
FINANCIAL VIABILITY ASSESSMENT FOR AFFORDABLE HOUSING THRESHOLDS AND EMPLOYMENT REDEVELOPMENT

1.0 Introduction

1.1 As part of the preparation of the Local Development Framework at the London Borough of Richmond Upon Thames (LBRT), Christopher Marsh & Co Ltd (Sustainable Property Consultants) were commissioned on Feb 23rd, 2007 as follows:

Aims:

- a. To test the impact on the economics of house building of revised affordable housing thresholds (or no threshold), percentage requirements and tenure splits;
- b. To consider the practicality of defining affordable housing requirements on small sites;
- c. To assess and provide commentary on the impact of affordable housing and other developer contributions (i.e. S106 agreements) recently revised, on the delivery of house building within the Borough.
- d. To consider the viability of redeveloping employment sites for employment purposes and mixed use development;
- e. To report the findings to the Council.

While LBRT commissioned two financial viability assessments, they are clearly interlinked for various reasons including;

- a. In many Boroughs, residential redevelopment sites including affordable housing are often former employment sites, but are feasible because of significant value differentials;
- b. Current very strong property yields which have increased existing use values and thus highlighted viability issues;
- c. The requirement in PPS3 Housing (para.29) for Affordable Housing Viability Studies with particular reference to proposed threshold changes; and
- d. The increasing requirement for mixed use developments incorporating residential and employment generating uses and arguments about the relative viability of different ratios of such uses.

We have therefore dealt with these commissions jointly. In terms of methodology, we adopted standard residual valuation approaches to make appropriate comparisons and evaluations. It should however be stressed at the outset that the extent and range of financial variables involved in such

calculations and individual site characteristics which are often unique, mean that blanket requirements and conclusions must always be tempered by a level of flexibility in application.

Background / Experience

- 1.2 Having been involved in advising local planning authorities regarding planning and development packages on over 230 major projects, CM/SPC are well versed in the requirements of such commissions and recently have carried out similar benchmarking exercises for the London Thames Gateway Development Corporation and a number of local authorities.

Context

- 1.3 ***The Policy Context.*** It is widely acknowledged both in the Council's Housing Needs Survey, planning policy statements and by local market sources that the Borough is one of the most expensive places to live in the country. The result is an acute problem of affordable housing. However, in practice, affordable housing provision has only reached 27% in recent years despite a 40% target in the policy, a record not particular to LBRT; indeed, actual affordable housing provision across London is approximately 31% despite the policy requirements of the London Plan.

The Council's approach therefore has been to seek to ensure that the supply of affordable housing meets as much of the need as possible by maximising provision on suitable sites.

In principle, there are two main ways in which this can be done;

- a) Lower the site/development size thresholds above which affordable and/or Planning Obligations are sought; and /or,
- b) Raise the overall affordable housing (and potentially Planning Obligation) requirements.

Pursuing such approaches can inevitably raise a dilemma, in that maintaining local employment opportunities, not least in the interests of sustainability, is often an equally important objective.

- 1.4 ***Thresholds.*** While Government have applied size thresholds to affordable housing for some time, no such threshold has applied to Planning Obligations. Indeed, the new Obligations Circular (05/05) makes clear that small schemes can be required to contribute planning obligations.

However, the case for reducing size thresholds regarding affordable housing is addressed in recent Government statements including revisions to PPS3 Housing (Dec. 2005) which enables local planning authorities to justify a case for reduction. Starting from the evidence, namely that the Council's current policies deliver affordable housing on qualifying sites, the question is, will reducing thresholds / and/or raising affordable housing targets produce more affordable housing units? The Council are making such a case on the basis of the proportion of housing sites below 10 dwellings. However, this inevitably raises

questions of viability. Can smaller sites meet affordable housing requirements in the same way that larger sites can? Can sites over 10 units deliver 50% affordable units including a 80-20% tenure split in favour of social renting? These questions have to be addressed via financial testing, not least because obvious economies of scale which apply to large sites may not arise on small sites.

The main sections of this report therefore review the potential for policy changes with specific reference to financial viability. In doing so, we have sought to compare potential outcomes with the ability to retain employment generating sites and their value either as existing uses or as redeveloped employment sites.

2.0 Methodology

2.1 While our methodology is consistent and follows standard development appraisal conventions, it should be emphasised that local market and planning policy circumstances are always different. Consequently, not only are such viability exercises particular to each authority, they are also specific to the time when they are undertaken and should of course be regularly reviewed to reflect revised policies, new market conditions, changes in the affordable housing regime and of course, the outcome of Circular 05/05 on Planning Obligations.

As will become clear, we have taken account as far as is practicable, of all these variables in carrying out these Reviews.

The Approach to Financial Viability

2.2 Development Appraisal models are in essence simple and can be summarised via the following equation;

Completed Development Value

Minus

Total Construction Costs

Minus

Developers Profit

=

Residual Land Value

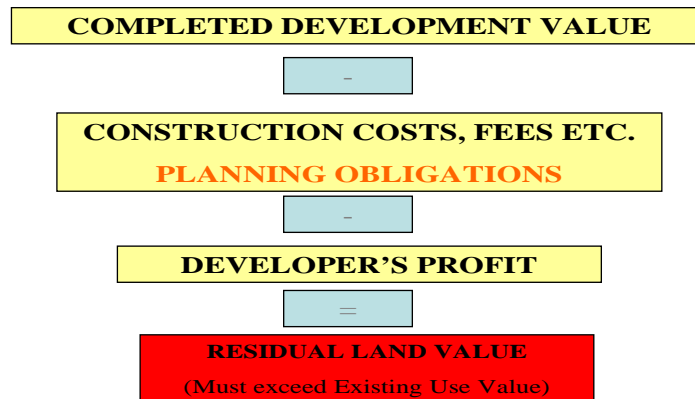
Residual Value – what the landowner receives – will normally be the critical variable. If a proposal generates sufficient positive land value, it will be implemented; if not, unless, there are alternative funding sources to bridge the ‘gap’ (and these will normally be particular to regeneration areas via public bodies such as English Partnerships), the proposal will not go ahead.

The problems with Development Appraisals all stem from the requirement to identify the key variables – values, costs etc.- with some degree of accuracy in advance of implementation. Even on the basis of the standard convention, namely that current values and costs are adopted (not values and costs on completion), this can be very difficult.

2.3 Problems with key variables can be summarised as follows:

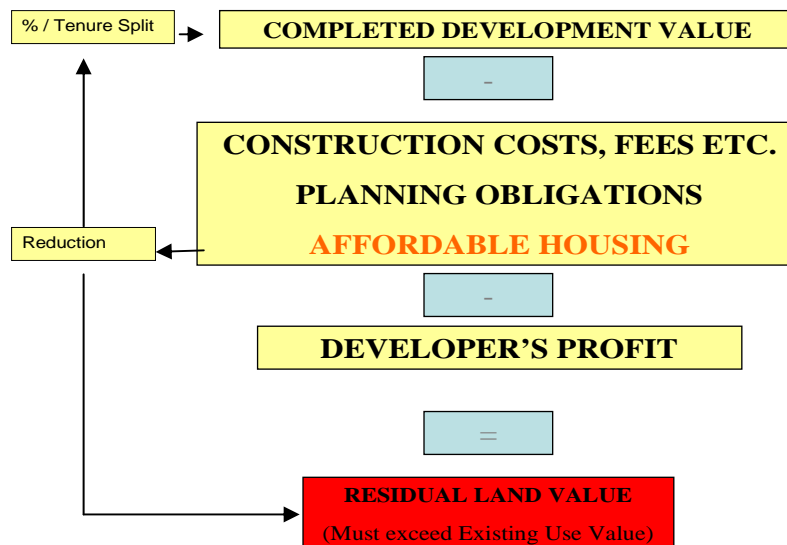
- Values attached to Completed Development Value are largely dependent on comparable evidence which requires sufficient new development in the locality of a similar size and type, to provide a realistic value base.
- Development costs are subject to extensive national and local monitoring and can be reasonably accurately assessed in ‘normal’ circumstances. Increasingly however, with restrictions on greenfield developments and a greater emphasis on brownfield sites, ‘exceptional’ costs such as decontamination are becoming more common. Such costs can be very difficult to anticipate before detailed site surveys, although these circumstances are less common in the Borough area than elsewhere.
- Development value and costs will also be significantly affected by assumptions about the nature and type of affordable housing provision and other Planning Obligations and on major projects, assumptions about development phasing and infrastructure triggers. In essence, where the cost of affordable units and/or Obligations are deferred, the less the real cost to the applicant.
- While Developer’s Profit has to be assumed in any appraisal, its level is closely correlated with risk. The greater the risk, the greater the profit level, in part as a contingency against the unexpected.
- Ultimately, the landowner holds the key and will make a decision on implementing the project or not on the basis of return and the potential for market change and thus alternative developments. The landowner’s ‘bottom line’ will be achieving ‘**development value**’ that sufficiently exceeds ‘**existing use value**’ to make development worthwhile.

What in essence therefore is a simple equation - the development appraisal calculation – is in reality fraught with problems. The following two diagrams summarise the outcomes.



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The standard appraisal calculation shown above is, subject to the problems noted earlier, reasonably clear cut. The delivery of Planning Obligations and in particular the provision of affordable housing however, below, complicates the calculation by reducing Completed Development Value depending on the percentage, tenure and funding of affordable housing and thus Residual Land Value and that is the essence of much of this debate.



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The result is predictable in several respects;

- a) When negotiating with the landowner, the prudent developer will invariably negotiate an option to purchase which crudely, will enable any additional costs arising (Planning obligations and affordable housing for example) to be passed on to the landowner. Ultimately, the landowner pays; and/or,
- b) The developer will build in sufficient contingency into the development appraisal to offset risks including for example, the availability of grant support for affordable housing. In some authorities, this variable is to a

degree removed by a no grant policy regime (although this may reduce the level of affordable housing delivered).

3.0 The Development Industry's Approach

- 3.1 In some areas, local developers have, not entirely unreasonably, complained about lack of 'certainty', despite the obvious hedges against risk noted above, when trying to carry out development appraisal calculations. This is hardly uncommon and indeed was one reason why Government explored the notion of a development 'tariff' rather than Planning Obligations. (The writer was a member of the ODPM advisory team which after much debate dismissed a 'tariff' as unworkable).
- 3.2 In some instances, developers have suggested a 'solution' founded on the notion of a hypothetical '*Gross Land Value*', from which various deductions for affordable housing and Planning Obligations are made, to then leave a '*Net Land Value*' which is adequate to meet landowners expectations. This is convenient and to a degree understandable, in that it would attempt to 'price-fix' and thus be certain, but in essence is nonsense. Fixing the land value and then arguing the proposal cannot be viable and that Planning Obligations and affordable housing must be scaled down is effectively attempting to carry out the Residual Valuation in reverse
- 3.3 Some Developers suggest a further step, namely to agree a 'formula' in advance of any particular scheme. The obvious requirements would be that it was equitable (not least to the local planning authority), robust in planning terms (meeting policy), and be workable.

