broke down the residential site types to which any policy may be applied by the following categories:
 - Site type
 - Greenfield
 - Brownfield (Previously Developed Land).
 - Site Size
 - Small 15 49 units
 - Medium 50 199 units
 - Large 200 499 units
 - Super 500+
 - Housing Market Demand
 - High / Medium Market Demand
 - Low Market Demand

¹ Thurrock Thames Gateway Development Corporation / ERM Draft Planning Obligations Strategy March 2009

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- 2.4.3 This analysis was used to test the schemes with 30% affordable housing and 35% affordable housing, compared with no affordable housing. By comparing the residual land value of the sites against a benchmark land value it was possible to analyse the appropriateness and deliverability of the policy across the range of site types.
- 2.4.4 Using this approach offers the potential to establish if there are patterns relating to the ability of particular site locations, sizes and densities to deliver affordable housing at certain proportions.
- 2.4.5 This analysis enables the identification of whether any of these factors (location, size, housing market area) on their own particularly impact upon viability and if so which, and what is the scale of the impact or if particular categories of sites created by combinations of those factors impact upon viability (e.g. small sized, low density, Inner Urban sites).
- 2.4.6 Figure 2-1 shows the potential housing sites that have been tested as part of this study and the house price postcode areas in which they are located. The sites are labelled with their SHLAA reference code.

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Figure 2-1: Thurrock 2007 house price mapping and modelled sites



3 Key Findings

3.1 Methodology and assumptions - summary

3.1.1 Modelling has been carried out using the HCA economic appraisal tool (EAT) to give residual land values for the site typologies identified. In total 23 sites have been modelled each of which represent a 'typology' in terms of its characteristics– demand area, density, size, and whether it is brownfield or greenfield. Standard assumptions are made for each typology in relation to unit mix and sizes, sales values and costs. These assumptions are based on market data and other sources and are set out in detail in Tribal's assumptions document.

3.2 Residual land value principle

- 3.2.1 The EAT produces a residual land value (RLV) which is compared to a benchmark value. This benchmark value represents the figure at which the site owner may be prepared to sell the site and is based on a view of land values in the area. If the RLV figure exceeds the benchmark land value for the site, then the development is considered 'viable'.
- 3.2.2 The RLV calculation starts with the production of a figure for sales income from the completed development this is made up of income from private housing for sale, together with the expected income that a developer would receive from an RSL for the affordable housing. From this the costs of construction, infrastructure and S106 contributions, fees, interest on borrowing and developers profit are deducted, leaving a figure which the developer could pay for land. This is the RLV.
- 3.2.3 Proportion of affordable housing to fully assess the impact of affordable housing on RLV, each site has been modelled at 0% 30% and 35% affordable housing. The affordable housing proportion has been calculated on the basis of percentage of habitable rooms to ensure that, given the local requirement for smaller units for affordable housing, a true 30% of the development is provided.

3.3 Establishing benchmark land value

- 3.3.1 There is limited information available on historic sales values and land values have reduced significantly as a result of the market downturn. Further analysis of the available data is set out in the assumptions document (Appendix B). We have therefore devised a set of benchmarks to assist analysis based on the available information on existing and historic values. These values are set at rates per hectare which depends on whether the site is in a low demand area (£300,000 per ha) or a higher demand area (£800,000 per ha)
- 3.3.2 These values are set to reflect the circumstances of sites which are allocated for housing but are currently in agricultural use. The setting of benchmark values is not an exact science, and the upper benchmark could be within the band £800,000 to £1 million, depending on the market strength of the site. It is also recognised that some sites will have a higher existing use value (EUV) or alternative use value (AUV), and this should be allowed for within the policy.

3.4 Significance of key variables

3.4.1 Demand is the main determinant of site value as it sets the finished sales values for private sale units and affects the value of shared ownership affordable housing units. We modelled two demand variables – low and medium/high. There is a large difference between average sales values between the two areas and although in some cases, sites in low demand areas exceed benchmark values it is doubtful whether residential



development would come forward in low demand areas without some form of additional subsidy being made available.

- 3.4.2 Density density determines the number and type of units that can be provided on a site. Next to demand it is the most important factor in determining RLV per hectare.
- 3.4.3 Brownfield/Greenfield allowances have been made for site preparation for brown field sites and additional site specific infrastructure works for green field sites. We have not allowed for major abnormal development costs as these will be of a site specific nature.

3.5 Impact of affordable housing – modelling results

- 3.5.1 Appendix A shows a summary of the modelling results. These results test 23 sites with varying levels of affordable housing (0%, 30% or 35%). They assume a constant contribution of £5k per unit. The results of testing alternative levels of contribution are set out in 3.6. The modelling has been carried out on the assumption that Social Housing Grant at the average rate for the HCA East Region under the 2009-11 programme will be available as set out in our assumptions document section 4.4.1.
- 3.5.2 Our findings are that, in general
 - Sites in medium/high value areas meet or exceed the benchmark land values with both 30% and 35% Affordable Housing. Most sites in low demand areas would meet benchmark land values at 0% Affordable Housing but not at the current policy target of 35%, or at the 30% level. These are the areas that would require the greatest intervention.
- 3.5.3 More detailed analysis shows that:
 - Most sites in low demand areas fail to achieve benchmark land values even with 0% affordable housing. However, large sites (200-500 units) both brownfield and greenfield and some super sites (over 500 units) in low demand areas do achieve benchmark land values with 0% Affordable Housing, and one site modelled exceeds benchmark land values with 30% Affordable Housing. No sites in the low demand areas meet the benchmark land values at 35% Affordable Housing.
 - Most sites in medium/high demand areas can achieve both 30% and 35% affordable housing and reach benchmark land values
 - Brownfield medium/high demand sites seem to produce better values that green field on small and medium sites. This is likely to be due to the specific densities on the individual sites selected. On large sites and super sites, greenfield sites produce higher values than brownfield.
 - At 0% affordable housing (which is not a benchmark value, but a notional starting point), 18 sites achieve benchmark land values per hectare and 5 sites do not. The sites that do not achieve benchmark values are all in low demand areas and are all brownfield. This is a result of the particularly low values for flats in low demand areas of Thurrock. Super size sites in low demand areas are particularly affected where there is a front loading of infrastructure costs which affects viability.
 - At 30% affordable housing RLV in medium/high demand areas is adjusted by an average of -50% over the 0% figure. In medium/high demand areas, site values meet or exceed the benchmark.
 - For sites in low demand areas all sites except one fail to meet benchmark land values and all but one have a negative RLV. As mentioned above, it is unlikely that developers



would want to build out sites in low demand locations unless additional incentives were made available. The sites that are likely to meet benchmark values are large, medium density, brown field, which gives the best value mix of housing for low demand development on an economical scale.

- At 35% affordable housing, no sites in low demand areas achieve benchmark land values. Sites in medium/high demand areas exceed benchmark land values in all but one scenario; a low density site where plot values are still at good levels.
- Figures 3.1 to 3.4 show the results of the modelling on different sizes of sites.



