Draft London Housing Design Guide:

Cost and Delivery Impact Assessment

Pre Publication Draft

Homes & Communities Agency

LONDON DEVELOPMENT AGENCY

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1. EXECUTIVE SUMMARY

1.1 The Draft London Housing Design Guide (the Guide) was published by the Mayor of London in July 2009. The publication of the Guide represented a step towards the draft policies in the Draft Replacement London Plan (published October 2009) and London Housing Strategy (published in February 2010), which seek to promote excellence in the design, quality and sustainability of homes in the Capital.

1.2 In August 2009, GVA Grimley together with Sheppard Robson, architects, Davis Langdon, cost consultants, and Cello mruk, specialist market research agency, were initially commissioned by the GLA, HCA and LDA (the Client) to assess the cost and delivery implications of the Guide for new housing on LDA owned land or which would receive public subsidy from April 2011. The study therefore focused on testing the consequences of those Requirements that are new or which go beyond those that already apply under existing planning policy. .

1.3 In light of consultation it became apparent that the Requirements could be refined to address more effectively the pan-tenure remit of draft London Plan policy and its emerging Supplementary Planning Guidance (SPG). To this end, the final iteration of the assessment presented here addresses a more refined set of Requirements developed in Spring 2010.

Methodology

1.4 A significant element of the assessment was focused on better understanding the wider perceptions and benefits derived from a coherent and co-ordinated approach to improved housing design. The qualitative dimension to the assessment was established to build upon previous perception work already undertaken by HCA as well as the Commission for Architecture and the Built Environment (CABE, July 2009). New primary survey research was conducted by Cello mruk during August and September with RSLs and with 500 private tenure residents.

1.5 Eight case study Schemes were identified as typical of proposals that have recently been promoted or developed in London. The Schemes were all taken to be compliant with existing standards, as the intent is to establish the additional costs and other impacts that the Guide might impose. Analysis focused on the impact of the seven Requirements considered to have the greatest potential impact on costs, sale values and output. The design consequences were considered in conjunction with the Client project team and the advisors who prepared the draft Guide, and also reflected representations that were made during the consultation period. Cost data was provided by Davis Langdon for each of the Schemes both as at 2009 and 2013. The potential impact on end values was researched through discussions with major developers, with RSLs and with local agents. Average sale values were adopted across 6 boroughs, which together represent circa 36% of the annual draft London Plan target for the

delivery of new dwellings. The impact of each Requirement and the cumulative effect has been measured by reference to the residual land value of the typologies both in 2009 and in 2013.

Key Results

1.6 The survey of RSLs suggested that whilst they welcomed the introduction of the original Guide, they were concerned that it should be applied flexibly and that allowance be made in those situations where it may not be possible to implement all aspects of the Guide. They welcomed that the fact that the Guide might be applied across all tenures. The survey of private residents noted high levels of satisfaction with natural light, the number of rooms and, in particular, the overall internal space of their new homes. The features with which they expressed the least satisfaction were space for recycling and shared outdoor space.

1.7 In one Scheme out of the eight tested, the introduction of the Guide led to a reduction in the number of dwellings by some 8%. Overall, it is not believed that introduction of the Guide will lead to the delivery of fewer dwellings on any given site other than in those locations where constraints are so strong that it is likely to be difficult to accommodate as many dwellings as might previously have been in the case in the absence of the Guide. In light of this conclusion, and to provide a prudent assessment of the impact of the Requirements on future housing output, sensitivity tests anticipating possible –2%, – 5% and –10% reductions in relevant output were applied to the results of the Strategic Housing Land Availability Assessment (SHLAA) which informed the London Plan's housing targets, The results of these tests fell within the boundaries of the aggregate of other sensitivities and provisions tested in the SHLAA, suggesting that the Plan's long term housing targets were likely to remain robust if the Requirements are applied to the full range of future housing provision.

1.8 Whilst there is evidence that in some cases the proposed Requirements can lead to shorter term increases in sale values, for example Private Open Space, it is considered that the Requirements studied do not at the present time create values that match the total cost that arise from their implementation. The greatest effects on costs are seen in respect of the requirements for minimum Internal Floor Areas and for Private Open Space, as shown by the results for two of the typologies, Schemes 1 and 2. The effect on the cost of construction as measured against the eight typologies is:

Increase in Build Costs due to cumulative effect of the Requirements

	Scheme 1	Scheme 2	Scheme 3	Scheme 4	Scheme 5	Scheme 6	Scheme 7	Scheme 8
2009	15 - 16%	13 - 14%	6 - 7%	3 - 4%	5%	7 - 8%	8 - 9%	8 - 9%
2013	13%	10 - 11%	3 - 4%	1%	2 - 3%	4 - 5%	5%	5%

1.9 The effects on the residual land value are most pronounced in those areas where sale values are particularly low, as is the case in five of the boroughs tested, where there is a reduction in the number of dwellings and/or there is a small scheme. The impact is reduced where there are higher sale values to start with and/or in the other cases, sale values rise by more than build costs over time, as is projected. On the basis of the projections used for the Study the effect on the residual land value is halved in many cases within four years. The impact will be further reduced if, as may be expected, purchasers and occupiers begin to value some of the benefits of dwellings and schemes designed in accordance with the Guide, and are prepared to pay a premium. The cumulative, short term effects of the Requirements tested on the residual land value of the eight typologies was assessed to be:

Reduction in Land Value due to cumulative effect of the Requirements

	Scheme 1	Scheme 2	Scheme 3	Scheme 4	Scheme 5	Scheme 6	Scheme 7	Scheme 8
2009	71 - 92%	38 - 60%	21 - 31%	12 - 20%	9 - 27%	11 - 35%	13 - 25%	13 - 22%
2013	37 - 52%	22 - 30%	14 - 18%	3 - 5%	6 - 9%	6 - 15%	8 - 17%	8 - 17%

1.10 Where there is an impact on viability then it is open to the planning authorities to agree with the applicant as to how the effects might be mitigated and what trade offs might be made in order to ensure that a scheme is deliverable. It is also anticipated that, as developers and designers become more familiar with the use and application of the Guide, so schemes will be better incorporate the Requirements, and thereby enable them to accentuate the positive aspects of the Guide and to mitigate the costs.