Several points are noteworthy;

- a) Despite guidance to the contrary in Circular 1/97, Planning Obligations (at least at the mathematical end of the spectrum – e.g. Education, health, libraries etc), have become increasingly formulaic and rightly so. Government has recognised this in Circular 05/05 which now strongly advocates the use of formula. However, at the 'softer' end of the Obligations agenda – e.g. Environmental and social costs - mitigation measures cannot be easily converted into fixed formulae and will continue to be negotiated, again recognised in the Circular.
- b) Even where formulae can be determined, a host of practical difficulties will remain – how are formulae to be fixed; how would they vary in different development situations; how would they apply to different land uses and on what basis would they be reviewed. Any certainty provided by formulae could be quickly undermined and for those reasons amongst many, the so-called 'Tariff' was abandoned by Government.
- c) Formulaic approaches have also been attempted with regard to affordable housing, most notably by the Greater London Authority, but again the original 'requirement' for 50% provision in inner Boroughs and 35% in outer Boroughs had to be downgraded to a Borough wide aspiration. Indeed, more recently, the GLA's Supplementary Planning Guidance on Affordable Housing (para.7.13) makes clear that financial considerations, where proven

via Independent Assessment, may arise which prevents the full policy expectation being delivered.

The implications of these limitations for an ‘area-based’ policy (considered by some Councils) in LBRT where base values do vary significantly are all too obvious.

Overall, while formulae can provide useful guidance, that’s all they are and ultimately every case must continue to be assessed on its merits albeit within a strong policy framework. Specifically, if a development project cannot meet its consequential infrastructure costs – and it is important to differentiate between those costs which are literally development necessities such as access works and those impact mitigation costs, many of which will also be necessities but may be negotiable to a degree - then it is the wrong proposal. If it can meet its Planning Obligations but cannot then meet its affordable housing requirements, then the proponents must demonstrate why not. It may for example be a contaminated site where genuine exceptional costs arise.

Three possibilities result;

- a) A robust financial explanation is accepted (or not) by the authority and exceptionally and in the interest of broader planning and community interests, policy requirements are compromised; or,
- b) Contributions and/or affordable housing are deferred in order to improve cashflow and discount the real costs of provision; or,
- c) Gap funding is necessary to cover the financial shortfall.

It is clearly prudent for the authority in developing its policy stance – not least at the area level - to ‘test’ in general and as far as is possible given the unpredictability of some financial variables, how practical the policy position actually is across its area /sub areas where values will obviously vary. This report provides that general benchmarking to the Council with particular reference to employment sites and their value.

4.0 The Benchmarking Exercise

4.1 **Key Modelling Variables** are as follows and are worthy of explanation in principle.

- a) **Sales Values by area.** Sales values – residential and commercial – will vary in all local authority areas and of course are in a constant state of flux. Developers will obviously try to complete schemes in a rising market but ultimately, this is a development ‘risk’ which the developer must accept. It is not for the authority to compromise because of market fluctuations.
- b) **Density.** Density is an increasingly important determinant of development value, albeit with commensurate effects on development costs, planning obligations and thus residual land value.
- c) **Gross to net floor space.** Clearly, the greater the density, the higher the gross to net floor space ratio – that is, for example, in high rise flatted schemes, more floor space is taken up by common areas and services and

thus less space is available for renting/sale - and this will adversely affect the appraisal calculation.

- d) **Base construction costs.** While base construction costs will be affected by density and other variables such as flood risk, ground conditions etc., they are nevertheless well documented and can be reasonably accurately determined in advance by the developer (and thus ourselves). Nevertheless, it is not difficult for the developer to inflate costs and potentially 'hide' 'super-profits'. The significance of cost consultants' estimates and their accuracy is clear.
- e) **Exceptional costs.** With the dearth of clean, serviced greenfield sites, there will always be some so-called 'exceptional costs' on brownfield sites. With the majority of sites now being redevelopments, exceptional costs have almost become the norm and need to be monitored carefully. In our role as Independent Assessors, we always require the developer's cost consultants to specify in writing the nature and justification for exceptional costs.
- e) **Profit on cost ratio.** Following the standard conventions, developer profits are based on an assumed percentage on costs, normally between 15% and 20% or on value, generally less. Higher profit figures reflect levels of risk; the higher the potential risk, the higher the profit margin in order to offset those risks. (House builders often assume 20%+ but in this exercise, we have assumed the minimum normally required, i.e.. 15% on cost albeit accepting that this may not be sufficient in some development circumstances).

4.2 **Existing Use value / Alternate Use value** requires particular attention. Clearly, there is a point where the Residual Land Value that results from the development appraisal – what the landowner receives – may be less than the land's **existing use value**. The latter varies hugely from very little – agricultural at say £7,200 per hectare (£3,000 per acre) to existing business space sites at say between £1,920,000 and £3,620,000 per hectare (£800,000 and £1,500,000 per acre) or more. Similarly, subject to planning permission, the potential development site may be capable of being used in different ways – business rather than residential for example or at least a different mix of uses (the latter being a key factor). EUV / AUV is effectively a 'bottom line' in the financial sense and a major driver in this modelling.

In this exercise, we have sought to provide a guide that compares all the above variables with Existing/ Alternate Use Values because ultimately, the product of the benchmarking exercise must be a guide (but no more) as to how much Planning Obligation and affordable housing can be delivered without falling foul of existing/ alternate use value, in particular employment generating uses.

EUV has of course been a contentious subject because one of the chief criticisms of the Three Dragons work for the Greater London Authority was that they underestimated EUV in their original Toolkit. This was indeed the case. In this exercise, we have indicated in our graphical results (see Appendix One), a range of EUVs in order to test the viability of different development scenarios; thus for example, a low value secondary industrial use might have an EUV of £2.4m per hectare (£1m per acre) while a town centre office site might have an

EUV of £7m per hectare or more (£3m per acre plus). Redevelopment proposals that generate residual land values below EUV will fail to be delivered.

While any such thresholds are only a guide in ‘normal’ development circumstances, it does not imply that individual landowners, in particular financial circumstances, will not bring sites forward at a lower return or indeed require a higher return. It is simply indicative. If proven existing use value (via a formal Red Book valuation which is essential) justifies a higher EUV than those assumed, then appropriate adjustments may be necessary. As such, Existing Use Values should be regarded as benchmarks rather than definitive fixtures.

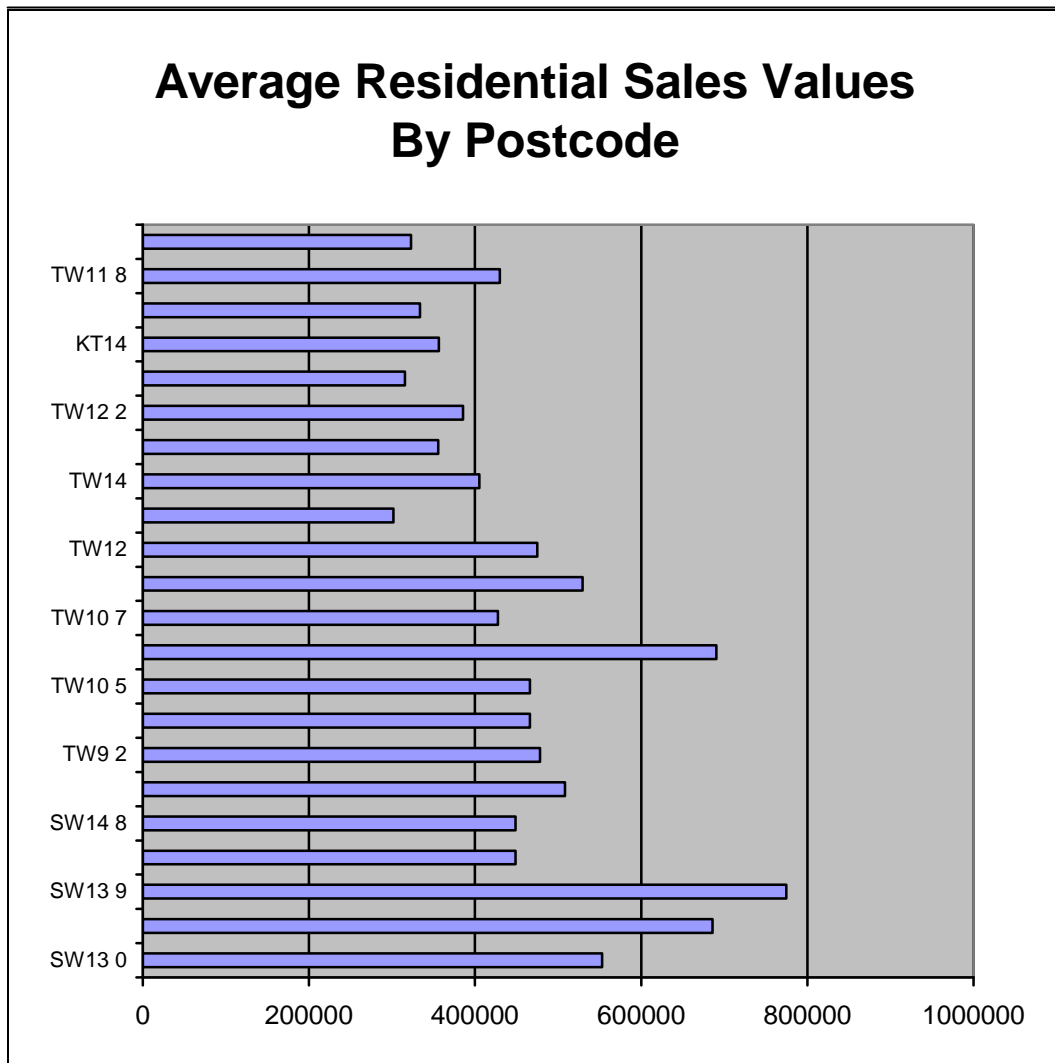
At a practical level, it is also necessary to stress that in the Borough area, many residential development sites are redevelopments of existing residential uses, thus emphasising the significance of value uplift.

4.3 **Specific Modelling Variables.** This section summarises the particular assumptions used in the benchmarking exercise.

- a) **Sales Values.** Residential values in the Borough have reflected and to a degree preceded national trends in recent years but do of course vary across the Borough as follows:

Area	Postcode	Land Registry Overall average Q4, 2006
Barnes	SW13 0	£552,738
	SW13 8	£686,071
	SW13 9	£774,538
East Sheen	SW14 7	£448,728
	Mortlake SW14 8	£448,503
Richmond	TW9 1	£508,119
	TW9 2	£478,248
	TW9 4	£465,785
	TW10 5	£465,785
	TW10 6	£690,406
Ham / Petersham	TW10 7	£427,506
Twickenham	TW1 1	£529,297
	TW1 2	£474,905
	TW1 3	£301,924
	TW1 4	£405,049
Hampton	TW12 1	£355,745
	TW12 2	£385,589
	TW12 3	£315,507
Hampton Wick	KT1 4	£356,407
Teddington	TW11 0	£333,799
	TW11 8	£429,705
Whitton	TW2 7	£323,025

These variations are more obviously illustrated in the following Chart although its should be emphasised that Land Registry data provides averages of all transactions and that new build will command premiums.