Figure 3-1 RLV on Small Sites



Figure 3-2: RLV on Medium Sites















- 3.5.4 The matrices attached as Appendix A show the detailed results of the analysis. They compare the residual land value for the sites against the benchmark valuation. For each site we have included residual and benchmark values for the site and at a per hectare level on the given site. The matrices are as follows
 - Figures 3.5 3.7 are summary tables showing site value analysis, value per hectare analysis and value per unit analysis, respectively. The "traffic light" coding indicates sites that fall above or below the equivalent benchmark land values.
 - Figures 3.8 3.10 showing sites modelled to provide no affordable housing, 30% affordable housing and 35% affordable housing, respectively.

3.6 Impact of varying tariff levels on the viability of affordable housing

- 3.6.1 Additional testing has been carried out to test the impact of varying tariff levels on the Residual Land Values of a selection of sites.
- 3.6.2 A standard tariff assumption of £5k per unit has been applied in the modelling thus far. Two alternative scenarios of £10k and £15k per unit tariff levels have also been tested to assess the impact of increasing the tariff on the resulting Residual Land Values. For modelling purposes, this has been applied as a Habitable Room rate based on an average unit size of 2.94 HR per unit.
- 3.6.3 The detailed results are set out in Figures 3.5 to 3.8 below, and in Appendix A. The findings show that
 - The biggest impact of the higher tariffs is on sites in the low demand areas. These sites do not meet the benchmark values at any tariff level and the impact of increasing the tariff levels to 10k or 15k per unit reduced the RLV considerably by just under 50% to over 500% in some cases.
 - The impact of the higher tariffs on sites in the medium/high demand area, while significant, is less severe. The difference between a £5k and a £10k tariff is less than 30% reduction in RLV in most cases and between £5k and £15k the difference is generally less than 60%.
 - At the £10k tariff level, most sites in the medium/high demand meet the benchmark land values. At the £15k level only one site meets the benchmark value. It is likely that no sites would meet the benchmark land value at a higher tariff level, for example £20k per unit.





Figure 3-5: RLV on small sites with 35% Affordable – alternative tariff scenarios



Figure 3-6: RLV on medium sites with 35% Affordable – alternative tariff scenarios





Figure 3-7: RLV on large sites with 35% Affordable – alternative tariff scenarios



Figure 3-8: RLV on super sites with 35% Affordable – alternative tariff scenarios



3.7 Policy considerations

3.7.1 There is a significant difference in the impact of affordable housing levels on the viability according to demand area. The Council may therefore wish to consider applying a higher affordable housing requirement in areas where demand is strong, and a reduced requirement in low demand areas.

Sites in medium/high demand areas:

- 35% affordable housing is viable for many high/medium demand sites and could be considered a target. It would be expected that this would not be viable for some sites and negotiation on a site by site basis would be needed to establish viability and the affordable housing requirement to be applied.
- 30% is viable for most medium/high demand sites and would be a safe policy requirement, where less flexibility would be allowed to the developer unless significant abnormal development costs could be identified and the viability impact of these clearly demonstrated.

Sites in low demand areas:

- 3.7.2 It is doubtful whether a developer would take the risk of developing some of these sites without further incentives, or with an expectation that the regeneration of the site would alter its demand category given the improvement to the area achieved. The imposition of an affordable housing requirement in these areas does mean they are not likely to be viable without additional investment.
- 3.7.3 In these areas it would be worth considering:
 - Potential for regeneration of an area and scale of development needed to achieve this
 - Possible joint regeneration plans with LA, Development Corporation and/or RSLs
 - Making the case for higher grant rates from HCA or grant from other sources
 - Need for introduction of a more balanced tenure mix and whether a lower affordable housing target is desirable given concentration of social housing already existing in some parts of Thurrock.

3.8 Policy recommendations

- 3.8.1 Our suggestions at this stage are that the Council should adopt
 - a district wide policy, but with provisions for exemptions where developers are able to demonstrate that the sales values being achieved are not high enough to support the target affordable housing ratio. We would expect most of these exemptions to be in lower sales value areas, or on sites where there are exceptionally high remediation or infrastructure costs; or
 - an area based policy, where the Council identifies areas where different ratios are required, recognising that there is variation in both need and viability in different parts of the District. This would require an ability to demonstrate a clear pattern of spatial variation in new build house prices.



- 3.8.2 However, of these two approaches, our recommendation would be a district-wide target as the most appropriate policy for the Borough. Although there is clearly a spatial variation in new build house prices, and between areas of brownfield and greenfield land in the Borough, in practice, the difficulties associated with implementing and enforcing a zonebased affordable housing target are too complex to allow a workable policy of this nature in Thurrock.
- 3.8.3 A district wide approach would give the flexibility to allow for current economic conditions, for areas in which the sales values will not support the target; and recognises the physical constraints on much of Thurrock's housing land due to its industrial heritage. This form of policy is a workable framework which gives clarity to developers, while allowing negotiation based on open book analysis to allow developers to demonstrate the maximum reasonable amount of affordable housing is being proposed.