2. INTRODUCTION

Overview

2.1 The Draft London Housing Design Guide (the Guide) was published by the Mayor of London in July 2009. The publication of the Guide represented a step towards the draft policies in the Draft Replacement London Plan (published October 2009) London Housing Strategy (published in February 2010), which seek to promote excellence in the design, quality and sustainability of homes in the capital.

2.2 The Guide has been prepared as a statement of intent from the Mayor to create homes for Londoners rather than 'delivering housing dwellings'. The Guide sets out a practical basis for designing high quality homes, indicating the levels and standards of quality that are expected by the London Development Agency (LDA) for all housing developed on its own land and by the Homes and Communities Agency (HCA) for new housing which will receive public subsidy after April 2011. It draws together into one document the multiple design and building standards that already exist across a number of other policy documents such as Building for Life, Lifetime Homes, Housing Quality Indicators, Code for Sustainable Homes and the adopted London Plan.

2.3 The Guide has been subject to public consultation. This has involved an extensive range of engagement with developers, residential investors, local authorities, Registered Social Landlords (RSLs) and the public through a call for representations, events and presentations. The findings of the public consultation are subject to a separate report. The consultation process provided inputs to this study so that it effectively became an iterative process, testing first the consequences of original requirements in the draft Housing Design Guide and then possible refinements to these suggested through the consultation process. There have been some significant changes made to the Guide as a result of the process and clarification provided where the original scope or intention of a particular Requirement was unclear. For example, it has been confirmed that it is not the intention of the Guide to remove the right to develop single person studio or bed sit dwellings, which usually have a floor area which is less than 50 sq.m. This Report is based on the final iteration of this process.

2.4 In parallel with the work being undertaken in London, the Homes and Communities Agency (HCA) is working to bring together and consolidate the design and quality standards formerly required by English Partnerships and the Housing Corporation. The HCA intends to publish new draft standards for design and sustainability by April 2010 as the basis for funding applications under the next round of the National Affordable Housing Programme (NAHP), or its replacement, from April 2011. The London Requirements and the HCA national standards will, it is envisaged, ultimately work in tandem to influence and shape housing design across the country. .Also in parallel with this LDA and HCA work, the Mayor has been preparing draft Supplementary Planning Guidance devolving from, and to support implementation of, the

housing policies of the Draft Replacement London Plan. This is being prepared to inform discussions on the draft Plan's housing policies at its Examination in Public in the Summer/Autumn of 2010. It will include draft guidance on implementation of the Draft Replacement London Plan Policy 3.5 on the quality and design of housing developments. Policy 3.5 draws on the principles of the Guide (para 3.31) and proposes that these be applied to all housing development across all tenures. The link between the Guide and the Draft Replacement London Plan is facilitated by Policy 3.5B/3.5C using similar terms to the chapter headings of the Guide.

Purpose of Assessment

2.5 In order to understand better the implications of implementing the Guide, the Greater London Authority (GLA), HCA London and LDA have jointly commissioned a cost and delivery impact assessment.

2.6 In August 2009, GVA Grimley together with Sheppard Robson, architects, Davis Langdon, cost consultants, and Cello mruk, specialist market research agency, were instructed by the GLA, HCA and LDA (the Client) to undertake the cost and delivery impact assessment. The purpose is to test the consequences of those Requirements which are new or which go beyond those that already apply under existing planning policy and/or by HCA for new homes that receive grant.

2.7 The original brief for this work aimed to understand the cost and delivery impact of the original Requirements in the draft Guide, but it became apparent that these would need to be changed as they were taken forwards into the SPG. To this end, the final cost and delivery impact assessment addresses a more realistic set of Requirements, which represented the iteration between the Guide and the SPG as at January 2010.

2.8 As a first step in the assessment process it is considered the full set of Requirements in the draft Guide to identify those new Requirements, over and above existing standards, which could be considered to have a material impact on housing development in London – cost, values and/or number of dwellings that might be built. We further reviewed the responses received by the LDA through the consultation on the draft Guide to confirm which Requirements had drawn greatest comment from the housebuilding industry.

2.9 After discussions with the Client it was agreed that the we would assess the following Requirements from the draft Guide:

1. **Shared circulation** (Guide para. 3.2.1);
2. **Internal Floor Area Standards** (Guide para. 4.1.1);
3. **Living/Dining/Kitchen** (Guide para. 4.4.3);
4. **Private open space and balconies** (Guide para. 4.10.1);
5. **Dual aspect** (Guide para. 5.2.1);

6. **Floor to ceiling heights** (Guide para 5.4.1)

7. **Code for Sustainable Homes Level 4** (Guide para 5.4.1)

2.10 The Requirements in the original Guide were refined by iterative testing through this project. Section 4 of this Report sets out the cost impact assessment of the revised Requirements as at January 2010.

2.11 We have assessed the impact of each Requirement on the design, layout, number of dwellings, cost of construction, sale value and residual land value of eight typical residential development schemes, three house schemes and five flat schemes, referred to as the Schemes. Each Scheme is intended to be representative of the forms of residential development that have been constructed within London within the last few years, and of a type and character likely to form the basis for future housing development in the near term whilst the consequences of the Guide for design are absorbed and new approaches adopted.

2.12 In order to test the impact across a range of locations, six Boroughs were selected after discussion with the Client:

- Barnet
- Barking and Dagenham
- Croydon
- Greenwich
- Hackney
- Newham

2.13 These boroughs were chosen with a view to illustrating the potential impact within both inner and outer London but with emphasis on boroughs where residential sale values are below the London average, and, therefore, the impact could be expected to be more pronounced.

2.14 In addition to this work we were also commissioned to conduct two surveys, carried out by Cello mruk, with RSLs and with residents who have recently purchased or rented newly built, private dwellings. The purpose of the surveys were to:

- Explore the views of RSLs active in London on current and proposed design standards, including the Guide;

- Obtain the views or owner/occupiers and renters as to their satisfaction with the design of the accommodation they now occupy (focussing on private and intermediate markets).