- c) The volume of **New Build** in the Borough is currently at relatively modest levels with the latest London Residential Research evidence indicating average prices asking / achieved in a sample of new developments. There are also variations here with postcode averages reflecting the particular type of new build under construction. LRR continue to operate in imperial, and while demonstrating a very wide range of values – from £236psf (£2548psm) to £906psf (£9785psm), the majority fall within the range £350-750psf (£3780-8100psm).

Appendix 3 details this data.

- d) Density.** Clearly, densities vary across the Borough from town centre to suburban locations. In this exercise, we have assumed an average residential unit size of 70m² and a range of densities from 48 units per hectare (3,360m²) – a modest suburban density but much higher than small scale executive developments – to 168 units per hectare (11,760m²) – a high town centre density. While there are clearly examples of small scale schemes at much lower densities, the model nevertheless enables a range of densities to be considered.
- e) Gross to Net Floor space.** The higher the density, the greater the loss of net lettable/ saleable space. In this model, we have adopted a range from 100% gross to net – i.e.. virtually no difference – to 82.5% gross to net in high density situations where common areas amount to 17.5%, and completed development value is reduced in line.
- f) Base Construction Costs.** The modelling exercise plots a range of base construction costs reflecting density considerations ranging from £1,291psm to 1,829psm. These costs are relatively high, and could be increased should ‘exceptional costs’ arise, that is the variety of above average costs which include contamination and remediation. While such costs may still be unusual in the Borough , redevelopments are increasingly the norm and thus, such costs will become more common. As a result, costs need to be treated with caution and where exceeded, will inevitably diminish the capacity of schemes to carry obligations and affordable housing. Affordable Housing build costs have been included at £1500m² in line with Housing Corporation guidelines.
- g) Planning Obligations.** We have modelled Planning Obligations as provided by the Borough’s Planning Officers taking account of reductions for one bedroom units and for affordable units and summarised in the following table.

Planning Obligations Strategy impact. April 2007*

Development type	Residential			B1 per additional 100 sqm GFA +	Retail A1 per additional 100 sqm GFA +	A2 per additional 100 sqm GFA +	A3 Restaurant per additional 100 sqm GFA +	A4 Pub/Bar of 100 sqm GFA +	A5 Takeaway of 100 sqm GFA +
	1-2 units	3 or more net	5 or more net						
Aff hsg	-	-	-	-	-	-	-	-	-
Educ: pte hsg	-	£2709 for 2-bed	£2709 for 2-bed	-	-	-	-	-	-
Educ: aff hsg	-	£1561 for 2-bed	£1561 for 2-bed	-	-	-	-	-	-
Community Safety	-	-	-	-	-	-	-	to be negotiated	to be negotiated
Health	-	-	£244 a unit	-	-	-	-	-	-
Public Realm etc	-	-	£1128 a unit	-	-	-	-	-	-
Transport	-	-	£5728 a unit	£2000/100 sqm	£17,000/100 sqm	£4000/100 sqm	£7000/100 sqm	£7000/100 sqm	£7000/100 sqm
Total pte residential	-	£2,709	£9,809	-	-	-	-	-	-
Total aff hsg	-	£1,561	£8,661	-	-	-	-	-	-
Total per sq m	-	-	-	£2000/100 sqm	£17,000/100 sqm	£4000/100 sqm	£7000/100 sqm	£7000/100 sqm	£7000/100 sqm

* At this point, the Strategy had been adopted June 2005, and amendments had been made to contributions for school places (Cab Member decision 2007)

Notes

Affordable housing: threshold = 40% on sites 'capable of 10 or more units' gross, but maximum feasible on former employment sites.

Where financial contribution for affordable housing is agreed, formula is 'market value less TCI x the appropriate no. & size of units'. Formula needs revision, as TCIs now superseded.

School places: threshold = 3 or more units net, excluding specialist housing for older people

Figures for private housing are for 2-bed units (although at least 25% will be 1-bed). The take-up rates for private housing are assumed to be 57% at secondary level, & 68% at primary level, although the Education Dept will be applying a primary level take-up of 75% for Twickenham (Middx) side of Borough and 60% for the Richmond (Surrey) side.

Figures for affordable housing are also for 2-bed units

Community safety:

Health: threshold = 5 or more units net

£147 per unit x occupancy factor. Figure in table assumes average of 2-bed units, to take account of occupancy factor

Public Realm, Open space and Thames: threshold = 5 or more units net

£680 per unit x occupancy factor. Figure in table assumes average of 2-bed units, to take account of occupancy factor. Could add £100 if over 400m from open space

Transport: threshold = 5 or more units net residential, or commercial (B1, A1, A2, A3, A4, A5 uses) with 100 sqm GFA or more
£1432 per net additional unit or £500 per additional 100 sqm GFA for commercial x trip generation factor x public transport accessibility factor
Figures in table assume trip generation factors of 2 for residential (average 2-bed flats), 2 for B1, 17 for A1, 4 for A2, 7 for A3, A4, A5 & PTAL average of 2

h) Affordable Housing Variations. There are of course a wide range of affordable housing development scenarios in terms of percentage, tenure split, nature of funding and of course increasingly private sector interest in affordable housing per se.

In the Borough area, the overriding need is for social rented affordable units and as such, the normal expectation will be a 70%-30% tenure split, social rented to intermediate units, although there may be site specific circumstances where these proportions are adjusted. We have also modelled at an overall target of 40% provision and at 50% provision with an 80-20% tenure split.

In the light of advice from Registered Social Landlords active in the area which broadly confirms as we would expect, a positive land value contribution both from intermediate tenures and from social rented, and taking account of tenure split expectations as above, we have modelled Residual Land Values on the basis of a value neutral scenario for comparison purposes, that is the affordable housing does not increase or decrease land value but covers its costs. In reality, However, there will be a positive land value contribution especially in higher value parts of the Borough. The assumptions for modelling are as follows.

Richmond Appraisals.

Assumptions common to basic variations;

Social Rent – 70%

Number	Type Bedspace/ Person	M2 - Net Internal Area	Habitable Rooms
5	1B / 2P	48	10
10	2B / 3P	58	30
10	2B / 4P	70	30
10	3B / 5P	83	40
35			110

Shared Ownership – 30%

Number	Type Bedspace/ Person	M2 - Net Internal Area	Habitable Rooms
5	1B / 2P	48	10
5	2B / 3P	58	15
5	2B / 4P	68	15
15			40

Build Cost

£1500 per m2 Gross Internal Area (GIA = NIA plus 15%)

On costs include interest: 9.3% of land and works

Grant

Social Rent: £92,857 per unit (£25,000 per bedspace)

Shared Ownership: £40,000 per unit (£13,300 per bedspace)

Other Assumptions

1999 values: 45% of current day (for Target Rent calculation)

Rent on SO: 2.5% of unsold equity

Staircasing where applicable

50% of SO units over years 5 – 21

Indicative Land Values**With Staircasing assumption**

							Overall Averages	
OMV per Ft2	Social Rent	Average / Unit	Average/ Hab.Room	Shared O'ship	Average / Unit	Average/ Hab.Room	Average / Unit	Average/ Hab.Room
300	1100000	31,429	10,000	1000000	66,667	25,000	42,000	14,000
400	1430000	40,857	13,000	1200000	80,000	30,000	52,600	17,533
600	1485000	42,429	13,500	1920000	128,000	48,000	68,100	22,700
800	1540000	44,000	14,000	2600000	173,333	65,000	82,800	27,600

With no Staircasing

							Overall Averages	
OMV per Ft2	Social Rent	Average / Unit	Average/ Hab.Room	Shared O'ship	Average / Unit	Average/ Hab.Room	Average / Unit	Average/ Hab.Room
300	1045000	29,857	9,500	800000	53,333	20,000	36,900	12,300
400	1430000	40,857	13,000	1000000	66,667	25,000	48,600	16,200
600	1485000	42,429	13,500	1440000	96,000	36,000	58,500	19,500
800	1540000	44,000	14,000	1800000	120,000	45,000	66,800	22,267

Other Influential Factors

- a) Variability of landowner attitudes. There is no question that land markets do need time to adapt to changing policy circumstances and landowners may have the choice to hold sites back and hope. Recently, a more common circumstance in areas of sharp price inflation has been developers ‘taking a punt’ – i.e.. buying sites in without consent on the expectation that rising capital values would offset risk and then seeking, in a market that turns, to persuade the authority that the scheme cannot afford its consequential infrastructure and affordable housing.
- b) Having said that, there is no question that site specific circumstances will arise where the authority is obliged to weigh up perhaps contradictory policy requirements.
- c) On larger schemes perhaps phased over some years, developers will invariably try and agree fixed terms on S106 and affordable housing at the outset. (Their driving factor will be the certainty, required to secure bank funding). In such circumstances, it is often in the authorities’ interest to seek monitoring and review mechanisms in the S106 that will allow a renegotiation at some future date should it become necessary.

4.5 Existing Use Values – Employment Land

4.5.1 A key element in this benchmarking assessment is Existing Use Value and specifically Employment land currently on the market as existing use values. In determining comparative values, we have considered the Borough’s employment land and its associated values. The key themes are as follows:

- Largest use type currently available is offices (B1);
- Location is important in pricing values and varies significantly;
- Richmond commands higher rents psf due to location and communication links, particularly office sites with access to major roads, such as A316 which leads onto the M3 in the south and towards the Hogarth Roundabout and in towards central London to the north;
- Available space in Teddington currently commands the lowest rents psf but as a main office centre, this probably reflects the poor quality of available space and less good communication links;
- Most warehousing is available in Hampton on sites further away from central areas;
- Small amount of light industrial/industrial sites currently on market in all areas studied;
- No sub-sector data captured for currently available employment use sites in the areas of Barnes, Ham/Petersham or Whitton/Heathfield;
- Good transport links reflected in the development pipeline. Major town centres (Twickenham, Richmond and Teddington) generate greater number of permissions;
- Little employment land use proposals in the pipeline for Ham/Petersham;

- Teddington pipeline data illustrates higher number of residential proposals than employment land;
- Twickenham pipeline shows a similarity between residential and employment land use proposals

Nb. Commercial agents still tend to market asking rents in imperial which we reflect below but for comparative modelling purposes, we have included both imperial and metric tables.