Appendix A – Modelling Outputs



Figure 3-9: Summary: Site Value Analysis

| | Site Typologies | | | | Site | e Details | | | RLV | | Banahmark | | Difference | |
|-----------|--------------------------|---|--|---|---|--|---|--|---|---|--|--|--|--|
| Site Size | Former Use | Demand | Site no. | Area (ha) | Units | Density | Density (units per ha) | 0% Aff | 30% Aff | 35% Aff | Denchinark | 0% Aff | 30% Aff | 35% Aff |
| Small | Brownfield Greenfield | Low Low Low High High High | GTH12 LTR06 TRV09 GRI16 COF14 COF01 | 0.364 0.8 0.3 0.43 0.92 1.23 | 15 24 14 47 34 46 | Medium Medium Medium High Low Low | 41.21 30.00 46.67 109.30 36.96 37.40 | 166,840 139,869 67,700 1,507,080 2,601,657 3,506,952 | -16,486 -233,985 -53,086 751,831 1,103,784 1,524,844 | -37,226 -259,731 -55,544 659,462 897,138 1,198,831 | 109,200 240,000 90,000 344,000 736,000 984,000 | 57,640 -100,131 -22,300 1,163,080 1,865,657 2,522,952 | -125,686 -473,985 -143,086 407,831 367,784 540,844 | -146,426 -499,731 -145,544 315,462 161,138 214,831 |
| Medium | Brownfield Greenfield | Low Low High High Low High | GRI05 OCK21 SCH03 AVE07 WTS14 OCK09 | 0.59 0.8 0.77 4.90 3.3 1.51 | 66 80 153 184 163 66 | High High High Low Medium Medium | 111.86 100.00 198.70 37.55 49.39 43.71 | -997,896 -1,527,092 4,818,182 13,782,612 1,471,040 4,266,186 | -1,191,043 -1,731,562 2,458,529 5,483,614 -904,638 2,186,924 | -1,169,986 -1,761,367 2,096,419 4,991,965 -1,343,177 1,808,390 | 177,000 240,000 616,000 3,920,000 990,000 1,208,000 | -1,174,896 -1,767,092 4,202,182 9,862,612 481,040 3,058,186 | -1,368,043 -1,971,562 1,842,529 1,563,614 -1,894,638 978,924 | -1,346,986 -2,001,367 1,480,419 1,071,965 -2,333,177 600,390 |
| Large | Brownfield Greenfield | Low Low High Low High | WTS30 WTS31 LTB08 EAT08 STC01 | 2.50 2.5 9.36 8.28 8.20 | 233 236 281 331 328 | Medium Medium Low Medium Medium | 93.20 94.40 30.02 40.00 40.00 | 3,581,184 2,338,546 19,747,460 4,896,318 20,902,177 | 1,113,615 -1,167,811 8,384,799 -41,701 10,756,448 | -440,458 -1,687,674 6,793,784 -757,772 9,200,942 | 750,000 750,000 7,488,000 2,482,500 6,560,000 | 2,831,184 1,588,546 12,259,460 2,413,818 14,342,177 | 363,615 -1,917,811 896,799 -2,524,201 4,196,448 | -1,190,458 -2,437,674 -694,216 -3,240,272 2,640,942 |
| | | | I | | | | | | | | | | | |
| Super | Brownfield Greenfield | Low Low Low Low High High | LTR10 WTS08 WTS32 OCK03 ORS22 HOM01 | 7.95 5.3 9.8 17.70 18.03 17.90 | 583 502 1244 876 721 716 | Medium Medium High Medium Medium | 73.33 94.72 126.94 49.49 40.00 40.00 | 5,713,883 2,341,205 -28,492,887 7,555,629 42,834,466 42,518,737 | -2,389,939 -5,181,010 -31,762,779 -5,628,004 20,203,491 20,422,305 | -4,646,014 -6,084,488 -32,429,148 -8,040,800 16,467,947 16,435,544 | 2,385,000 1,590,000 2,940,000 5,310,000 14,420,000 14,320,000 | 3,328,883 751,205 -31,432,887 2,245,629 28,414,466 28,198,737 | -4,774,939 -6,771,010 -34,702,779 -10,938,004 5,783,491 6,102,305 | -7,031,014 -7,674,488 -35,369,148 -13,350,800 2,047,947 2,115,544 |
| | | 5 | | | - | | | | | | | | | |



Figure 3-10: Summary: Value per hectare analysis

| | Site Typologies | | | | Sit | e Details | | | RLV | | Denehmerk | | Difference | |
|-----------|--------------------------|---|--|---|---|--|---|--|---|---|--|--|---|---|
| Site Size | Former Use | Demand | Site no. | Area (ha) | Units | Density | Density (units per ha) | 0% Aff | 30% Aff | 35% Aff | Benchmark | 0% Aff | 30% Aff | 35% Aff |
| Small | Brownfield Greenfield | Low Low Low High High High | GTH12 LTR06 TRV09 GRI16 COF14 COF01 | 0.364 0.800 0.300 0.43 0.92 1.23 | 15 24 14 47 34 46 | Medium Medium Medium High Low Low | 41.21 30.00 46.67 109.30 36.96 37.40 | 458,352 174,836 225,668 3,504,837 2,827,888 2,851,180 | -45,291 -292,481 -176,953 1,748,444 1,199,765 1,239,711 | -102,269 -324,664 -185,147 1,533,633 975,150 974,659 | 300,000 300,000 300,000 800,000 800,000 800,000 | 158,352 -125,164 -74,332 2,704,837 2,027,888 2,051,180 | -345,291 -592,481 -476,953 948,444 399,765 439,711 | -402,269 -624,664 -485,147 733,633 175,150 174,659 |
| Medium | Brownfield Greenfield | Low Low High High Low High | GRI05 OCK21 SCH03 AVE07 WTS14 OCK09 | 0.59 0.80 0.77 4.90 3.30 1.51 | 66 80 153 184 163 66 | High High High Low Medium Medium | 111.86 100.00 198.70 37.55 49.39 43.71 | -1,691,349 -1,908,865 6,257,379 2,812,778 445,770 2,825,289 | -2,018,717 -2,164,453 3,192,895 1,119,105 -274,133 1,448,294 | -1,983,027 -2,201,708 2,722,622 1,018,768 -407,023 1,197,609 | 300,000 300,000 800,000 800,000 300,000 800,000 | -1,991,349 -2,208,865 5,457,379 2,012,778 145,770 2,025,289 | -2,318,717 -2,464,453 2,392,895 319,105 -574,133 648,294 | -2,283,027 -2,501,708 1,922,622 218,768 -707,023 397,609 |
| Large | Brownfield Greenfield | Low Low High Low High | WTS30 WTS31 LTB08 EAT08 STC01 | 2.50 2.50 9.36 8.28 8.20 | 233 236 281 331 328 | Medium Medium Low Medium Medium | 93.20 94.40 30.02 40.00 40.00 | 1,432,474 935,418 2,109,771 591,700 2,549,046 | 445,446 -467,124 895,812 -5,039 1,311,762 | -176,183 -675,069 725,832 -91,574 1,122,066 | 300,000 300,000 800,000 300,000 800,000 | 1,132,474 635,418 1,309,771 291,700 1,749,046 | 145,446 -767,124 95,812 -305,039 511,762 | -476,183 -975,069 -74,168 -391,574 322,066 |
| Super | Brownfield Greenfield | Low Low Low High High | LTR10 WTS08 WTS32 OCK03 ORS22 HOM01 | 7.95 5.30 9.80 17.70 18.03 17.90 | 583 502 1244 876 721 716 | Medium Medium High Medium Medium | 73.33 94.72 126.94 49.49 40.00 40.00 | 718,727 441,737 -2,907,437 426,872 2,376,392 2,375,348 | -300,621 -977,549 -3,241,100 -317,966 1,120,859 1,140,911 | -584,404 -1,148,017 -3,309,097 -454,282 913,617 918,187 | 300,000 300,000 300,000 300,000 800,000 800,000 | 418,727 141,737 -3,207,437 126,872 1,576,392 1,575,348 | -600,621 -1,277,549 -3,541,100 -617,966 320,859 340,911 | -884,404 -1,448,017 -3,609,097 -754,282 113,617 118,187 |