2.15 This Report sets out our findings based on the work we have undertaken, and makes recommendations to inform the final version of the Guide, which in some cases may be more appropriate for the draft SPG.

2.16 This examination of costs and delivery impacts contributes to the evidence base underpinning the evolution of the Guide, and sits alongside the findings from the public consultation process. It therefore informs the development of the Guide from its draft to final version and the preparation of the SPG.

Structure of the Report

2.17 Following this introduction, the Report is structured as follows:

- Section 3 sets out in summary the findings from the perceptions survey work;
- Section 4 summarises the methodology we adopted in order to test and assess the potential impact of each of the Requirements to be investigated;
- Section 5 sets out the findings for each of the standards and Requirements that were tested;
- Section 6 details other points that arise;
- Section 7 sets out our assessment of the potential consequences for the delivery of housing as proposed in the revised London Plan;
- Section 8 sets out our conclusions and recommendations;
- Technical Appendices provide the underlying data sets, background analysis and supporting material.

3. PERCEPTION RESEARCH SURVEYS

3.1 A significant element of the assessment was focused on better understanding the wider perceptions and benefits derived from a coherent and co-ordinated approach to improved housing design. The qualitative dimension to the assessment was established to build upon previous perception work already undertaken by HCA as well as the Commission for Architecture and the Built Environment (CABE, July 2009). New primary survey research was conducted by Cello mruk during August and September with RSLs and with 500 private tenure residents. Appendix 1 provides a detailed report of the findings.

Responses by RSLs

3.2 In-depth interviews were completed with thirteen RSLs (from 22 contacted) that have developed and are continuing to develop new housing stock within the Capital. The target list was agreed to include both larger and smaller RSLs, and looked to encompass a geographical coverage across inner and outer London areas. Each interview was a structured discussion with an identified, relevant officer from the RSL, supported in many instances by evidence from their own internal, tenant perception work.

3.3 The purpose of the survey of RSLs was to assist in drawing together their own research on space standards and internal design issues, to highlight any other cost or viability issues that they have experienced, and their reflections on the current and future housing development market in London. The survey aimed to identify design issues which are important in the social rented sector, especially families with children.

3.4 The key findings were:

(1) The majority of RSLs are in favour of a set of design standards being introduced. They commented that there are currently too many documents for developments to adhere too, and bringing these together under a single Guide should be encouraged;

(2) RSLs support the inclusion of private developers in the remit of the Guide in order to create a ‘level playing field’ when bidding for development sites;

(3) In a dense urban environment such as London, it will not always be possible to apply the standards (infill sites were given as an example of where it might not always be possible to implement the Guide). Allowance should be made for this;

(4) There is concern that the Guide could result in more prescriptive design solutions, and RSLs expressed concern about resulting design standardisation. They would encourage more flexibility in the Guide;

(5) How the Guide is going to be used and the application of it needs to be clear i.e. whether it will be tested at a planning or funding stage. An Implementation Strategy may be

advantageous. This may in turn help to enable a uniform approach to the Guide by Local Authorities across London.

Responses by private tenure residents

3.5 The private tenure residents' perception survey involved 500 short, face-to-face interviews conducted in the six target London Boroughs. The survey targeted particularly residents living in private sector tenure homes, or hoping to find private sector accommodation, and provided a structured analysis of their views on space standards, communal amenities provision including open spaces, storage facilities, and broader expectations for quality private tenure housing in the Capital.

3.6 The principal findings from the survey were:

(1) The most important feature respondents identified in their home was overall internal space (96%), this was followed by size of bedrooms and quality of construction (95%);

(2) The features with which respondents expressed the highest levels of satisfaction were plenty of natural light in their home (91%), and then by the number of rooms and the overall internal space (89%);

(3) The features with which respondents expressed the lowest levels of satisfaction included space for recycling, both inside and outside the home, and shared outdoor space (38%-59%);

(4) For the vast majority of internal and external features that respondents were asked about, the satisfaction expressed by respondents was lower than the importance that they gave them. This indicates priorities for improvement; the greater the gap between the importance expressed and their satisfaction the greater the need for improvement. Privacy from noise (-23%), space for recycling inside the home (-21%), and maintenance of communal areas (-17%) are the key three areas for improvement. These are followed by quality of construction (-16%), private outdoor space (-15%), the neighbourhood (-14%), size of eating/living areas (-14%), and space for recycling outside the home (-14%);

(5) Over two thirds of respondents (68%) said their living and dining areas are open plan. Slightly more than one in ten (11%) of respondents were dissatisfied with their open plan home. The key reason cited for dissatisfaction was overall size (being too small);

(6) More than four fifths of respondents agreed that their home was well ventilated;

(7) Almost a half of respondents interviewed felt they were not able to adapt their home to meet potential future needs;

(8) Four in five respondents were satisfied with the space available in their bedrooms. A similar proportion were also satisfied with space in their living areas and bathroom;

(9) Satisfaction was lowest with external storage, 42% of respondents specifically expressed dissatisfaction;

(10) A third of respondents overall said that they had access to a private balcony. Respondents with access to a private balcony use it in a number of ways. The largest proportion (63%) said they used it for sitting and socialising. A further 46% also used their balcony for drying clothes, and 31% for eating. Overall satisfaction with balconies is high at 84%; only 8% of respondents specifically said they are dissatisfied with their balcony. Those who were dissatisfied with their balcony were most likely to feel this way because it was too small;

(11) Overall of those respondents who do not currently have a private balcony, just over half (51%) said they would like to have access to one.

3.7 It is noted that affordable housing is occupied more intensively than the equivalent, private accommodation, and, therefore, that the views of the private occupiers would not reflect in all regards the same concerns as those living in affordable accommodation.

Informal views of estate agents

3.8 In addition to the formal survey work, GVA contacted 67 local estate agents by telephone when carrying out research into values in the selected boroughs. As part of the discussion the agents were asked their opinion as to the potential impact on current sale values, but not rental values, of some of the Requirements that are being considered. Their responses are shown in Table 1 below.