4.5.2 Overall, the level of employment land activity is relatively modest with a wide range of rental values (See Appendix 1). Using this data, we have prepared a series of commercial office and industrial / warehousing valuations to determine residual land value which can then be used for comparative purposes. The following Table summarises outcomes;

Employment Land Values

Use	Rent psf / Yield				
Appraisal No.	1A	1B	1C	1D	1E
B1 Offices	£15 - 8%	£17 - 8%	£20 - 8%	£23 - 8%	£25 - 8%
Land Value	- £23.61psf	- £10.99 psf	£7.95 psf	£26.89 psf	£39.51 psf

Use	Rent psf / Yield				
Appraisal No.	2A	2B	2C	2D	2E
B1 Offices	£25 - 7%	£30 - 7%	£35 - 7%	£40 - 6.5%	£50 - 6%
Land Value	£47.72psf	£83.88 psf	£110.18 psf	£168.98 psf	£265 psf

Use	Rent psf / Yield				
Appraisal No.	3A	3B	3C	3D	
B2 / Wh	£10 - 8%	£12 - 8%	£15 - 7.5%	£18 - 7.5%	
Land Value	£4.18 psf	£18.99 psf	£33.78 psf	£57.51 psf	

B1 office rentals illustrate the traditional 'rule of thumb', namely that a £20psf minimum rental level is necessary in order to generate a positive land value. In those parts of the Borough, where this is not the case (See the following Table), then redevelopment for B1 office uses is unlikely. Areas of relatively low office rental are most likely to find existing employment sites under pressure for change of use. Land value is also dependent on yield as demonstrated

Research Criterion		Town							
Class	Sub-class	East Sheen	Hampton	Hampton Wick	Mortlake	Richmond	Teddington	Twickenham	Grand Total
1. sites in mixed use/town centre areas	B1 – offices (i)	2 (Avg £17)	11 (Avg £24)	4 (Avg £27)	1 (Avg £19.50)	11 (Avg £24)	4 (Avg 7)	7 (Avg £17)	40
	B1© – light industry (iii)		3 (Avg£3 £12)				3 (Avg £9)		6
	Industrial uses/workshops/workshops ancillary to garages/filling stations (vi)		1 (Avg £56)						1
	Warehousing, closed storage (viii)		1 (Avg £18)						1
Total		2	16	4	1	11	7	7	48
2. sites further away from central areas	B1 – offices (i)	1 (Avg £26)	2 (Avg £23)			11 Avg (£30)	1	4 (Avg £20)	19
	B1© – light industry (iii)					2 (Avg£12)			2
	Industrial uses/workshops/workshops ancillary to garages/filling stations (vi)					1 (Avg £13)			1
	Warehousing, closed storage (vii)		33 (Avg £12)						33
Total		1	35			14	1	4	56
3. sites with good access/approaches (e.g. Lower Richmond Rd)	B1 – offices (i)					4 Avg (£50)			4
Total						4			4
4. sites with relatively poor access/approaches (e.g. Colne Rd., West Twickenham)	B1 – offices (i)					4 (Avg £26)			4
Total						4			4
5. sites of different sizes	B1 – offices (i)	1 (Avg £17)	3 (Avg £20)	2 (Avg £23)	1	8 (Avg £22)	4 (Avg £18)	12 (Avg £18)	31
	B1© – light industry (iii)						1 (Avg £13.50)		1
Total		1	3	2	1	8	5	12	32
Grand Total		4	54	6	2	41	12	23	142

Note: Values quoted are asking rents, not those necessarily achieved (or incentivised) for space/sites available in 2006/7.

above; higher rentals generate better yields and as such improve land value twice over. Density is also a key driver in land value terms and B1 offices can of course vary markedly. For modelling purposes, we have adopted a £7.2m per hectare land value for better quality B1 office sites with say up to five floors and 60% site cover. This might be exceeded in individual cases but it is reasonable for most better locations. Lower densities and less prime locations would be correspondingly lower and in the modelling exercise, we have indicated a £4.8m per hectare (£2m per acre) level for comparative purposes. Similarly, better order industrials at say £15psf and a 7.5% yield with say a 70% plot ratio on a single storey would produce a land value of approximately £2.4m per hectare (£1m per acre). These benchmarks (reflected in the Table above) by location and rent provide the necessary guide to the likelihood of redevelopment pressure, in that clearly any residential led scheme would have to **exceed** these levels in order to be viable.

Before examining the illustrated outcomes however, it is important to stress again and summarise those variables which may change the outputs – positively and negatively - and which thus must be treated with caution. They are as follows:

Positive Impacts on Calculation

Negative Impacts

Net land value contribution from Affordable Housing

Possible Net land value loss from AH

Low/deferred Planning Obligations

High obligations up-front

Historic land costs (minimal)

Contamination / remediation cost

Increase in shared ownership

Reduced SHG

Availability of Gap funding

With those caveats in mind, the following Tabular presentation summarises the key outputs.

RESULTS**Table 1. Base Residential Land Values per square foot in LB Richmond (Excluding Affordable Housing)**

Table 1	Density – Units/acre →	20 Units 14000ft2/acre G/Net 100%	30 Units 21,000ft2/acre G/N 95%	40 units 26,000ft2/acre G/N 90%	50 units 31,250 ft2/acre G/N 87.5%	60 units 36,000ft2/acre G/N 85%	70 units 40,250ft2/acre G/N 82.5%
Sales Value psf	Residual Land Value psf	Build - £120psf	Build - £130psf	Build - £140psf	Build - £150psf	Build - £160psf	Build - £170psf
£275 psf		70.23	50.38	30.54	15.51	0.48	-14.55
£300 psf		87.75	67.03	46.31	30.84	15.37	-0.09
£325 psf		105.28	83.68	62.08	46.17	30.27	14.36
£350 psf		122.80	100.32	77.85	61.51	45.16	28.82
£375 psf		140.32	116.97	93.62	76.84	60.06	43.28
£400 psf		157.85	133.62	109.39	92.17	74.95	57.73
£425 psf		175.37	150.27	125.16	107.5	89.85	72.19
£450 psf		192.89	166.91	140.93	122.84	104.74	86.64
£475 psf		210.42	183.56	156.70	138.17	119.63	101.10
£500 psf		227.94	200.21	172.47	153.50	134.53	115.56
£525 psf		245.46	216.85	188.24	168.83	149.42	130.01
£550 psf		262.99	233.50	204.01	184.17	164.32	144.47
£600 psf		298.03	266.79	235.56	214.83	194.11	173.38
£650 psf		333.08	300.09	267.10	245.50	223.90	202.30
£700 psf		368.12	333.38	298.64	276.16	253.69	231.21
£800 psf		438.22	399.97	361.72	337.49	313.26	289.04
£900 psf		508.31	466.56	424.81	398.82	372.84	346.86
£1000 psf		578.40	533.14	487.89	460.16	432.42	404.69
One Bed Percentage of Total @ 500 ft2 each		20%	30%	40%	50%	60%	70%

Table 2. Base Residential Land Values per acre in LB Richmond (Excluding Affordable Housing)

Table 2	Density – Units/acre →		20 Units 14000ft2/acre G/Net 100%	30 Units 21,000ft2/acre G/N 95%	40 units 26,000ft2/acre G/N 90%	50 units 31,250 ft2/acre G/N 87.5%	60 units 36,000ft2/acre G/N 85%	70 units 40,250ft2/acre G/N 82.5%
Sales Value psf	Residual Land Value per acre		Build - £120psf	Build - £130psf	Build - £140psf	Build - £150psf	Build - £160psf	Build - £170psf
£275 psf			983220	1057980	794040	484687	17280	-585637
£300 psf			1228500	1407630	1204060	963750	553320	-3622
£325 psf			1473920	1757280	1614080	1442812	1089720	577990
£350 psf			1719200	2106720	2024100	1922187	1625760	1160005
£375 psf			1964480	2456370	2434120	2401250	2162160	1742020
£400 psf			2209900	2806020	2844140	2880312	2698200	2323632
£425 psf			2455180	3155670	3254160	3359375	3234600	2905647
£450 psf			2700460	3505110	3664180	3838750	3770640	3487260
£475 psf			2945880	3854760	4074200	4317812	4306680	4069275
£500 psf			3191160	4204410	4484220	4796875	4843080	4651290
£525 psf			3436440	4553850	4894240	5275937	5379120	5232902
£550 psf			3681860	4903500	5304260	5755312	5915520	5814917
£600 psf			4172420	5602590	6124560	6713437	6987960	6978545
£650 psf			4663120	6301890	6944600	7671875	8060400	8142575
£700 psf			5153680	7000980	7764640	8630000	9132840	9306202
£800 psf			6135080	8399370	9404720	10546563	11277360	11633860
£900 psf			7116340	9797760	11045060	12463125	13422240	13961115
£1000 psf			8097600	11195940	12685140	14380000	15567120	16288773
One Bed Percentage of Total @ 500 ft2 each			20%	30%	40%	50%	60%	70%

Table 3A. Base Residential Land Values per acre in LB Richmond including SPG Planning Obligations as defined by LBR

Table 3A	Density – Units/acre →		20 Units 14000ft2/acre G/Net 100%	30 Units 21,000ft2/acre G/N 95%	40 units 26,000ft2/acre G/N 90%	50 units 31,250 ft2/acre G/N 87.5%	60 units 36,000ft2/acre G/N 85%	70 units 40,250ft2/acre G/N 82.5%
Sales Value psf	Residual Land Value per acre		Build - £120psf	Build - £130psf	Build - £140psf	Build - £150psf	Build - £160psf	Build - £170psf
£275 psf			797876	788091	445024	61962	-473736	-1139526
£300 psf			1043156	1137741	855044	541025	62304	-557511
£325 psf			1288576	1487391	1265064	1020087	598704	24101
£350 psf			1533856	1836831	1675084	1499462	1134744	606116
£375 psf			1779136	2186481	2085104	1978525	1671144	1188131
£400 psf			2024556	2536131	2495124	2457587	2207184	1769743
£425 psf			2269836	2885781	2905144	2936650	2743584	2351758
£450 psf			2515116	3235221	3315164	3416025	3279624	2933371
£475 psf			2760536	3584871	3725184	3895087	3815664	3515386
£500 psf			3005816	3934521	4135204	4374150	4352064	4097401
£525 psf			3251096	4283961	4545224	4853212	4888104	4679013
£550 psf			3496516	4633611	4955244	5332587	5424504	5261028
£600 psf			3987076	5332701	5775544	6290712	6496944	6424656
£650 psf			4477776	6032001	6595584	7249150	7569384	7588686
£700 psf			4968336	6731091	7415624	8207275	8641824	8752313
£800 psf			5949736	8129481	9055704	10123838	10786344	11079971
£900 psf			6930996	9527871	10696044	12040400	12931224	13407226
£1000 psf			7912256	10926051	12336124	13957275	15076104	15734884

Table 3B. Base Residential Land Values per acre in LB Richmond including SPG Planning Obligations as defined by LBR Adjusted for 40% Affordable Housing (70-30% split) BUT excluding AH land value adjustment

Table 3B	Density – Units/acre →		20 Units 14000ft2/acre G/Net 100%	30 Units 21,000ft2/acre G/N 95%	40 units 26,000ft2/acre G/N 90%	50 units 31,250 ft2/acre G/N 87.5%	60 units 36,000ft2/acre G/N 85%	70 units 40,250ft2/acre G/N 82.5%
Sales Value psf	Residual Land Value per acre		Build - £120psf	Build - £130psf	Build - £140psf	Build - £150psf	Build - £160psf	Build - £170psf
£275 psf			804764	799571	456504	62193	-462256	-1130342
£300 psf			1050044	1149221	866524	541256	73784	-548327
£325 psf			1295464	1498871	1276544	1020318	610184	33285
£350 psf			1540744	1848311	1686564	1499693	1146224	615300
£375 psf			1786024	2197961	2096584	1978756	1682624	1197315
£400 psf			2031444	2547611	2506604	2457818	2218664	1778927
£425 psf			2276724	2897261	2916624	2936881	2755064	2360942
£450 psf			2522004	3246701	3326644	3416256	3291104	2942555
£475 psf			2767424	3596351	3736664	3895318	3827144	3524570
£500 psf			3012704	3946001	4146684	4374381	4363544	4106585
£525 psf			3257984	4295441	4556704	4853443	4899584	4688197
£550 psf			3503404	4645091	4966724	5332818	5435984	5270212
£600 psf			3993964	5344181	5787024	6290943	6508424	6433840
£650 psf			4484664	6043481	6607064	7249381	7580864	7597870
£700 psf			4975224	6742571	7427104	8207506	8653304	8761497
£800 psf			5956624	8140961	9067184	10124069	10797824	11089155
£900 psf			6937884	9539351	10707524	12040631	12942704	13416410
£1000 psf			7919144	10937531	12347604	13957506	15087584	15744068