Figure 3-11: Summary: Value per Unit Analysis

| | Site Typologies | | | | Sit | e Details | | | RLV | | Denehmerk | | Difference | |
|-----------|--------------------------|---|--|---|----------------------------------|--|---|--|--|---|---|---|---|---|
| Site Size | Former Use | Demand | Site no. | Area (ha) | Units | Density | Density (units per ha) | 0% Aff | 30% Aff | 35% Aff | Benchmark | 0% Aff | 30% Aff | 35% Aff |
| Small | Brownfield Greenfield | Low Low Low High High High | GTH12 LTR06 TRV09 GRI16 COF14 COF01 | 0.364 0.800 0.300 0.43 0.92 1.23 | 15 24 14 47 34 46 | Medium Medium Medium High Low Low | 41.21 30.00 46.67 109.30 36.96 37.40 | 11,123 5,828 4,836 32,066 76,519 76,238 | -1,099 -9,749 -3,792 15,996 32,464 33,149 | -2,482 -10,822 -3,967 14,031 26,386 26,062 | 7,280 10,000 6,429 7,319 21,647 21,391 | 3,843 -4,172 -1,593 24,746 54,872 54,847 | -8,379 -19,749 -10,220 8,677 10,817 11,757 | -9,762 -20,822 -10,396 6,712 4,739 4,670 |
| Medium | Brownfield | Low Low High | GRI05 OCK21 SCH03 | 0.59 0.80 0.77 | 66 80 153 | High High High | 111.86 100.00 198.70 | -15,120 -19,089 31,491 | -18,046 -21,645 16,069 | -17,727 -22,017 13,702 | 2,682 3,000 4,026 | -17,801 -22,089 27,465 | -20,728 -24,645 12,043 | -20,409 -25,017 9,676 |
| | Greenfield | High Low High | WTS14 OCK09 | 4.90 3.30 1.51 | 184 163 66 | Low Medium Medium | 37.55 49.39 43.71 | 64,639 | 33,135 | 27,130 | 6,074 18,303 | -6,074 46,336 | 6,498 - <mark>6,074</mark> 14,832 | 5,826 - <mark>6,074</mark> 9,097 |
| | | | | | | | | | | | | | | |
| Large | Brownfield Greenfield | Low Low High Low | WTS30 WTS31 LTB08 EAT08 | 2.50 2.50 9.36 8.28 | 233 236 281 331 | Medium Medium Low Medium | 93.20 94.40 30.02 40.00 | 15,370 9,909 70,276 14,793 | 4,779 -4,948 29,839 -126 -22,704 | -1,890 -7,151 24,177 -2,289 | 3,219 3,178 26,648 7,500 | 12,151 6,731 43,628 7,293 | 1,561 -8,126 3,191 -7,626 13,704 | -5,109 -10,329 -2,471 -9,789 |
| | | High | SICOI | 8.20 | 328 | wealum | 40.00 | 03,720 | 32,794 | 26,052 | 20,000 | 43,720 | 12,794 | 8,052 |
| | | | | | | | | | | | | | | |
| Super | Brownfield | Low Low Low Low | LTR10 WTS08 WTS32 OCK03 | 7.95 5.30 9.80 17.70 | 583 502 1244 876 | Medium Medium High Medium | 73.33 94.72 126.94 49.49 | 9,801 4,664 <mark>-22,904</mark> 8,625 | -4,099 -10,321 -25,533 -6,425 | -7,969 -12,120 -26,068 -9,179 | 4,091 3,167 2,363 6,062 | 5,710 1,496 - <mark>25,268</mark> 2,564 | -8,190 -13,488 -27,896 -12,486 | -12,060 -15,288 -28,432 -15,241 |
| | Greenfield | High High | ORS22 HOM01 | 18.03 17.90 | 721 716 | Medium Medium | 40.00 40.00 | 59,410 59,384 | 28,021 28,523 | 22,840 22,955 | 20,000 20,000 | 39,410 39,384 | 8,021 8,523 | 2,840 2,955 |



Figure 3-12: Model Outputs 0% Affordable Housing

| | Site Typologie | es | | | Site Deta | ails | | Resid | ual Land Valua | tion | Bei | nchmark Valua | ation | | Difference | |
|--------------|----------------|---------------------------|----------------------------------|-----------------------------|----------------------------|------------------------------------|--|--|--|---|--|--|---|---|--|---|
| Site Size | Former Use | Demand | Site no. | Area (ha) | Units | Density | Density (units per ha) | Site Value (£) | Value (£ per Ha) | Value (£ per unit) | Site Value (£) | Value (£ per Ha) | Value (£ per unit) | Site (£) | Per hectare (£) | Per unit (£) |
| Small | Brownfield | Low Low Low High | GTH12 LTR06 TRV09 GRI16 | 0.364 0.8 0.3 0.43 | 15 24 14 47 34 | Medium Medium Medium High | 41.21 30.00 46.67 109.30 36.96 | 166,840 139,869 67,700 1,507,080 | 458,352 174,836 225,668 3,504,837 | 11,123 5,828 4,836 32,066 76 519 | 109,200 240,000 90,000 344,000 | 300,000 300,000 300,000 800,000 | 7,280 10,000 6,429 7,319 21,647 | 57,640 -100,131 -22,300 1,163,080 | 158,352 -125,164 -74,332 2,704,837 | 3,843 -4,172 -1,593 24,746 |
| | Greenfield | High | COF01 | 1.23 | 46 | Low | 37.40 | 3,506,952 | 2,851,180 | 76,238 | 984,000 | 800,000 | 21,391 | 2,522,952 | 2,051,180 | 54,847 |
| Medium | Brownfield | Low Low High | GRI05 OCK21 SCH03 | 0.59 0.8 0.77 | 66 80 153 | High High High | 111.86 100.00 198.70 | -997,896 -1,527,092 4,818,182 | -1,691,349 -1,908,865 6,257,379 | -15,120 -19,089 31,491 | 177,000 240,000 616,000 | 300,000 300,000 800,000 | 2,682 3,000 4,026 | -1,174,896 -1,767,092 4,202,182 | -1,991,349 -2,208,865 5,457,379 | -17,801 -22,089 27,465 |
| Medium | Greenfield | High Low High | AVE07 WTS14 OCK09 | 4.90 3.3 1.51 | 184 163 66 | Low Medium Medium | 37.55 49.39 43.71 | 13,782,612 1,471,040 4,266,186 | 2,812,778 445,770 2,825,289 | 74,905 9,025 64,639 | 3,920,000 990,000 1,208,000 | 800,000 300,000 800,000 | 21,304 6,074 18,303 | 9,862,612 481,040 3,058,186 | 2,012,778 145,770 2,025,289 | 53,601 2,951 46,336 |
| Large | Brownfield | Low Low High Low | WTS30 WTS31 LTB08 EAT08 | 2.50 2.5 9.36 8.28 | 233 236 281 331 | Medium Medium Low Medium | 93.20 94.40 30.02 40.00 | 3,581,184 2,338,546 19,747,460 4,896,318 | 1,432,474 935,418 2,109,771 591,700 | 15,370 9,909 70,276 14,793 | 750,000 750,000 7,488,000 2,482,500 | 300,000 300,000 800,000 300,000 | 3,219 3,178 26,648 7,500 | 2,831,184 1,588,546 12,259,460 2,413,818 | 1,132,474 635,418 1,309,771 291,700 | 12,151 6,731 43,628 7,293 |
| | | High | STC01 | 8.20 | 328 | Medium | 40.00 | 20,902,177 | 2,549,046 | 63,726 | 6,560,000 | 800,000 | 20,000 | 14,342,177 | 1,749,046 | 43,726 |
| Super | Brownfield | Low Low Low Low | LTR10 WTS08 WTS32 OCK03 | 7.95 5.3 9.8 17.70 | 583 502 1244 876 | Medium Medium High Medium | 73.33 94.72 126.94 49.49 | 5,713,883 2,341,205 -28,492,887 7,555,629 | 718,727 441,737 -2,907,437 426,872 | 9,801 4,664 <mark>-22,904</mark> 8,625 | 2,385,000 1,590,000 2,940,000 5,310,000 | 300,000 300,000 300,000 300,000 | 4,091 3,167 2,363 6,062 | 3,328,883 751,205 -31,432,887 2,245,629 | 418,727 141,737 -3,207,437 126,872 | 5,710 1,496 <mark>-25,268</mark> 2,564 |
| Super | Greenfield | High High | ORS22 HOM01 | 18.03 17.90 | 721 716 | Medium Medium | 40.00 40.00 | 42,834,466 42,518,737 | 2,376,392 2,375,348 | 59,410 59,384 | 14,420,000 14,320,000 | 800,000 800,000 | 20,000 20,000 | 28,414,466 28,198,737 | 1,576,392 1,575,348 | 39,410 39,384 |