3.9 It should be noted that these discussions were not set up or structured in the same way as those conducted by Cello mruk, and that many of the estate agents were not directly engaged to sell newly developed dwellings. They do however supplement our own experience, and are interesting as a pointer towards wider issues in respect of the potential mismatch between what purchasers currently would like and what they might be prepared to pay for.

3.10 A general comment was made by a number of agents that the Requirements discussed could be expected in many instances to make properties easier and quicker to sell; this view echoes that of a number of the Developers.

Table 1: Survey of local estate agents – Impact on Current Sales Values

	Zero	Low <£10,000	Mid £10-20,000	High £20,000+	Unquantifiable	No answer	Total
Prevalence of balconies on new flats		4	23	39		1	67
Purchaser desire for balconies		6	16	44		1	67
Value of balcony	4	36	13	4	9	1	67
Prevalence of dual aspect new flats		59	5	2		1	67
Purchaser desire for dual aspect		59	5	2		1	67
Value of dual aspect	22	16	1	1	25	2	67
Expectation of separate living spaces in 3+ bed dwellings		17	16	33		1	67
Value of separate living spaces	10	24	4	0	26	3	67

4. METHODOLOGY FOR ASSESSING THE COST AND VALUE IMPACT

Introduction

4.1 In this section we set out a summary of our approach and methodology for testing the impact of the Guide on costs and values. We describe our approach to establishing typical London residential development schemes as the basis for testing, and also confirm the principal assumptions and limitations of the assessment.

Overall Approach to Testing

4.2 The underlying principles for assessing the cost and value impact of the Guide have been to ensure that the assessment:

(1) Reflects and is based upon the character and scale of residential developments common in London both now and those likely in the future, say 5-10 years, i.e. the Guide is tested against scheme designs that while notional are realistic and reflect the current rather than the proposed policy environment;

(2) Considers the cost and value implications on the assumption that proposed schemes should or ought to comply with existing standards and requirements;

(3) Considers the cost and value implications for London as a whole, but is also able to distinguish differential impacts that may arise due to the range of values and costs across the capital;

(4) Examines the impact by reference to current market conditions and also by reference to a future date when the current, difficult market conditions may have ameliorated.

Assessing the Consequences

4.3 The analysis of the potential consequences for the scale, layout and composition of the development was principally conducted by Sheppard Robson. The results have been annotated and are attached at Appendix 3.

4.4 It is must be noted that in the case of some of the Requirements it is difficult, and sometimes misleading, to illustrate the consequences by reference to alterations that would have to be made to existing buildings or schemes as the changes required would lead to a radically different design. This is particularly so in the case of the Requirement for dual aspect flats. In some cases the theoretical effect can be so marked as to render the original scheme undeliverable. In reality, however, a landowner, developer or designer knowing at the outset that the design has to incorporate the Requirements will arrive at a different but viable answer.

4.5 It should also be noted that the intention of the Guide is to raise standards where required, and not simply settle for the status quo. Therefore, it should be anticipated that developers and designers will amend their models and layouts to meet the challenge, as they already do to address the changing needs of the market. It can be anticipated that, even in the absence of the Guide, the designs and layouts that prevail in a few years time will differ from those that have been tested. There is a danger, therefore, in abstracting into the longer term from the results of the modelling and the dates selected, when the consequences of the Guide will be different from those we have observed.

4.6 A further difficulty is created by the absence of a context for the assumed Schemes. For some sites there may be no viable way in which all or some of the Requirements can be incorporated without a reduction in the number of proposed dwellings, perhaps, for example, because of boundary or height constraints or third party rights. In other cases, the Requirements will have little or no effect on the number of dwellings.

4.7 As previously noted, the purpose is to test the consequences of those Requirements which are new or which go beyond those that already apply under existing planning policy and/or by HCA for new homes that receive grant. Whilst we have therefore adopted Schemes that are deemed to meet existing policy requirements, it is acknowledged that there will be schemes, perhaps recently consented, which do not comply in all respects with existing policy. It might be assumed, therefore, that in reality the potential impact of the Guide, and the Requirements we have studied, could be more marked than our analysis would suggest. However, this illustrates the fact that both the current and the revised London Plan, the SPG and the Guide are planning policy documents, open to an interpretation and application that can be amended to reflect particular circumstances, should the case be made and accepted. It should be noted that:

(1) Our examples do not represent current, best practice, and on which the impact of the Requirements can be expected to be modest;

(2) It is the deliberate intent of the Guide to improve the design and quality of the new housing that has yet to be consented or built;

(3) The Guide will not apply to schemes that already have planning permission.

Establishing the Residential Development Scheme

4.8 In order to provide a coherent and common basis for testing the impact of the Guide a series of typical residential development Schemes were created. This was necessary to ensure that the potential individual impacts of the Requirements to be tested could be assessed as well as the overall impact. It would also assist us in identifying any differential impacts affecting particular forms or scales of residential development.

4.9 The Draft Replacement London Plan and the Strategic Housing Land Availability Assessment (SHLAA) identifies capacity for 163,000 more homes in the development pipeline, of which approx 73% already have planning permission[1].

4.10 It was necessary to consider the current and anticipated future geography of London's housing development in order to assess impacts across the Capital. Six London Boroughs were identified as the base locations for the residential Schemes. These were selected on the basis of:

- Analysis of future housing land delivery targets drawing on the London Plan, and supporting information from the GLA's London-wide Strategic Housing Land Availability Assessment;
- Analysis of the differential sales values for private market housing at Borough level;
- A mix of inner and outer Boroughs.