Table 4A. Base Residential Land Values per acre in LB Richmond including SPG Planning Obligations (adjusted as in Table 3B) and 40% Affordable housing at nil cost/value

Table 4A	Density – Units/acre →		20 Units 14000ft2/acre G/Net 100%	30 Units 21,000ft2/acre G/N 95%	40 units 26,000ft2/acre G/N 90%	50 units 31,250 ft2/acre G/N 87.5%	60 units 36,000ft2/acre G/N 85%	70 units 40,250ft2/acre G/N 82.5%
Sales Value psf	Residual Land Value per acre		Build - £120psf	Build - £130psf	Build - £140psf	Build - £150psf	Build - £160psf	Build - £170psf
£275 psf			482858	479743	273902	37316	-647158	-1582479
£300 psf			630026	689533	519914	324754	44270	-767658
£325 psf			777278	899323	765926	612191	366110	19971
£350 psf			924446	1108987	1011938	899816	687734	369180
£375 psf			1071614	1318777	1257950	1187254	1009574	718389
£400 psf			1218866	1528567	1503962	1474691	1331198	1067356
£425 psf			1366034	1738357	1749974	1762129	1653038	1416565
£450 psf			1513202	1948021	1995986	2049754	1974662	1765533
£475 psf			1660454	2157811	2241998	2337191	2296286	2114742
£500 psf			1807622	2367601	2488010	2624629	2618126	2463951
£525 psf			1954790	2577265	2734022	2912066	2939750	2812918
£550 psf			2102042	2787055	2980034	3199691	3261590	3162127
£600 psf			2396378	3206509	3472214	3774566	3905054	3860304
£650 psf			2690798	3626089	3964238	4349629	4548518	4558722
£700 psf			2985134	4045543	4456262	4924504	5191982	5256898
£800 psf			3573974	4884577	5440310	6074441	6478694	6653493
£900 psf			4162730	5723611	6424514	7224379	7765622	8049846
£1000 psf			4751486	6562519	7408562	8374504	9052550	9446441

Table 4B. Base Residential Land Values per acre in LB Richmond including SPG Planning Obligations (as adjusted in Table 3B) and 40% Affordable housing based on most likely RSL financial scenario with a 70:30% tenure split.

Table 4B	Density – Units/acre →	20 Units 14000ft2/acre G/Net 100%	30 Units 21,000ft2/acre G/N 95%	40 units 26,000ft2/acre G/N 90%	50 units 31,250 ft2/acre G/N 87.5%	60 units 36,000ft2/acre G/N 85%	70 units 40,250ft2/acre G/N 82.5%
Sales Value psf	Residual Land Value per acre	Build - £120psf	Build - £130psf	Build - £140psf	Build - £150psf	Build - £160psf	Build - £170psf
£275 psf		798858	953743	905902	827316	300842	-476479
£300 psf		966026	1193533	1191914	1164754	1052270	408432
£325 psf		1133278	1433323	1477926	1502191	1434110	1265971
£350 psf		1300446	1484987	1763938	1839816	1815734	1685180
£375 psf		1471614	1918777	2057950	2187254	2209574	2118389
£400 psf		1639666	1949367	2345562	2526691	2593598	2540156
£425 psf		1801234	2391157	2620374	2850129	2958638	2939765
£450 psf		1962802	2622421	2895186	3173754	3323462	3339133
£475 psf		2125254	2855011	3171598	3499191	3690686	3741542
£500 psf		2287622	3087601	3448010	3824629	4058126	4143951
£525 psf		2450790	3321265	3726022	4152066	4427750	4548918
£550 psf		2614042	3555055	4004034	4479691	4797590	4954127
£600 psf		2941178	4023709	4561814	5136566	5539454	5767104
£650 psf		3262798	4484089	5108238	5779629	6264518	6560722
£700 psf		3585134	4945543	5656262	6424504	6991982	7356898
£800 psf		4236374	5878177	6765110	7730441	8465894	8971893
£900 psf		4882730	6803611	7864514	9024379	9925622	10569846
£1000 psf		5539486	7744519	8984562	10344504	11416550	12204441

Table 5A. Base Residential Land Values per acre in LB Richmond including SPG Planning Obligations (adjusted) and 50% Affordable housing (70:30% split) at nil cost/value

Table 5A	Density – Units/acre →		20 Units 14000ft2/acre G/Net 100%	30 Units 21,000ft2/acre G/N 95%	40 units 26,000ft2/acre G/N 90%	50 units 31,250 ft2/acre G/N 87.5%	60 units 36,000ft2/acre G/N 85%	70 units 40,250ft2/acre G/N 82.5%
Sales Value psf	Residual Land Value per acre		Build - £120psf	Build - £130psf	Build - £140psf	Build - £150psf	Build - £160psf	Build - £170psf
£275 psf			402382	399785	228252	31096	-693384	-1695513
£300 psf			525022	574610	433262	270628	36892	-822490
£325 psf			647732	749435	638272	510159	305092	16642
£350 psf			770372	924155	843282	749846	573112	307650
£375 psf			893012	1098980	1048292	989378	841312	598657
£400 psf			1015722	1273805	1253302	1228909	1109332	889463
£425 psf			1138362	1448630	1458312	1468440	1377532	1180471
£450 psf			1261002	1623350	1663322	1708128	1645552	1471277
£475 psf			1383712	1798175	1868332	1947659	1913572	1762285
£500 psf			1506352	1973000	2073342	2187190	2181772	2053292
£525 psf			1628992	2147720	2278352	2426721	2449792	2344098
£550 psf			1751702	2322545	2483362	2666409	2717992	2635106
£600 psf			1996982	2672090	2893512	3145471	3254212	3216920
£650 psf			2242332	3021740	3303532	3624690	3790432	3798935
£700 psf			2487612	3371285	3713552	4103753	4326652	4380748
£800 psf			2978312	4070480	4533592	5062034	5398912	5544577
£900 psf			3468942	4769675	5353762	6020315	6471352	6708205
£1000 psf			3959572	5468765	6173802	6978753	7543792	7872034

Table 5B. Base Residential Land Values per acre in LB Richmond including SPG Planning Obligations (adjusted) and 50% Affordable housing (70:30% split) at most likely RSL financial scenario.

Table 5B	Density – Units/acre →		20 Units 14000ft2/acre G/Net 100%	30 Units 21,000ft2/acre G/N 95%	40 units 26,000ft2/acre G/N 90%	50 units 31,250 ft2/acre G/N 87.5%	60 units 36,000ft2/acre G/N 85%	70 units 40,250ft2/acre G/N 82.5%
Sales Value psf	Residual Land Value per acre		Build - £120psf	Build - £130psf	Build - £140psf	Build - £150psf	Build - £160psf	Build - £170psf
£275 psf			797382	992285	1018252	1018596	491616	-313013
£300 psf			945022	1204610	1273262	1320628	1296892	647510
£325 psf			1092732	1416935	1528272	1622659	1640092	1574142
£350 psf			1240372	1629155	1783282	1924846	1983112	1952650
£375 psf			1393012	1848980	2048292	2239378	2341312	2243657
£400 psf			1541722	2062805	2305302	2543909	2687332	2730463
£425 psf			1682362	2264630	2546312	2828440	3009532	3084471
£450 psf			1823002	2466350	2787322	3113128	3331552	3438277
£475 psf			1964712	2669675	3030332	3400159	3656572	3795785
£500 psf			2106352	2873000	3273342	3687190	3981772	4153292
£525 psf			2248892	3077720	3518352	3976721	4309792	4514098
£550 psf			2391702	3282545	3763362	4266409	4637992	4875106
£600 psf			2677982	3693590	4255512	4847971	5297212	5600420
£650 psf			2957332	4094240	4733532	5412190	5935432	6301435
£700 psf			3237612	4496285	5213552	5978753	6576652	7005748
£800 psf			3806312	5312480	6189592	7132034	7882912	8442577
£900 psf			4368942	6119675	7153762	8270315	9171352	9858205
£1000 psf			4944572	6946265	8143802	9441253	10498792	11319534

Table 5C. Base Residential Land Values per acre in LB Richmond including SPG Planning Obligations (adjusted) and 50% Affordable housing (80:20% split) at most likely RSL financial scenario.

Table 5C	Density – Units/acre →		20 Units 14000ft2/acre G/Net 100%	30 Units 21,000ft2/acre G/N 95%	40 units 26,000ft2/acre G/N 90%	50 units 31,250 ft2/acre G/N 87.5%	60 units 36,000ft2/acre G/N 85%	70 units 40,250ft2/acre G/N 82.5%
Sales Value psf	Residual Land Value per acre		Build - £120psf	Build - £130psf	Build - £140psf	Build - £150psf	Build - £160psf	Build - £170psf
£275 psf			767382	947285	958252	943596	401616	-418013
£300 psf			910022	1152110	1203262	1233128	1191892	525010
£325 psf			1042732	1144435	1428272	1497659	1490092	1399142
£350 psf			1175372	1531655	1653282	1762346	1788112	1725150
£375 psf			1310012	1724480	1882292	2031878	2056312	2058157
£400 psf			1442722	1914305	2107302	2296409	2390332	2383963
£425 psf			1588362	2123630	2358312	2593440	2727532	2755471
£450 psf			1711002	2328350	2603322	2883128	3055552	3116277
£475 psf			1873712	2533175	2848332	3172659	3383572	3477285
£500 psf			2016352	2738000	3093342	3462190	3711772	3838292
£525 psf			2160992	2945720	3342352	3756721	4045792	4206098
£550 psf			2303702	3150545	3587362	4046409	4373992	4567106
£600 psf			2591982	3564590	4083512	4632971	5039212	5299420
£650 psf			2862332	3951740	4543532	5174690	5650432	5968935
£700 psf			3127612	4331285	4993552	5653753	6246652	6620748
£800 psf			3666312	5102480	5909592	6782034	7462912	7952577
£900 psf			4198942	5864675	6813762	7845315	8661352	9263205
£1000 psf			4734572	6631265	7723802	8916253	9868792	10584534

Table 6A. Base Residential Land Values per hectare in LB Richmond including SPG Planning Obligations (as adjusted in Table 3B) and 40% Affordable housing based on most likely RSL financial scenario with a 70:30% tenure split.