Figure 3-13: Model Output 30% Affordable Housing

| | Site Typologi | ies | | | Site De | etails | | Affordable Housing Mix | Res | idual Land Val | uation | Benc | hmark Valu | ation | | Difference | |
|--------------|--------------------------|---|--|---|---|--|---|--|---|---|--|--|--|---|--|---|--|
| Site Size | Former Use | Demand | Site no. | Area (ha) | Units | Density | Density (units per ha) | Unit Split* | Site Value (£) | Value (£ per Ha) | Value (£ per unit) | Site Value (£) | Value (£ per Ha) | Value (£ per unit) | Site (£) | Per hectare (£) | Per unit (£) |
| Small | Brownfield Greenfield | Low Low Low High High | GTH12 LTR06 TRV09 GRI16 COF14 COF01 | 0.364 0.8 0.3 0.43 0.92 1.23 | 15 24 14 47 34 46 | Medium Medium High Low Low | 41.21 30.00 46.67 109.30 36.96 37.40 | 10 PS 3SR 1SO 1IR 15 PS 6SR 2SO 1IR 9 PS 3SR 1SO 1IR 32PS 11SR 2SO 2IR 19PS 11SR 2SO 2IR 29PS 12SR 3SO 2IR | -16,486 -233,985 -53,086 751,831 1,103,784 1,524,844 | -45,291 -292,481 -176,953 1,748,444 1,199,765 1,239,711 | -1,099 -9,749 -3,792 15,996 32,464 33,149 | 109,200 240,000 90,000 344,000 736,000 984,000 | 300,000 300,000 300,000 800,000 800,000 800,000 | 7,280 10,000 6,429 7,319 21,647 21,391 | -125,686 -473,985 -143,086 407,831 367,784 540,844 | -345,291 -592,481 -476,953 948,444 399,765 439,711 | -8,379 -19,749 -10,220 8,677 10,817 11,757 |
| Medium | Brownfield Greenfield | Low Low High High Low High | GRI05 OCK21 SCH03 AVE07 WTS14 OCK09 | 0.59 0.8 0.77 4.90 3.3 1.51 | 66 80 153 184 163 66 | High High High Low Medium Medium | 111.86 100.00 198.70 37.55 49.39 43.71 | 45PS 15SR 3SO 3IR 55 PS 17SR 4SO 4IR 105PS 34SR 7SO 7IR 114PS 48SR 11SO 11IR 104 PS 41SR 9SO 9IR 42PS 17SR 4SO 3IR | -1,191,043 -1,731,562 2,458,529 5,483,614 -904,638 2,186,924 | -2,018,717 -2,164,453 3,192,895 1,119,105 -274,133 1,448,294 | -18,046 -21,645 16,069 29,802 -5,550 33,135 | 177,000 240,000 616,000 3,920,000 990,000 1,208,000 | 300,000 300,000 800,000 800,000 300,000 800,000 | 2,682 3,000 4,026 21,304 6,074 18,303 | -1,368,043 -1,971,562 1,842,529 1,563,614 -1,894,638 978,924 | -2,318,717 -2,464,453 2,392,895 319,105 -574,133 648,294 | -20,728 -24,645 12,043 8,498 -11,624 14,832 |
| Large | Brownfield Greenfield | Low Low High Low High | WTS30 WTS31 LTB08 EAT08 STC01 | 2.50 2.5 9.36 8.28 8.20 | 233 236 281 331 328 | Medium Medium Low Medium Medium | 93.20 94.40 30.02 40.00 40.00 | 148 PS, 60 SR, 13 SO, 12 IR 150 PS 60SR 13SO 13IR 176 PS, 73 SR, 16 SO, 16 IR 207 PS, 86 SR, 19 SO, 19 IR 206 PS, 86 SR, 18 SO, 18 IR | 1,113,615 -1,167,811 8,384,799 -41,701 10,756,448 | 445,446 -467,124 895,812 -5,039 1,311,762 | 4,779 -4,948 29,839 -126 32,794 | 750,000 750,000 7,488,000 2,482,500 6,560,000 | 300,000 300,000 800,000 300,000 800,000 | 3,219 3,178 26,648 7,500 20,000 | 363,615 -1,917,811 896,799 -2,524,201 4,196,448 | 145,446 -767,124 95,812 -305,039 511,762 | 1,561 -8,126 3,191 -7,626 12,794 |
| Super | Brownfield Greenfield | Low Low Low Low High High | LTR10 WTS08 WTS32 OCK03 ORS22 HOM01 | 7.95 5.3 9.8 17.70 18.03 17.90 | 583 502 1244 876 721 716 | Medium Medium High Medium Medium Medium | 73.33 94.72 126.94 49.49 40.00 40.00 | 370 PS ,148 SR ,32 SO ,33 IR 319 PS ,129 SR ,27 SO ,27 IR 851 PS ,272 SR ,64 SO ,57 IR 559 PS ,223 SR ,47 SO ,47 IR 459 PS ,183 SR ,41 SO ,38 IR 454 PS ,183 SR ,41 SO ,38 IR | -2,389,939 -5,181,010 -31,762,779 -5,628,004 20,203,491 20,422,305 | -300,621 -977,549 -3,241,100 -317,966 1,120,859 1,140,911 | -4,099 -10,321 -25,533 -6,425 28,021 28,523 | 2,385,000 1,590,000 2,940,000 5,310,000 14,420,000 14,320,000 | 300,000 300,000 300,000 300,000 800,000 800,000 | 4,091 3,167 2,363 6,062 20,000 20,000 | -4,774,939 -6,771,010 -34,702,779 -10,938,004 5,783,491 6,102,305 | -600,621 -1,277,549 -3,541,100 -617,966 320,859 340,911 | -8,190 -13,488 -27,896 -12,486 8,021 8,523 |