Table 2: London Borough Housing Delivery Targets and Price Variance

London Borough	Inner / Outer	Dwellings Per Annum (London Plan target)	Deviation of Borough Average Price from London Average	Borough to be Tested
Barking & Dagenham	Outer	1,190	-45%	Test
Barnet	Outer	2,055	11%	Test
Bexley	Outer	345	-35%	
Brent	Outer	1,120	-9%	
Bromley	Outer	485	-9%	
Camden	Inner	595	55%	
City of London	Inner		25%	
Croydon	Outer	1,100	-26%	Test
Ealing	Outer	915	-4%	
Enfield	Outer	395	-22%	
Greenwich	Inner	2,010	-27%	Test
Hackney	Inner	1,085	-12%	Test
Hammersmith & Fulham	Inner	450	44%	
Haringey	Outer	680	-6%	
Harrow	Outer	400	-5%	
Havering	Outer	535	-27%	
Hillingdon	Outer	365	-21%	
Hounslow	Outer	445	-11%	
Islington	Inner	1,160	18%	
Kensington & Chelsea	Inner	350	167%	
Kingston upon Thames	Outer	385	-2%	
Lambeth	Inner	1,100	-4%	
Lewisham	Inner	975	-30%	
Merton	Outer	370	1%	
Newham	Outer	3,510	-34%	Test
Redbridge	Outer	905	-19%	
Richmond upon Thames	Outer	270	41%	

[1] London Plan Annual Monitoring Report, February 2009, Greater London Assembly

London Borough	Inner / Outer	Dwellings Per Annum (London Plan target)	Deviation of Borough Average Price from London Average	Borough to be Tested
Southwark	Inner	1,630	-6%	
Sutton	Outer	345	-24%	
Tower Hamlets	Inner	3,150	-5%	
Waltham Forest	Outer	665	-32%	
Wandsworth	Inner	745	22%	
Westminster	Inner	680	92%	
TOTAL		**30,410**		
TEST TOTAL		**10,950**	**36%**	

Source: Acadametrics, Greater London Assembly

4.11 The combination of these factors led us together with the Client Project Team to conclude that the testing should be carried out by reference to costs and values for the following Boroughs:

- Barnet
- Barking and Dagenham
- Croydon
- Greenwich
- Hackney
- Newham.

4.12 It was important to ensure that the residential Schemes created were representative of the characteristics of the housing that has been and is likely to be developed. The Schemes therefore had their basis in an analysis of the characteristics of real development schemes completed in London within the last few years. Whilst the Schemes are intended to represent a sample of the types of scheme built and potentially to be constructed in the future, care should be taken in extrapolating the results. It is anticipated that the introduction of the Guide will alter the practice of developers and designers, and therefore that the schemes of the future will in certain important respects not replicate recent or current examples. Nevertheless, the issues and themes emerging from the analysis we believe do apply on a London-wide basis.

4.13 The Schemes were created through an analysis of:

- Schemes with public funding – utilising HCA data on the nature, scale and type of publicly funded schemes in London for the period 2008-11, see Appendix 2;
- Private sector schemes – utilising market sales data from Rightmove, see Appendix 2; analysis of consented and developed schemes using data from GLA and Borough Planning Registers; and data from schemes designed by Sheppard Robson Architects.

4.14 For the selected Borough locations the data from HCA and Rightmove showed a strong tendency towards funding for, and the development and construction of flats rather than houses both in the public and private sectors:

- Of a total of some 18,400 housing dwellings allocated funding through the HCA National Affordable Housing Programme (NAHP) across the whole of London for the period to 2008-2011, some 75% are either one or two bed flats, 16% three-bed flats and 3% 4+ bed flats. A total of 5% of dwellings are houses.
- Data from Rightmove covering the six target Boroughs identified that the majority (66%) of new residential developments built and sold in the period 2000-2009 were studio, 1-bed or 2-bed flatted apartments, with a further 3% being 3 or more beds; some 29% were 2, 3 or 4 bedroom houses.
- The Rightmove data suggests that c 23% were below the proposed Internal Floor Area Standards, while the HCA data indicates c 50%.

4.15 It should be noted that the Rightmove data is reliant on floor areas provided by developers and estate agents as part of the sales particulars. Whilst the Guide refers to the Gross Internal Area of a given dwelling i.e. the whole enclosed area within the external walls inclusive of internal walls and partitions, plant rooms, lobbies and corridors, some developers and estate agents quote floor areas on a different basis approximating to a net internal area or net usable area e.g. without allowance for internal walls, plant rooms etc. This distinction will make a difference, perhaps as much as c 5%.

Table 3: Analysis of HCA data for schemes funded in London from 2008-11 NAHP

	Projects		Dwellings		Average size sq m	Dwellings less than proposed Internal Floor Area Standards	
	No.	Proportion of projects	No.	Proportion all dwellings		No.	Proportion all dwellings
1 bed 1 person flat	18	0.5%	48	0.3%	40	0	0%
1 bed 2 person flat	1,058	29%	5,628	31%	48	3,945	70%
2 bed 3 person flat	747	21%	3,863	21%	68	826	21%
2 bed 4 person flat	829	23%	4,320	24%	72	2,077	48%
3 bed 4 person flat	81	2%	251	1%	79	40	16%
3 bed 5 person flat	443	12%	2,231	12%	88	1,248	56%
3 bed 6 person flat	131	4%	488	3%	100	253	52%
4 bed 5 person flat	7	0.2%	27	0.1%	101	0	0%
4 bed 6 person flat	91	3%	535	3%	108	101	19%
2 bed 4 person house	66	2%	265	1%	80	223	84%
3 bed 4 person house	6	0.2%	17	0.1%	84	10	59%
3 bed 5 person house	92	3%	514	3%	96	389	76%

	Projects		Dwellings		Average size sq m	Dwellings less than proposed Internal Floor Area Standards	
	No.	Proportion of projects	No.	Proportion all dwellings		No.	Proportion all dwellings
4 bed 5 person house	1	0%	1	0%	95	1	100%
4 bed 6 person house	41	1%	205	1%	112	118	58%
Total	**3,611**		**18,393**			**9,278**	**50%**

Source: HCA

Table 4: Analysis of data from Rightmove: Sale of new dwellings 2000-9 in 6 London Boroughs

	Barking & Dagenham	Barnet	Croydon	Greenwich	Hackney	Newham	Combined
Studio flat	0	13	1	1	5	3	23 (0.3%)
1 bed flat	147	202	101	392	341	369	1,522 (18.4%)
2 bed flat	455	600	385	1,222	526	793	3,981 (47.3%)
3 bed flat	7	43	10	67	62	79	268 (3.2%)
2 bed house	218	79	38	284	67	83	769 (9.1%)
3 bed house	237	153	109	443	75	139	1,156 (13.7%)
4 bed house	48	102	98	205	28	29	510 (6.1%)
5 bed house	3	63	63	22	3	4	158 (1.9%)
Total	**1,115**	**1,255**	**805**	**2,636**	**1,107**	**1,499**	**8,417**

Source: Rightmove

4.16 From this background information, it was possible to create a picture of the characteristics of both public and private residential development that has occurred in the past decade, and then to utilise this to design the typical residential scheme for testing.