Table 6A	Density – Units/hect →		48 Units 3360 m2/hect G/Net 100%	72 Units 5040 m2/hect G/N 95%	96 units 6760 m2/Hect G/N 90%	120 units 8400 m2/hect G/N 87.5%	144 units 1080 m2/hect G/N 85%	168 units 11760 m2/hect G/N 82.5%
Sales Value psm	Residual Land Value per hectare		Build - £1291 psm	Build - £1399 psm	Build - £1506 psm	Build - £1614 psm	Build - £1722 psm	Build - £1829 psm
2970 psm			1973179	2355745	2237577	2043470	743079	-1176903
3240 psm			2386084	2948026	2944027	2876942	2599106	1008827
3510 psm			2799196	3540307	3650477	3710411	3542251	3126948
3780 psm			3212101	3667917	4356926	4544345	4484863	4162394
4050 psm			3634886	4739379	5083136	5402517	5457647	5232420
4320 psm			4049975	4814936	5793538	6240926	6406187	6274185
4573 psm			4449048	5906157	6472323	7039818	7307835	7261219
4842 psm			4848120	6477379	7151109	7839172	8208951	8247658
5111 psm			5249377	7051877	7833847	8643001	9115994	9241608
5380 psm			5650426	7626374	8516584	9446833	10023571	10235559
5649 psm			6053451	8203524	9203274	10255603	10936543	11235827
5918 psm			6456683	8780985	9889964	11064837	11850047	12236694
6456 psm			7264709	9938561	11267681	12687318	13682451	14244747
6994 psm			8059111	11075700	12617348	14275684	15473359	16204983
7532 psm			8855281	12215491	13970967	15868525	17270196	18171538
8640 psm			10463844	14519097	16709822	19094189	20910758	22160576
9720 psm			12060343	16804919	19425350	22290216	24516286	26107520
10800 psm			13682530	19128962	22191868	25550925	28198879	30144969

Table 6B. Base Residential Land Values per hectare in LB Richmond including SPG Planning Obligations (as adjusted in Table 3B) and 50% Affordable housing based on most likely RSL financial scenario with a 70:30% tenure split.

Table 6B	Density – Units/hect →	48 Units 3360 m2/hect G/Net 100%	72 Units 5040 m2/hect G/N 95%	96 units 6760 m2/Hect G/N 90%	120 units 8400 m2/hect G/N 87.5%	144 units 1080 m2/hect G/N 85%	168 units 11760 m2/hect G/N 82.5%
Sales Value psm	Residual Land Value per hectare	Build - £1291 psm	Build - £1399 psm	Build - £1506 psm	Build - £1614 psm	Build - £1722 psm	Build - £1829 psm
2970 psm		1969533	2450944	2515082	2515932	1214291	-773142
3240 psm		2334204	2975386	3144957	3261951	3203323	1599349
3510 psm		2699048	3499829	3774831	4007967	4051027	3888130
3780 psm		3063718	4024012	4404706	4754369	4898286	4823045
4050 psm		3440739	4566980	5059281	5531263	5783040	5541832
4320 psm		3808053	5095128	5694095	6283455	6637710	6744243
4573 psm		4155434	5593636	6289390	6986246	7433544	7618643
4842 psm		4502814	6091884	6884685	7689426	8228933	8492544
5111 psm		4852838	6594097	7484920	8398392	9031732	9375589
5380 psm		5202689	7096310	8085154	9107359	9834976	10258631
5649 psm		5554763	7601968	8690329	9822500	10645186	11149822
5918 psm		5907503	8107886	9295504	10538030	11455840	12041512
6456 psm		6614615	9123167	10511115	11974488	13084114	13833037
6994 psm		7304610	10112773	11691824	13368109	14660517	15564544
7532 psm		7996901	11105824	12877473	14767520	16244330	17304198
8640 psm		9401590	13121826	15288292	17616124	19470793	20853165
9720 psm		10791287	15115597	17669792	20427678	22653239	24349766
10800 psm		12213093	17157275	20115191	23319895	25932016	27959249

Table 6C. Base Residential Land Values per hectare in LB Richmond including SPG Planning Obligations (as adjusted in Table 3B) and 50% Affordable housing based on most likely RSL financial scenario with a 80:20% tenure split.

Table 6C	Density – Units/hect →		48 Units 3360 m2/hect G/Net 100%	72 Units 5040 m2/hect G/N 95%	96 units 6760 m2/Hect G/N 90%	120 units 8400 m2/hect G/N 87.5%	144 units 1080 m2/hect G/N 85%	168 units 11760 m2/hect G/N 82.5%
Sales Value psm	Residual Land Value per hectare		Build - £1291 psm	Build - £1399 psm	Build - £1506 Psm	Build - £1614 psm	Build - £1722 psm	Build - £1829 psm
2970 psm			1895433	2339794	2366882	2330682	991991	-1032492
3240 psm			2247754	2845711	2972057	3045826	2943973	1296774
3510 psm			2575548	2826754	3527831	3699217	3680527	3455880
3780 psm			2903168	3783187	4083606	4352994	4416636	4261120
4050 psm			3235729	4259465	4649261	5018738	5079090	5083647
4320 psm			3563523	4728333	5205035	5672130	5904120	5888388
4573 psm			3923254	5245366	5825030	6405796	6737004	6806013
4842 psm			4226174	5751024	6430205	7121326	7547213	7697204
5111 psm			4628068	6256942	7035380	7836467	8357422	8588894
5380 psm			4980389	6762860	7640554	8551609	9168076	9480581
5649 psm			5337650	7275928	8255609	9279100	9993106	10389062
5918 psm			5690143	7781846	8860784	9994630	10803760	11280752
6456 psm			6402195	8804537	10086275	11443438	12446854	13089567
6994 psm			7069960	9760797	11222524	12781484	13956567	14743269
7532 psm			7725201	10698274	12334073	13964770	15429230	16353248
8640 psm			9055790	12603126	14596692	16751624	18433393	19642865
9720 psm			10371387	14485747	16829992	19377928	21393539	22880116
10800 psm			11694393	16379225	19077791	22023145	24375916	26143799

5.0 Results

5.1 This section needs to be read in conjunction with the Tabular / Graphical presentation above, which contains the product of 1296 residual valuations in which land values are calculated on a per square foot basis and then applied via different densities of development to a land value per acre, in order to facilitate comparisons with employment land / floorspace data which still tends to be in imperial. (Series 6 of the Tables then converts the key results into metric). The Tables show Base Residential Land Values resulting from a requirement for a package of Planning Obligations as summarised on page 12 per residential unit, 40% affordable housing (Series 4) and 50% affordable housing (Series 5). Nil cost/value affordable housing is presented as a benchmark (Tables 4A and 5A) and compares with the most realistic RSL scenarios (Tables 4B and 5B) based on a 70-30% tenure split. Table 5C plots the effect of 50% affordable housing with an 80-20% split. Series 6 converts the key outputs into metric.

Six density scenarios with applicable variables are plotted, as follows:

- A = 48 units; 3,360m²/hec; G/Net 100%; Build £1,291 psm;
- B = 72 units; 5,040m²/hec; G/Net 95%; Build £1,399 psm
- C = 96 units; 6,760 m²/hec; G/N 90%; Build - £1,506 psm
- D = 120 units; 8,400m²/hec; G/Net 87.5%; Build £1,614 psm
- E = 144 units; 10,080m²/hec; G/Net 85%; Build £1,722 psm
- F = 168 units; 11,760m²/hec; G/Net 82.5%; Build £1,829 psm

The Tables demonstrate that the traditional Planning Obligations / Affordable Housing 'rule of thumb' largely holds true; namely that once open market sales values exceed £4320psm (£400psf), policy targets are increasingly deliverable in principle, albeit subject to grant availability and none of the negative impacts listed above.

As indicated, the typical residential sales value range exceeds £4320psm and therefore, in most circumstances, the affordable housing policy and planning obligation requirement will be deliverable. There are two important caveats;

- a) That Residual land values exceed Existing Use Value. This is shown in the Tables by the colour shaded cells reflecting the values explained in para.4.5.2 where green cells identify those scenarios failing to exceed £2.4m per hectare, yellow cells those failing to exceed £4.8m per hectare and light yellow cells those failing to exceed £7.2m per hectare, although there will be site specific circumstances where these thresholds are higher or lower. As indicated, while a higher existing use value requires a commensurate higher residential sales value, in many circumstances, this will still be viable although lower density schemes are more vulnerable to existing use value requirements.
- b) That any exceptional costs such as decontamination are not excessive.

5.2 Small Sites. Since local RSLs are often unwilling to take on groups of less than four units, the modelling exercise above was not relevant. Instead, the issue of commuted sums re-emerges. While commuted sums have been rare in many

Boroughs in recent years, LBRuT does have a formula, namely ‘the value on the open market of units of the same size and in the same location, less any Social Housing Grant granted to the scheme, applied in such a way that a similar ratio of market: affordable units would be achieved as if they were provided on site. Total Cost Indicators have in the past been used as a proxy for social housing grant’. While TCIs have been superseded, they can nevertheless, suitably updated from their last calculation in late 2003 (for the 2004-06 round) by applying the BCIS index, form the basis of a practical approach. The formula’s dependence on open market value clearly means that no single sum can be laid down as a blanket policy. Indeed, such is the variation in residential market values across the Borough, that utilising commuted sums in lower value areas may be worth consideration.

6.0 Conclusions

- 6.1 The London Borough of Richmond upon Thames has an acute problem of affordable housing. Affordable housing policy requirements are clearly based on need proven through a reasonably up-to-date Housing Needs Survey. Its requirements for the provision of social and community infrastructure via planning obligations are equally clear although it should be stressed while we initially ran the viability numbers on the basis of the aspirations in the Planning Obligations Strategy 2005, the reality has been rather less and we have re-run all the viability numbers as a result. Ironically, this has a positive effect on affordable housing expectations.

This report has examined, in terms of financial viability, the potential to increase affordable housing provision by either reducing thresholds and/or increasing targets, while maintaining a revised but higher level of planning obligation contributions. We also gave particular consideration to the impact of existing use values on redevelopment proposals with specific reference to the retention of employment land. As such, we have considered a range of existing use values and their differential effects on delivering redevelopment proposals with their required levels of obligations and affordable housing.

This is a complex set of variables and has now been completed for the second time, with varying affordable housing requirements.

- 6.2 Our key conclusions are that;
- a) Within the residential sales value bands which predominate in the Borough and thus high residual land values, there is scope for 40% affordable housing almost across the Borough (and in many circumstances, 50% with, where necessary some level of cross subsidy provided by the developer) and in addition, the £12-15,000 package of planning obligations required (see page 12/13), without viability being compromised. Where exceptional costs arise, site factors may override this conclusion to some degree and this should not be underestimated.

- a) While we accept that smaller sites do incur somewhat higher costs than larger sites pro rata, it is our view that there is sufficient capacity in the base appraisals for development proposals to carry these costs in general. This does of course assume that;
- i) Preferred RSLs are prepared to accept small numbers of / individual affordable housing units which does not appear to be the case;
 - ii) Service charges (in mixed tenure schemes) can be restricted to ensure affordability; and,
 - iii) The land value market adjusts accordingly.