Figure 3-14: Model Output 35% Affordable Housing

| | Site Typologi | es | Site Details | | | Affordable Housing Mix | Resid | lual Land Valua | ation | Bei | nchmark Valu | ation | | Difference | | | |
|--------------|--------------------------|---|--|---|---|--|---|--|---|---|--|--|--|---|--|---|--|
| Site Size | Former Use | Demand | Site no. | Area (ha) | Units | Density | Density (units per ha) | Unit Split* | Site Value (£) | Value (£ per Ha) | Value (£ per unit) | Site Value (£) | Value (£ per Ha) | Value (£ per unit) | Site (£) | Per hectare (£) | Per unit (£) |
| Small | Brownfield Greenfield | Low Low Low High High | GTH12 LTR06 TRV09 GRI16 COF14 COF01 | 0.364 0.8 0.3 0.43 0.92 1.23 | 15 24 14 47 34 46 | Medium Medium Medium High Low Low | 41.21 30.00 46.67 109.30 36.96 37.40 | 9PS 4SR 1SO 1IR 14PS 7SR 2SO 1IR 8PS 4SR 1SO 1IR 30 PS 12SR 3SO 2IR 21PS 9SR 2SO 2IR 26PS 14SR 3SO 3IR | -37,226 -259,731 -55,544 659,462 897,138 1,198,831 | -102,269 -324,664 -185,147 1,533,633 975,150 974,659 | -2,482 -10,822 -3,967 14,031 26,386 26,062 | 109,200 240,000 90,000 344,000 736,000 984,000 | 300,000 300,000 300,000 800,000 800,000 800,000 | 7,280 10,000 6,429 7,319 21,647 21,391 | -146,426 -499,731 -145,544 315,462 161,138 214,831 | -402,269 -624,664 -485,147 733,633 175,150 174,659 | -9,762 -20,822 -10,396 6,712 4,739 4,670 |
| Medium | Brownfield Greenfield | Low Low High High Low High | GRI05 OCK21 SCH03 AVE07 WTS14 OCK09 | 0.59 0.8 0.77 4.90 3.3 1.51 | 66 80 153 184 163 66 | High High High Low Medium Medium | 111.86 100.00 198.70 37.55 49.39 43.71 | 42PS 17SR 4SO 3IR 51PS 21SR 4SO 4IR 97PS 40SR 8SO 8IR 105PS 55SR 12SO 12IR 95PS 48SR 10SO 10IR 38PS 20SR 4SO 4IR | -1,169,986 -1,761,367 2,096,419 4,991,965 -1,343,177 1,808,390 | -1,983,027 -2,201,708 2,722,622 1,018,768 -407,023 1,197,609 | -17,727 -22,017 13,702 27,130 -8,240 27,400 | 177,000 240,000 616,000 3,920,000 990,000 1,208,000 | 300,000 300,000 800,000 800,000 300,000 800,000 | 2,682 3,000 4,026 21,304 6,074 18,303 | -1,346,986 -2,001,367 1,480,419 1,071,965 -2,333,177 600,390 | -2,283,027 -2,501,708 1,922,622 218,768 -707,023 397,609 | -20,409 -25,017 9,676 5,826 -14,314 9,097 |
| Large | Brownfield Greenfield | Low Low High Low High | WTS30 WTS31 LTB08 EAT08 STC01 | 2.50 2.5 9.36 8.28 8.20 | 233 236 281 331 328 | Medium Medium Low Medium Medium | 93.20 94.40 30.02 40.00 40.00 | 135 PS, 68 SR, 15 SO, 15 IR 137PS 69SR 15SO 15IR 161 PS, 84 SR, 18 SO, 16 IR 190 PS, 99 SR, 21 SO, 21 IR 188 PS, 98 SR, 21 SO, 21 IR | -440,458 -1,687,674 6,793,784 -757,772 9,200,942 | -176,183 -675,069 725,832 -91,574 1,122,066 | -1,890 -7,151 24,177 -2,289 28,052 | 750,000 750,000 7,488,000 2,482,500 6,560,000 | 300,000 300,000 800,000 300,000 800,000 | 3,219 3,178 26,648 7,500 20,000 | -1,190,458 -2,437,674 -694,216 -3,240,272 2,640,942 | -476,183 -975,069 -74,168 -391,574 322,066 | -5,109 -10,329 -2,471 -9,789 8,052 |
| Super | Brownfield Greenfield | Low Low Low Low High High | LTR10 WTS08 WTS32 OCK03 ORS22 HOM01 | 7.95 5.3 9.8 17.70 18.03 17.90 | 583 502 1244 876 721 716 | Medium Medium High Medium Medium Medium | 73.33 94.72 126.94 49.49 40.00 40.00 | 339 PS ,171 SR ,37 SO ,36 IR 232 PS ,147 SR ,32 SO ,31 IR 787 PS ,321 SR ,71 SO ,65 IR 508 PS ,255 SR ,57 SO ,56 IR 418 PS ,212 SR ,46 SO ,45 IR 416 PS ,209 SR ,46 SO ,45 IR | -4,646,014 -6,084,488 -32,429,148 -8,040,800 16,467,947 16,435,544 | -584,404 -1,148,017 -3,309,097 -454,282 913,617 918,187 | -7,969 -12,120 -26,068 -9,179 22,840 22,955 | 2,385,000 1,590,000 2,940,000 5,310,000 14,420,000 14,320,000 | 300,000 300,000 300,000 300,000 800,000 800,000 | 4,091 3,167 2,363 6,062 20,000 20,000 | -7,031,014 -7,674,488 -35,369,148 -13,350,800 2,047,947 2,115,544 | -884,404 -1,448,017 -3,609,097 -754,282 113,617 118,187 | -12,060 -15,288 -28,432 -15,241 2,840 2,955 |