4.17 The schemes are exclusively residential developments. It is acknowledged that many development schemes in London include a mixture of residential, commercial and other uses. The purpose of this assessment was to test the impact of the Guide on residential development. It was decided that this was best achieved by omitting assessments of multiple-use development schemes, as each has its own distinct scheme characteristics. Nevertheless, the findings from the assessment identify areas of impact that would be applicable to mixed-use schemes. Where residential sits above commercial use the assessment undertaken on medium and high density schemes could be directly applied.

Schemes

4.18 In order to assess the incremental or additional effect that the Requirements might make, it has been assumed that the dwellings in the Base Scheme comply with current planning

policies required under the London Plan, including the requirement that all dwellings meet Lifetime Homes Standards. It should be noted that there will be schemes, even relatively recently consented, that probably do not in fact comply in all respects with existing policies. Where this is true it illustrates the fact that planning policies can often be applied flexibly and that exceptions are sometimes made. We would expect that on occasions the Guide will be applied in similar way.

4.19 It is acknowledged that this will only give a partial analysis of the effects, both positive and negative, and that there will be a large number of schemes for which the consequences will be different from those we have identified. A major challenge is that in some instances it is difficult or misleading to simply retro-fit the Requirements onto existing designs as the consequence of the Guide may be that in some cases the design has to be substantially altered. As the purpose of the SPG (rather than the Guide) is to raise design standards throughout London for all tenures it is intended that there will indeed be such an impact on occasion. Within these limitations we have sought to gauge the effects by using a variety of schemes that reflect the sorts of designs used at the present time.

4.20 Full details of the residential Schemes created are set out in Appendix 3, but in summary are:

Table 5: Summary information on Flat Schemes

	Scheme 1	Scheme 2	Scheme 3	Scheme 4	Scheme 5
No of Dwellings	14	66	276	252	103
No of Private	10	47	193	177	72
No of Affordable	4	19	83	75	31
Private / Affordable Split	70% / 30%	70% / 30%	70% / 30%	70% / 30%	70% / 30%
Unit Type Mix	Studio x 0 1 bed x 3 2 bed x 7 3 bed x 4 4 bed x 0 5 bed x 0	Studio x 0 1 bed x 31 2 bed x 11 3 bed x 19 4 bed x 5 5 bed x 0	Studio x 31 1 bed x 68 2 bed x 82 3 bed x 66 4 bed x 24 5 bed x 5	Studio x 0 1 bed x 84 2 bed x 84 3 bed x 84 4 bed x 0 5 bed x 0	Studio x 0 1 bed x 40 2 bed x 42 3 bed x 21 4 bed x 0 5 bed x 0
Unit Sizes GIA sq m	Studio - 1 bed - 47 2 bed - 68 3 bed - 90 4 bed - 5 bed -	Studio - 1 bed - 44 2 bed - 71 3 bed - 85 4 bed - 104 5 bed -	Studio - 46 1 bed - 48 2 bed - 70 3 bed - 88 4 bed - 107 5 bed - 134	Studio - 46 1 bed - 47.5 2 bed - 78.9 3 bed - 99.8 4 bed - 107 5 bed - 134	Studio - 1 bed - 51 2 bed - 87 3 bed - 102 4 bed - 5 bed -
No of storeys	3	4 and 14	6 and 26	5	5 and 7
Net Density – dwellings/ha	142	492	641	167	154
Floor to Ceiling Height	2.40m	2.60m	2.45m	2.70m	2.70m
Private Housing Standards	Part L in 2009 & CSH 4 in 2013				
Affordable Housing Standards	CSH 3 in 2009 & CSH 4 in 2013				
No of balconies	0	66	276	252	103

Table 6: Summary information on House Schemes

	Scheme 6	Scheme 7	Scheme 8
No of Dwellings	14	66	220
No of Private	10	46	154
No of Affordable	4	20	66
Private / Affordable Split	70% / 30%	70% / 30%	70% / 30%
Unit Type Mix	2 bed x 7 3 bed x 4 4 bed x 3	2 bed x 14 3 bed x 33 4 bed x 19	2 bed x 46 3 bed x 110 4 bed x 64
Unit Sizes GIA sq m	2 bed - 80 3 bed - 93 4 bed - 105	2 bed - 80 3 bed - 93 4 bed - 105	2 bed - 80 3 bed - 93 4 bed - 105
No of storeys	2	2	2
Floor to Ceiling Height	2.40m	2.40m	2.40m
Private Housing Standards	Part L in 2009 & CSH 4 in 2013		
Affordable Housing Standards	CSH 3 in 2009 & CSH 4 in 2013		

4.21 Table 7 illustrates the differences that arise in the floor areas generated by existing practice and those proposed in the Guide and London Plan. The potential impact will be in respect of both private and affordable housing. It is likely to be greatest in respect of schemes comprising small dwelling types (no. of bedrooms), in particular flats.