The reticent stance of local RSLs regarding small schemes does raise the issue of commuted payments which had of course until relatively recently almost disappeared. This is a problem and depends entirely on whether the 'off-site' land is available and in particular at what price. Thus LB Greenwich for instance have recently concluded an arrangement in which significant numbers of off site family units are provided on and in addition to the partial redevelopment of an existing council estate, a relatively cost efficient option. In contrast, if the applicant has to buy in the 'off-site' at existing use value (plus perhaps hope value), then the ability to deliver affordable housing will be very restricted. We have taken account of this possibility in our diagrammatic conclusions. Commuted sums based on an updated version of the current formula are certainly practical and given the wide range of residential values could be a relatively efficient approach.

- b) We are not of the view that an area-based policy differentiating affordable housing provision is a practical proposition for the following reasons;
- i) The overall level of new build is relatively low and then includes a range of values not only reflecting local market variations but also, the type and specification of units proposed. The value range across the Borough is quite wide but nevertheless, we remain of the view that any assumptions about outturn values on a local area base would be very susceptible to challenge and would require constant monitoring and review and thus be disruptive, uncertain and possibly counter-productive.
 - ii) The potential variables on any such assumption about values and costs – identified throughout this report – have the capacity to undermine any standard approach not only at an area level, but also at a Borough wide level. Such possibilities are specifically recognised for example, in the GLA's SPG on Affordable Housing (Section 7), where in effect, there is a recognition that financial circumstances may well arise which require a review of affordable housing requirements in individual cases. There is nothing in this analysis that suggests that the Council's circumstances are markedly different.
- d) Density is another key variable as demonstrated in this analysis and in the interests of accuracy and applicability, it is important that the Council adopt an approach to residential density based either on habitable rooms/ hectare

or floor space / hectare, or a combination of one of these measures with units / hectare.

- e) Existing use value / alternate use value is an increasing concern. This exercise demonstrates that in lower value parts of the Borough, higher demands for affordable housing are likely to conflict with EUV/AUV. Indeed, in a market where the gap between residential values and commercial values has narrowed a little, the possibility of developers changing the proportions of mixed use proposals becomes more of an issue. It is important to stress that where Existing Use Value comparisons arise, a full RICS 'Red Book' valuation should be required to substantiate such comparisons. A letter from a local estate agent will not suffice.
 - f) While this Viability exercise provides benchmarks, they clearly must be treated with caution and certainly do not imply a fixed position on the part of the Council. Indeed, site specific financial evaluations will continue to be necessary, a point emphasised in Circular 05/05, where the role of the Independent Assessor is recognised specifically.
- 6.3 Overall, the product of the Council's review must be a strongly worded affordable housing and Planning Obligations policy base which effectively redefines the nature of the local land market. Policies must acknowledge that exceptional circumstances *may* arise but that the authority will *require* a detailed and robust financial statement to demonstrate conclusively why planning policies cannot be met. Even then, there should be no presumption that such circumstances will be accepted.

With regard to employment land, it is clear that if B1 office rents and yields improve, there will be an increasing conflict especially in mixed use schemes to adjust the commercial / residential mix to minimise affordable housing content. In contrast, where low value commercial space is the subject of redevelopment proposals, there is less likelihood of a viability conflict. Having said that, it should again be stressed that such conclusions assume 'clean' site circumstances. Genuine 'exceptional costs' will change outputs.

APPENDIX 1

EMPLOYMENT LAND REVIEW

APPENDIX ONE

Employment Land Methodology

At a meeting on 26th February 2007, the parameters for research into financial viability of employment sites involving affordable housing were discussed and it was agreed that the criterion for the study would involved 10 areas:

Barnes; East Sheen; Mortlake; Richmond; Ham/ Petersham; Twickenham; Whitton/ Heathfield; Teddington; Hampton; and Hampton Wick

Within those areas it was agreed to research sites that are in sectors in:

- 1 sites in mixed use/town centre areas
- 2 sites further away from central areas
- 3 sites with good access/approaches (e.g. Lower Richmond Rd)
- 4 sites with relatively poor access/approaches (e.g. Colne Rd., West Twickenham)
- 5 sites of different sizes
- 6 sites with premises of differing age/condition

Existing Land Use

In existing land use, the sub-sectors include:

- i B1 - offices
- ii B1(b) - research, laboratories, studios
- iii B1(c) – light industry
- iv Car parking area
- v Petrol filling station
- vi Industrial uses/workshops/workshops ancillary to garages/filling stations
- vii Builder's yard, open storage (from small yards to timber yards)
- viii Warehousing, closed storage

This data was captured on-line obtained from local commercial estate agents and other data providers, including:

- EGPropertyLink;
- Snellers;
- South London Business;
- Martin Campbell;
- Michael Rogers;
- Gateway;
- Offices Please;
- Knight Frank; and
- EGi.

No retail data was to be captured.

Proposed Land Uses

Proposed land uses, that is sites with planning permission, were analysed from planning data received from the London Borough of Richmond upon Thames (LBRUT). This was used to provide information on sites within the 10 areas as noted above. At the inception meeting the proposed land uses to be identified were: Industrial uses/workshops; Builder's yard, open storage + enabling uses; Warehousing, closed storage (traditional self-store); Offices – B1; B1(b) – research,

laboratories, studios; B1(c) – light industry; (D1 – especially health-related uses, children’s nurseries; D2 – sports facilities, gym.

The original data, received in Excel format, could not be analysed by town as presented as headings and text were shown throughout the dataset producing 3,201 lines of information for data on 699 planning permissions. Excel cannot produce information and analysis on numbers within a dataset where text is included. This dataset also includes towns and areas which are not reflected in the study

Therefore the data had to go through a long process of adjustment to make changes and improvements in order to gain information and data on residential and non-residential developments in the immediate pipeline.

The non-residential land use data (i.e. employment use sites) was calculated on the major land use, if the scheme fell into a mixed use development. A lot of retail data was presented, but in line with the LBRUT’s instruction, was not shown.

Moreover, it was not possible to differentiate the residential types as this was only presented as C3 and not split into private, affordable, shared-ownership or live-work. Whilst it is appreciated that these all fall within the same planning use type, to make analysis of the types of housing, data has to be divided to show results.

Employment Sites Research – Existing Land Use

In researching the number of existing employment land use sites available in the area, a total of 142 sites were identified falling within the use type sub-sector as explained in the methodology. It was noted whilst exploring agents and data provider's websites that a lot of "A" use type was available (ie. Retail), but has not been shown in line with LBRUT's criterion.

Highest values were found, unsurprisingly in the Richmond area. Richmond benefits from good transport links in most categories, i.e. tube, fast rail links; roads and large, major bus network.

The site with the highest rent was in an area deemed to be with good access and approaches. The site in question is on the A316, Lower Mortlake Road, and giving good road links to London to the east and the M3 to the west. There is good bus transport links from Richmond station and close to North Sheen station, but is in an out of town area, although there are some local facilities close by.

Lowest values were shown from data received regarding Teddington, as low as £7psf on average on sites identified as central areas. Teddington in transport terms is not as accessible as Richmond. It is on a slow train line, no tube and a lower provision of bus services.

The most warehousing and B8 use was found to be located in Hampton on non-central sites. The majority of these sites were located on business parks close to the A308, Upper Sunbury Road, and giving good access to Junction 1 of the M3, and the A316, major road into central London.

The Table below is a summary of the number of sites available with Sector and sub-sector use type. All data obtained can be provided if required.

Table : Summary of Existing Land Use

Availability		Town							
Class	Sub-class	East Sheen	Hampton	Hampton Wick	Mortlake	Richmond	Teddington	Twickenham	Grand Total
1. sites in mixed use/town centre areas	B1 – offices (i)	2 (Avg £17)	11 (Avg £24)	4 (Avg £27)	1 (Avg £19.50)	11 (Avg £24)	4 (Avg 7)	7 (Avg £17)	40
	B1(c) – light industry (iii)		3 (Avg £12)				3 (Avg £9)		6
	Industrial uses/workshops/workshops ancillary to garages/filling stations (vi)		1 (Avg £6)						1
	Warehousing, closed storage (viii)		1 (Avg £18)						1
Total		2	16	4	1	11	7	7	48
2. sites further away from central areas	B1 – offices (i)	1 (Avg £26)	2 (Avg £23)			11 Avg (£30)	1	4 (Avg £20)	19
	B1(c) – light industry (iii)					2 (Avg£12)			2
	Industrial uses/workshops/workshops ancillary to garages/filling stations (vi)					1 (Avg £13)			1
	Warehousing, closed storage (vii)		33 (Avg £12)						33
Total		1	35			14	1	4	56
3. sites with good access/approaches (e.g. Lower Richmond Rd)	B1 – offices (i)					4 Avg (£50)			4
Total						4			4
4. sites with relatively poor access/approaches (e.g. Colne Rd., West Twickenham)	B1 – offices (i)					4 (Avg £26)			4
Total						4			4
5. sites of different sizes	B1 – offices (i)	1 (Avg £17)	3 (Avg £20)	2 (Avg £23)	1	8 (Avg £22)	4 (Avg £18)	12 (Avg £18)	31
	B1(c) – light industry (iii)						1 (Avg £13.50)		1
Total		1	3	2	1	8	5	12	32
Grand Total		4	54	6	2	41	12	23	142

Note: Those highlighted are assumed averages

Employment Sites Research – Proposed Land Use

Summary of Proposed Land Use

Summary of Planning Permissions by Town Supplied by LBRUT			
Town	No of Permissions (including any dupes/differing proposals)	Number of Proposed Residential	All proposed non- residential (Sq m) ¹
Barnes	47	98	6,553
East Sheen	45	223	1,137
Mortlake	5	2	64,622
Richmond	118	320	48,091
Ham/Petersham	18	66	420
Twickenham	186	755	53,716
Whitton/Heathfield	24	74	2,488
Teddington	110	906	13,692
Hampton	70	186	19,218
Hampton Wick	31	184	1,040

¹ The non-residential use sizing is based on the major with other use type calculated in, where applicable.