Figure 3-15: Model Output Tariff at £5,000 per unit

| 5 | Site Typologies | | Site Details | | | | | Affordable Housing Mix | Residua | al Land Valuation | on | Bench | hmark Valua | ation | Difference | | |
|-----------|-----------------|--------------|----------------|----------------|------------|------------------|------------------------------|--|--------------------------------------|---------------------------------------|---------------------------------|--------------------------|---------------------|-----------------------|---------------------------------------|---------------------------------------|--------------------------------|
| Site Size | Former Use | Demand | Site no. | Area (ha) | Units | Density | Density (units per ha) | Unit Split* | Site Value (£) | Value (£ per Ha) | Value (£ per unit) | Site Value (£) | Value (£ per Ha) | Value (£ per unit) | Site (£) | Per hectare (£) | Per unit (£) |
| Small | Brownfield | Low High | GTH12 GRI16 | 0.364 0.43 | 15 47 | Medium High | 41.21 109.30 | 9PS 4SR 1SO 1IR 30 PS 12SR 3SO 2IR | - <mark>37,226</mark> 659,462 | - <mark>102,270</mark> 1,533,633 | - <mark>2,482</mark> 14,031 | 109,200 344,000 | 300,000 800,000 | 7,280 7,319 | - <mark>146,426</mark> 315,462 | <mark>-402,270</mark> 733,633 | <mark>-9,762</mark> 6,712 |
| Sman | Greenfield | High High | COF14 COF01 | 0.92 1.23 | 34 46 | Low Low | 36.96 37.40 | 21PS 9SR 2SO 2IR 26PS 14SR 3SO 3IR | 897,138 1,198,831 | 975,150 974,659 | 26,386 26,062 | 736,000 984,000 | 800,000 800,000 | 21,647 21,391 | 161,138 214,831 | 175,150 174,659 | 4,739 4,670 |
| | 1 | | | | | | | | | | | | | | | | |
| Modium | Brownfield | Low High | GRI05 SCH03 | 0.59 0.77 | 66 153 | High High | 111.86 198.70 | 42PS 17SR 4SO 3IR 97PS 40SR 8SO 8IR | <mark>-1,169,986</mark> 2,096,419 | - <mark>1,983,026</mark> 2,722,622 | - <mark>17,727</mark> 13,702 | 177,000 616,000 | 300,000 800,000 | 2,682 4,026 | - <mark>1,346,986</mark> 1,480,419 | - <mark>2,283,026</mark> 1,922,622 | - <mark>20,409</mark> 9,676 |
| Medium | Greenfield | High High | AVE07 OCK09 | 4.90 1.51 | 184 66 | Low Medium | 37.55 43.71 | 105PS 55SR 12SO 12IR 38PS 20SR 4SO 4IR | 4,991,965 1,808,390 | 1,018,768 1,197,609 | 27,130 27,400 | 3,920,000 1,208,000 | 800,000 800,000 | 21,304 18,303 | 1,071,965 600,390 | 218,768 397,609 | 5,826 9,097 |
| | | | | | | | | | | | | | | | | | |
| Large | Brownfield | Low High | WTS30 LTB08 | 2.50 9.36 | 233 281 | Medium Low | 93.20 30.02 | 135 PS, 68 SR, 15 SO, 15 IR 161 PS, 84 SR, 18 SO, 16 IR | <mark>-440,458</mark> 6,793,784 | - <mark>176,183</mark> 725,832 | <mark>-1,890</mark> 24,177 | 750,000 7,488,000 | 300,000 800,000 | 3,219 26,648 | -1,190,458 -694,216 | -476,183 -74,168 | -5,109 -2,471 |
| Large | Greenfield | Low High | EAT08 STC01 | 8.28 8.20 | 331 328 | Medium Medium | 40.00 40.00 | 190 PS, 99 SR, 21 SO, 21 IR 188 PS, 98 SR, 21 SO, 21 IR | - 757,772 9,200,942 | - <mark>91,574</mark> 1,122,066 | <mark>-2,289</mark> 28,052 | 2,482,500 6,560,000 | 300,000 800,000 | 7,500 20,000 | - <mark>3,240,272</mark> 2,640,942 | - <mark>391,574</mark> 322,066 | <mark>-9,789</mark> 8,052 |
| | | | | | | | | | | | | | | | | | |
| Super | Brownfield | Low Low | LTR10 OCK03 | 7.95 17.70 | 583 876 | Medium Medium | 73.33 49.49 | 339 PS ,171 SR ,37 SO ,36 IR 508 PS ,255 SR ,57 SO ,56 IR | -4,646,014 -8,040,800 | -584,404 -454,282 | -7,969 -9,179 | 2,385,000 5,310,000 | 300,000 300,000 | 4,091 6,062 | -7,031,014 -13,350,800 | -884,404 -754,282 | -12,060 -15,241 |
| Capor | Greenfield | High High | ORS22 HOM01 | 18.03 17.90 | 721 716 | Medium Medium | 40.00 40.00 | 418 PS ,212 SR ,46 SO ,45 IR 416 PS ,209 SR ,46 SO ,45 IR | 16,467,947 16,435,544 | 913,617 918,187 | 22,840 22,955 | 14,420,000 14,320,000 | 800,000 800,000 | 20,000 20,000 | 2,047,947 2,115,544 | 113,617 118,187 | 2,840 2,955 |

Figure 3-16: Model Output Tariff at £10,000 per unit

| Si | ite Typologies | | | | Site Det | ails | | Affordable Housing Mix | Residu | al Land Valua | tion | Bend | hmark Valu | ation | | Difference | |
|-----------|----------------|--------------|----------------|----------------|------------|------------------|------------------------------|--|---------------------------------------|---------------------------------------|--------------------------------|--------------------------|---------------------|-----------------------|---------------------------------------|-----------------------------------|-------------------------------|
| Site Size | Former Use | Demand | Site no. | Area (ha) | Units | Density | Density (units per ha) | Unit Split* | Site Value (£) | Value (£ per Ha) | Value (£ per unit) | Site Value (£) | Value (£ per Ha) | Value (£ per unit) | Site (£) | Per hectare (£) | Per unit (£) |
| Small | Brownfield | Low High | GTH12 GRI16 | 0.364 0.43 | 15 47 | Medium High | 41.21 109.30 | 9PS 4SR 1SO 1IR 30 PS 12SR 3SO 2IR | - 117,929 459,990 | - <mark>323,981</mark> 1,069,743 | - <mark>7,862</mark> 9,787 | 109,200 344,000 | 300,000 800,000 | 7,280 7,319 | -227,129 115,990 | - <mark>623,981</mark> 269,743 | <mark>-15,142</mark> 2,468 |
| oman | Greenfield | High High | COF14 COF01 | 0.92 1.23 | 34 46 | Low Low | 36.96 37.40 | 21PS 9SR 2SO 2IR 26PS 14SR 3SO 3IR | 702,233 930,837 | 763,297 756,778 | 20,654 20,236 | 736,000 984,000 | 800,000 800,000 | 21,647 21,391 | -33,767 -53,163 | -36,703 -43,222 | -993 -1,156 |
| | 1 | | | | | | | | | | | | | | | | |
| Modium | Brownfield | Low High | GRI05 SCH03 | 0.59 0.77 | 66 153 | High High | 111.86 198.70 | 42PS 17SR 4SO 3IR 97PS 40SR 8SO 8IR | <mark>-1,440,211</mark> 1,472,258 | - <mark>2,441,035</mark> 1,912,023 | - <mark>21,821</mark> 9,623 | 177,000 616,000 | 300,000 800,000 | 2,682 4,026 | -1,617,211 856,258 | -2,741,035 1,112,023 | -24,503 5,596 |
| Medium | Greenfield | High High | AVE07 OCK09 | 4.90 1.51 | 184 66 | Low Medium | 37.55 43.71 | 105PS 55SR 12SO 12IR 38PS 20SR 4SO 4IR | 3,936,031 1,469,140 | 803,272 972,940 | 21,391 22,260 | 3,920,000 1,208,000 | 800,000 800,000 | 21,304 18,303 | 16,031 261,140 | 3,272 172,940 | 87 3,957 |
| | | | | | | | | | | | | | | | | | |
| Larga | Brownfield | Low High | WTS30 LTB08 | 2.50 9.36 | 233 281 | Medium Low | 93.20 30.02 | 135 PS, 68 SR, 15 SO, 15 IR 161 PS, 84 SR, 18 SO, 16 IR | - <mark>1,604,787</mark> 5,238,513 | - <mark>641,915</mark> 633,053 | <mark>-6,887</mark> 15,826 | 750,000 7,488,000 | 300,000 800,000 | 3,219 26,648 | -2,354,787 -2,249,487 | -941,915 -166,947 | -10,106 -10,821 |
| Large | Greenfield | Low High | EAT08 STC01 | 8.28 8.20 | 331 328 | Medium Medium | 40.00 40.00 | 190 PS, 99 SR, 21 SO, 21 IR 188 PS, 98 SR, 21 SO, 21 IR | -2,407,946 7,562,100 | -290,990 922,207 | -7,275 23,055 | 2,482,500 6,560,000 | 300,000 800,000 | 7,500 20,000 | - <mark>4,890,446</mark> 1,002,100 | - <mark>590,990</mark> 122,207 | -14,775 3,055 |
| | | | | | | | | | | | | | | | | | |
| Super | Brownfield | Low Low | LTR10 OCK03 | 7.95 17.70 | 583 876 | Medium Medium | 73.33 49.49 | 339 PS ,171 SR ,37 SO ,36 IR 508 PS ,255 SR ,57 SO ,56 IR | -7,664,017 -12,583,226 | -964,027 -710,917 | -13,146 -14,364 | 2,385,000 5,310,000 | 300,000 300,000 | 4,091 6,062 | -10,049,017 -17,893,226 | -1,264,027 -1,010,917 | -17,237 -20,426 |
| | Greenfield | High High | ORS22 HOM01 | 18.03 17.90 | 721 716 | Medium Medium | 40.00 40.00 | 418 PS ,212 SR ,46 SO ,45 IR 416 PS ,209 SR ,46 SO ,45 IR | 12,724,447 12,717,011 | 705,933 710,448 | 17,648 17,761 | 14,420,000 14,320,000 | 800,000 800,000 | 20,000 20,000 | -1,695,553 -1,602,989 | -94,067 -89,552 | -2,352 -2,239 |