Table 7: Draft London Housing Design Guide Internal Floor Area Standards compared to typical current standards for private developments and Affordable Housing

Min. Dwelling by Internal Floor Area	Dwelling Type (bedrooms / persons)	Private GIA Sq M	Affordable HQI GIA Sq M	London Plan/Guide GIA Sq M
Flats	1b1p	(Note 1)	30 – 35	Not Specified
	1b2p	45	45 – 50	50
	2b3p	60	57 – 67	61
	2b4p	65	67 – 75	70
	3b4p	(Note 1)	67 – 75	74
	3b5p	85	75 – 85	86
	3b6p	86	85 – 95	95 (Note 2)
	4b5p	100	75 – 85	90
	4b6p	104	85 – 95	99
2 storey houses	2b4p	75 – 80	67 – 75	83
	3b4p	80 – 93	67 – 75	87 (Note 2)
	3b5p		75 – 85	96
	4b5p	102 – 105	82 – 85	100
	4b6p		95 – 100	107

Min. Dwelling by Internal Floor Area	Dwelling Type (bedrooms / persons)	Private GIA Sq M	Affordable HQI GIA Sq M	London Plan/Guide GIA Sq M
3 storey houses	3b5p	105 – 110	75 – 85	102
	4b5p	115 – 125	75 – 85	106
	4b6p		100 – 105	113

Table Notes:

1. Not typically provided for private development
2. The draft LHDG contained wrong figures for 3 bed 6 person flats, which should read 95 sq m not 100 sq m, and for 3 bed 4 person 2 storey houses, which should read 87 sq m not 86 sq m.

Building Cost Analysis

4.23 Davis Langdon has prepared summary building cost assessments for all the schemes as at 3Q 2009 and 2013. For each Scheme a baseline cost was created with three variations to reflect the fact that in some areas the cost could be expected to differ both as a result of the general location and the need to build to a specification commensurate with assumed end values. The specification for the assumed level of internal fit out reflects that which it is considered would apply to private sale dwellings. Full details of the costings used are set out in Appendix 4.

4.24 Davis Langdon has assessed the potential additional cost for each of the Requirements, both separately and when combined.

4.25 In line with current planning policy and HCA funding requirements, it is that in the Base Scenario as at 2009 the private dwellings are built to meet Building Regulations Part L and that the affordable dwellings are built to meet Code for Sustainable Homes Level 3. For the Base Scenario in 2013 it is assumed that all dwellings would be built to Code for Sustainable Homes Level 4, to reflect projected national policy.

4.26 The building costs exclude external works, unusual or exceptional site conditions, off-site services, and professional fees.

4.27 The projections for building costs in 2013 have been supplied by Davis Langdon, and reflect a reduction of 4.6%.

Development Appraisals

4.28 With the benefit of the analysis undertaken by Sheppard Robson and the cost advice from Davis Langdon, GVA Grimley has carried out residual development appraisals to test the consequences of the Requirements. The assessment provides a residual land value of a Scheme once the total costs, including finance and a developer's profit, are deducted for the total revenue.

4.29 A base residual land value was calculated as at 2009 and 2013 for each of the schemes, the Base Scheme. The potential impact of each Requirement in isolation and when combined has been assessed by reference to the residual land value of the Base Scheme.

4.30 Adopted sales prices reflect the assumed values that could be achieved for each Scheme in each of the Boroughs to be tested. The figures used are a blend of the information gathered from discussions with local agents and research. They are averaged across the principal areas that are expected to deliver new housing. The sale rates adopted for each Borough are detailed in Appendix 5.

4.31 In conducting the appraisals standard assumptions have been adopted in order to simplify the assessments, and to seek to arrive at results that would enable a comparison to be made. The appraisals assume that the property comprises a vacant, freehold site for which full planning permission and other consents had been granted. The split between private and affordable housing was discussed and agreed with the Client. In addition, the following standard inputs were used:

Table 8: Development Appraisal Standard Inputs

	2009	2013
Private Dwellings	70%	70%
Affordable Dwellings	30%	30%
Social Rented (% of Affordable)	60%	60%
Intermediate Tenure (% of Affordable)	40%	40%
Profit on Sales	20%	17.5%
Finance Debit Rate	6.5%	7%
Contingency	3%	3%
Professional Fees	10%	10%
Cost of Sales	6%	6%

4.32 In agreement with the Client, The impact consequences were tested with reference to costs and values as at 3rd Quarter 2009 and to projected values and costs as at 2013. The values adopted for 2013 are based on a forecast provided by Experian. It should be noted that this forecast applies to the UK and not specifically London. As historical data shows, the growth in average house prices in London has usually exceeded the national average, see Appendix 2. Given the current, economic and market conditions, and concerns as to when and how much finance will be available for mortgages[2], it is most appropriate to use what may turn out to be a conservative forecast for the purpose of this exercise.

Table 9: Experian: National House Price Change Predictions 2009-2013

	Dec-10	Dec-11	Dec-12	Dec-13
UK House Prices, % Change pa (Q4)	0.5%	2.5%	3.3%	3.4%

[2] The outlook for mortgage funding markets in the UK in 2010 - 2015 Report by the Council of Mortgage Lenders

Source: Experian

4.33 Data from Academtrics for the six selected London Boroughs showing how average house prices have changed since January 2001 is included within Appendix 2.

4.34 Allowance is made, both in 2009 and 2013, for grant to be paid by HCA under the National Affordable Homes Programme (NAHP). The grant adopted is equivalent to an average of £23,000 per person to cover both Social Rent and Intermediate Tenure.

4.35 In some instances the results of the testing suggest a very marked impact on the building cost and/or the land value. In such cases the developer and design team will need to investigate alternative mixes and designs in order to see how the effect may be mitigated and the land value and profit maximised. It is also to be expected that they will discuss the consequences with the local planning authority and explore how the Requirements might be applied so that the scheme is rendered viable. It is wrong to infer that where the results of our testing are particularly negative there can be expected to be no residential development undertaken, but it does illustrate those situations where there could be a need for a different design, mix of dwellings, and/or an acknowledgement by the planning authorities that the effects of the Guide will have to mitigated to ensure a scheme is deliverable.

5. COST AND VALUE IMPACT OF SPECIFIC REQUIREMENTS

Introduction

5.1 In this Section, the cost and value impacts of the Guide are considered by testing the selected Requirements against the typical residential development Schemes described in the preceding Section.