APPENDIX TWO

GRAPHICAL RESULTS

Figure 6A: Base Residential Values per hectare in LB Richmond (SPG Planning Obligations as adjusted in Table 3B and 40% affordable housing based on most likely RSL financial scenario with a 70:30% tenure split)

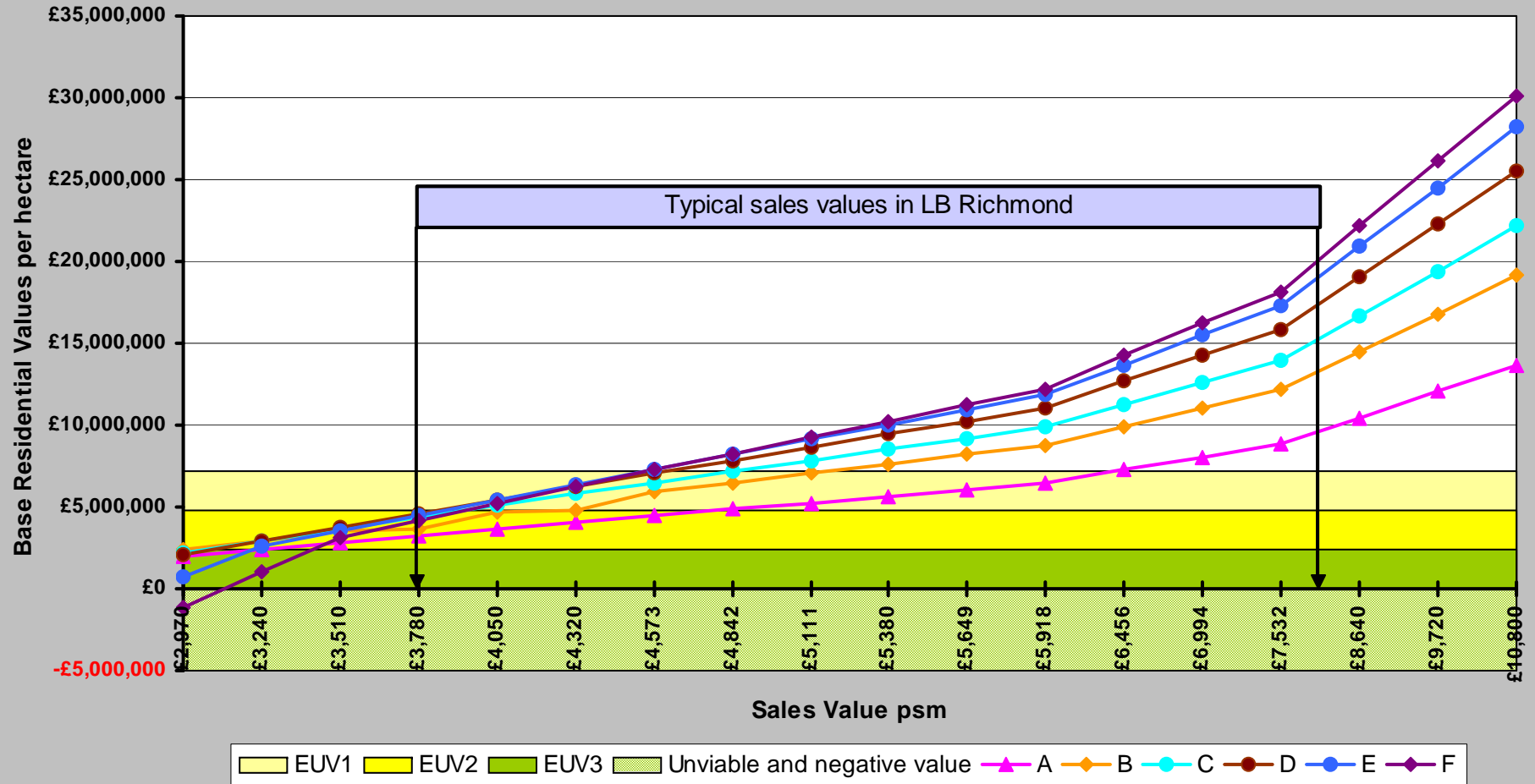


Figure 6B: Base Residential Values per hectare in LB Richmond (SPG Planning Obligations as adjusted in Table 3B and 50% affordable housing based on most likely RSL financial scenario with a 70:30% tenure split)

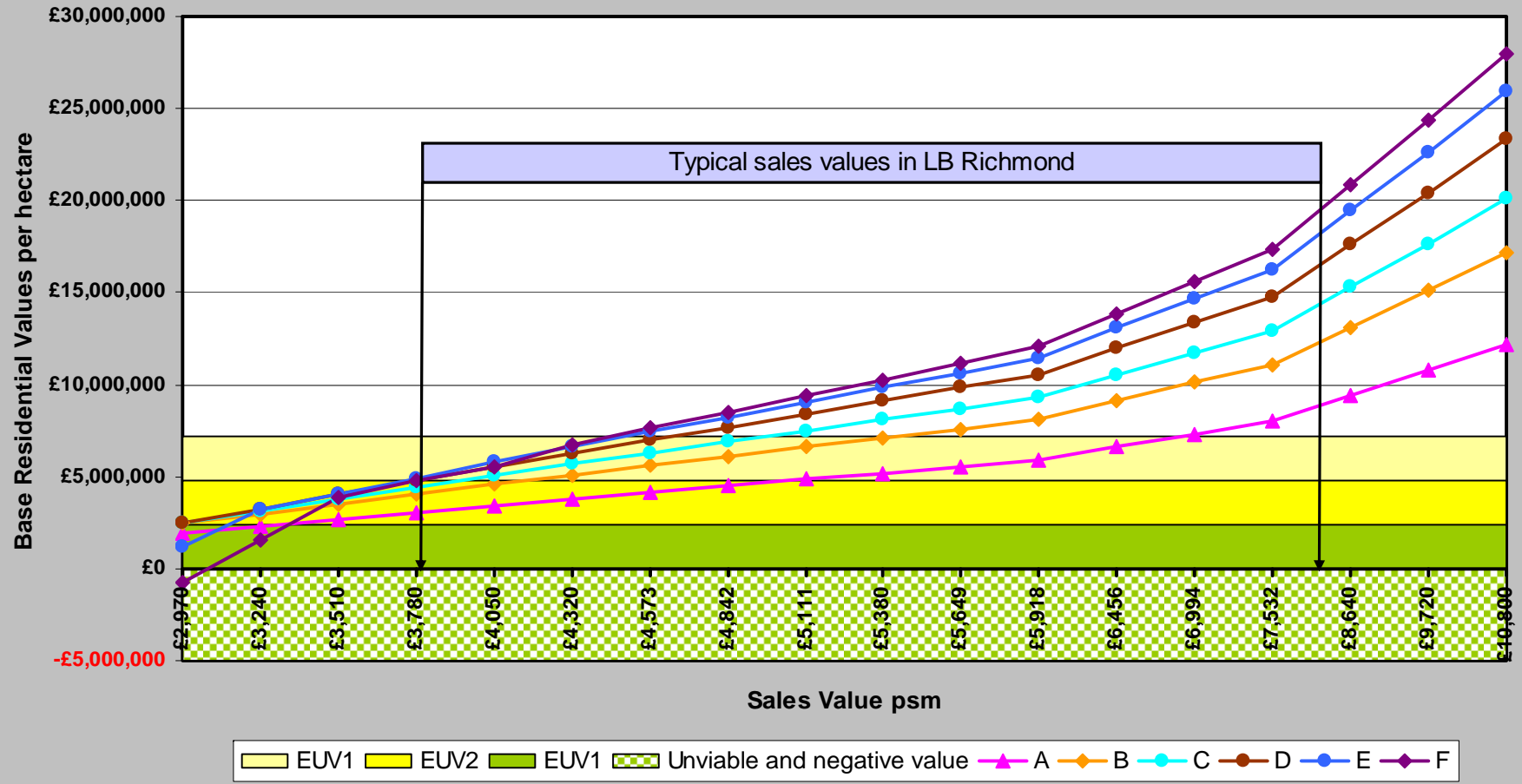
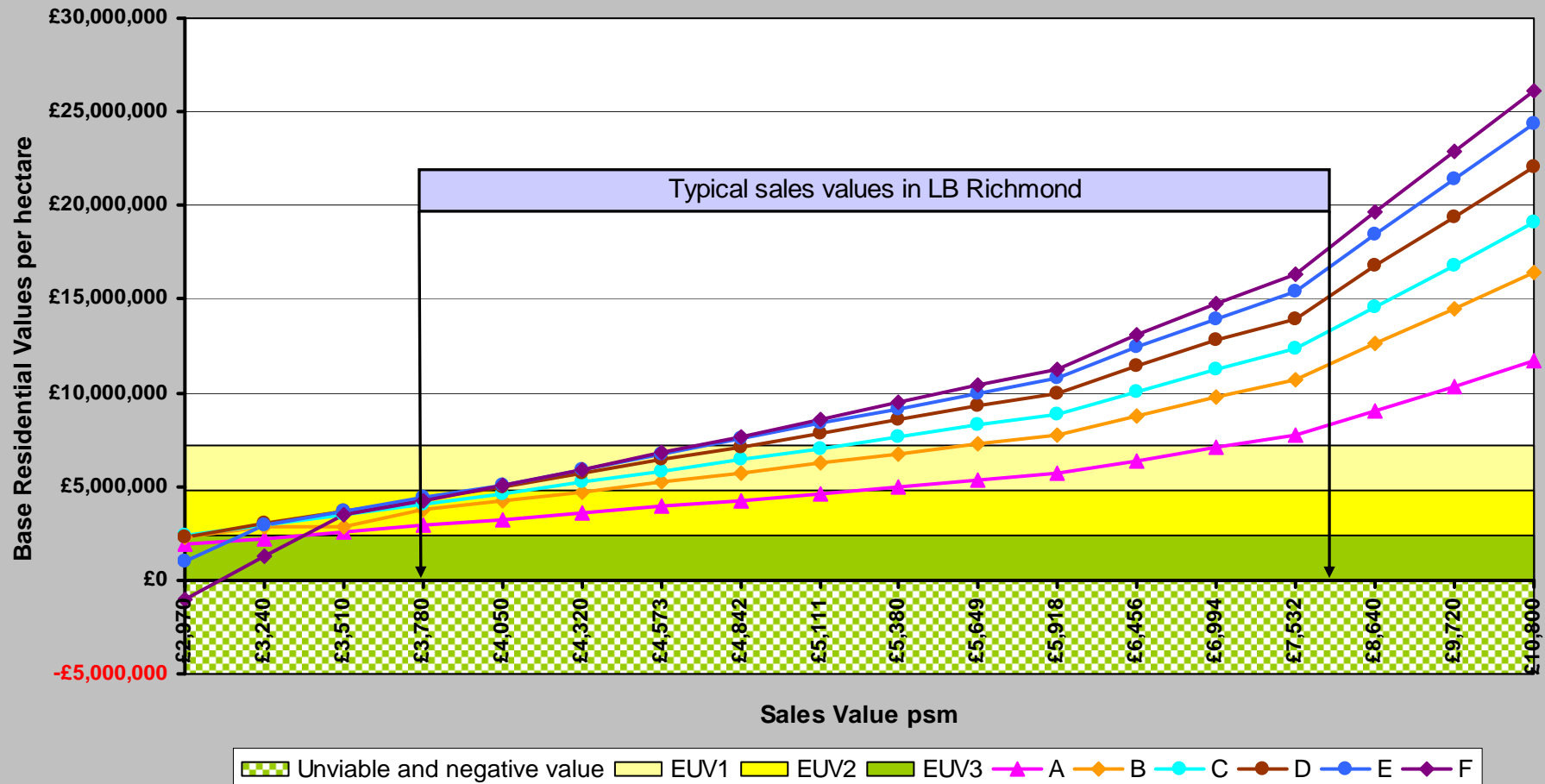


Figure 6C: Base Residential Values per hectare in LB Richmond (SPG Planning Obligations as adjusted in Table 3B and 50% affordable housing based on most likely RSL financial scenario with a 80:20% tenure split)



**NB. FURTHER APPENDICES TO BE
ADDED**