Figure 3-17: Model Output Tariff at £15,000 per unit

| Site Typologies | | | Site Details | | | | | Affordable Housing Mix | Residual Land Valuation | | | Benchmark Valuation | | | Difference | | |
|-----------------|------------|--------------|----------------|----------------|------------|------------------|------------------------------|--|---------------------------------------|---------------------------------------|---------------------------------|--------------------------|---------------------|-----------------------|----------------------------|--------------------------|-------------------------------|
| Site Size | Former Use | Demand | Site no. | Area (ha) | Units | Density | Density (units per ha) | Unit Split* | Site Value (£) | Value (£ per Ha) | Value (£ per unit) | Site Value (£) | Value (£ per Ha) | Value (£ per unit) | Site (£) | Per hectare (£) | Per unit (£) |
| Small | Brownfield | Low High | GTH12 GRI16 | 0.364 0.43 | 15 47 | Medium High | 41.21 109.30 | 9PS 4SR 1SO 1IR 30 PS 12SR 3SO 2IR | - <mark>198,632</mark> 260,517 | - <mark>545,692</mark> 605,853 | - <mark>13,242</mark> 5,543 | 109,200 344,000 | 300,000 800,000 | 7,280 7,319 | -307,832 -83,483 | -845,692 -194,147 | -20,522 -1,776 |
| | Greenfield | High High | COF14 COF01 | 0.92 1.23 | 34 46 | Low Low | 36.96 37.40 | 21PS 9SR 2SO 2IR 26PS 14SR 3SO 3IR | 507,328 662,843 | 551,444 538,897 | 14,921 14,410 | 736,000 984,000 | 800,000 800,000 | 21,647 21,391 | -228,672 -321,157 | -248,556 -261,103 | -6,726 -6,982 |
| Medium | Brownfield | Low High | GRI05 SCH03 | 0.59 0.77 | 66 153 | High High | 111.86 198.70 | 42PS 17SR 4SO 3IR 97PS 40SR 8SO 8IR | -1,710,436 848,096 | - <mark>2,899,044</mark> 1,101,424 | <mark>-25,916</mark> 5,543 | 177,000 616,000 | 300,000 800,000 | 2,682 4,026 | -1,887,436 232,096 | -3,199,044 301,424 | <mark>-28,598</mark> 1,517 |
| | Greenfield | High High | AVE07 OCK09 | 4.90 1.51 | 184 66 | Low Medium | 37.55 43.71 | 105PS 55SR 12SO 12IR 38PS 20SR 4SO 4IR | 2,880,097 1,129,890 | 587,775 748,271 | 15,653 17,120 | 3,920,000 1,208,000 | 800,000 800,000 | 21,304 18,303 | -1,039,903 -78,110 | -212,225 -51,729 | -5,652 -1,183 |
| Large | Brownfield | Low High | WTS30 LTB08 | 2.50 9.36 | 233 281 | Medium Low | 93.20 30.02 | 135 PS, 68 SR, 15 SO, 15 IR 161 PS, 84 SR, 18 SO, 16 IR | -2,769,115 3,683,242 | -1,107,646 393,509 | - <mark>11,885</mark> 13,108 | 750,000 7,488,000 | 300,000 800,000 | 3,219 26,648 | -3,519,115 -3,804,758 | -1,407,646 -406,491 | -15,103 -13,540 |
| | Greenfield | Low High | EAT08 STC01 | 8.28 8.20 | 331 328 | Medium Medium | 40.00 40.00 | 190 PS, 99 SR, 21 SO, 21 IR 188 PS, 98 SR, 21 SO, 21 IR | - <mark>4,058,119</mark> 5,923,258 | - <mark>490,407</mark> 722,349 | - <mark>12,260</mark> 18,059 | 2,482,500 6,560,000 | 300,000 800,000 | 7,500 20,000 | -6,540,619 -636,742 | -790,407 -77,651 | -19,760 -1,941 |
| | | | | | | | | | | | | | | | | | |
| Super | Brownfield | Low Low | LTR10 OCK03 | 7.95 17.70 | 583 876 | Medium Medium | 73.33 49.49 | 339 PS ,171 SR ,37 SO ,36 IR 508 PS ,255 SR ,57 SO ,56 IR | -10,682,021 -17,125,652 | -1,343,650 -967,551 | -18,323 -19,550 | 2,385,000 5,310,000 | 300,000 300,000 | 4,091 6,062 | -13,067,021 -22,435,652 | -1,643,650 -1,267,551 | -22,413 -25,611 |
| | Greenfield | High High | ORS22 HOM01 | 18.03 17.90 | 721 716 | Medium Medium | 40.00 40.00 | 418 PS ,212 SR ,46 SO ,45 IR 416 PS ,209 SR ,46 SO ,45 IR | 8,980,947 8,998,478 | 498,250 502,708 | 12,456 12,568 | 14,420,000 14,320,000 | 800,000 800,000 | 20,000 20,000 | -5,439,053 -5,321,522 | -301,750 -297,292 | -7,544 -7,432 |



Appendix B - Assumptions