5.2 The analysis is aimed at understanding the cost and value/viability impacts, and any other material planning or design consequences that could arise from the implementation of the Guide. From analysis of the Guide it is apparent that although there are a large number of individual standards and Requirements throughout the document, many of these will not have any material impact on the cost or viability of future residential schemes; albeit they will impact upon the quality, attractiveness and resident satisfaction of the development. Moreover, many of the requirements reflect existing planning policy. On this basis it was agreed with the Client Project Team that initially we would concentrate on the following Requirements from the original draft Guide:

1. **Shared circulation**: The number of dwellings accessed from a single core should be no more than eight per floor (Guide para. 3.2.1);
2. **Internal Floor Area Standards**: (Guide para. 4.1.1);
3. **Living/Dining/Kitchen**: Dwellings with three bedrooms or more should have two living spaces, e.g. Living room and kitchen-dining room (Guide para. 4.4.3);
4. **Private open space and balconies**: A minimum of 5 sq.m of private outdoor space should be provided for 1-2 person dwellings and an extra 1 sq.m should be provided for each additional occupant (Guide para. 4.10.1).;
5. **Dual aspect**: There will be a presumption against single aspect dwellings. (Guide para. 5.2.1);
6. **Floor to ceiling heights**: The minimum floor to ceiling height in all habitable rooms is to be 2.6 metres (Guide para 5.4.1);
7. **Code for Sustainable Homes:** An increase from Building Regulations Part L, to Code 3 and then Code 4 CSH (Guide para 6.2.1).

5.3 Since the original instruction the Client has decided to vary some of these original Guide Requirements through the iterative testing process associated with this project. This final selection, set out below, represented the iteration of those Requirements, which could have a material impact on development, as at January 2010. These may change further before final publication of the Guide; however, the Client has advised that further changes are only likely

to be minor. This means that this assessment is a more realistic assessment of the impact of the SPG and Guide than an assessment based on the original draft Guide.

5.4 We have been instructed to provide an analysis of the Requirements as proposed, January 2010, which are:

1 **Internal Floor Area Standards**: (Guide para. 4.1.1) and London Plan Policy 3.5;

2 **Private open space and balconies**: A minimum of 5 sq.m of private outdoor space should be provided for 1-2 person dwellings with an extra 1 sq.m should be provided for each additional occupant. The minimum depth is to be 1.5m (Guide para. 4.10.1 & 4.10.3);

3 **Floor to ceiling heights**: The minimum floor to ceiling height in all habitable rooms is to be 2.5 metres (Guide para 5.4.1);

4 **Dual aspect**: Developments should avoid single aspect north facing dwellings, and dwellings with three or more bedrooms should be dual aspect. (Guide para. 5.2.1);

5 **Energy:** Development proposals should be designed to meet the minimum targets for carbon dioxide emissions reduction 2010-2013: 44%, 2013-2016: 55%, 2016-2031: Zero Carbon (Guide para 6.2.1) and London Plan Policy 5.2;

6 **Shared circulation**: The number of dwellings accessed from a single core should be no more than eight per floor (Guide para. 3.2.1);

7 **Living/Dining/Kitchen**: Dwellings for Social Rent with three bedrooms or more should have two living spaces, e.g. Living room and kitchen-dining room (Guide para. 4.4.3).

5.5 It should be noted that in some cases the Requirement has been altered, Floor to Ceiling Height, Dual Aspect, Living/Dining/Kitchen, and in the case of Shared Circulation the way in which the Requirement is to be applied has changed. The detail behind each Requirement is explained further under each heading in this Section.

5.6 Each of the Requirements is examined in turn, and referenced to the findings of the RSL interviews, perceptions surveys and public consultation comments.

Consequences for Values

5.7 It should be noted that all our comments on value, and the impact of the Requirements individually and cumulatively, are limited to the timescale within each our assessment has been undertaken i.e. up to 2013. we understand that research has been commissioned by the Client which will examine the benefits of the Guide in terms of well-being and long term values. It is anticipated that as the Guide becomes a standard document or reference for designers and developers so the consequences will begin to show, and lead to a better outcome in terms of sales values. In the meantime, as we have already noted, it is believed that the application of the Guide will make the sale of dwellings easier and quicker to achieve thus aiding cashflow.

Internal Floor Area Standards

5.8 The minimum Internal Floor Area Standards stipulated by the Guide are set out below. The same figures are also adopted in the draft replacement London Plan, Table 3.3.

Table 10: Draft London Housing Design Guide Internal Floor Area Standards

Min. Dwelling by Internal Floor Area	Dwelling Type (bedrooms / persons)	Essential GIA Sq M
Flats	1b2p	50
	2b3p	61
	2b4p	70
	3b4p	74
	3b5p	86
	3b6p	95
	4b5p	90
	4b6p	99
2 storey houses	2b4p	83
	3b4p	87
	3b5p	96
	4b5p	100
	4b6p	107
3 storey houses	3b5p	102
	4b5p	106
	4b6p	113

5.9 During the consultation on the draft Guide, it was widely interpreted by many consultees that the Guide and the London Plan removes the right to develop single person studio or bed-sit dwellings, which usually have a GIA less than 50 sq.m. The Client has advised GVA Grimley that it is not the Mayor's intention to prevent studios or bed-sit dwellings to be constructed, so long as they meet location and high quality expectations, which are set out in the draft Replacement London Plan. When considering the effects of the Internal Floor Area Standards Scheme 3 has not been adjusted to remove the 1 bed 1 person dwellings that are deemed to exist in the Base Scheme.

5.10 As previously noted the Schemes all start from the assumption that they comply with existing standards including HQI. The impact therefore is not as significant as for those schemes that do not. We have seen no data or evidence that shows or suggests how many recent schemes, including those with affordable housing, do not in fact meet current standards.

Consequences for Values

5.11 The Survey work shows that whilst private purchasers may have particular regard to the overall size, they are influenced to a greater extent by the number of bedrooms, the specification of the fittings, the aspect, the position within the scheme, and, most importantly, the alternative properties available, both new and old. Ultimately, the price that can be expected for a dwelling is dictated by the price or value of alternative, existing stock. To this extent, all developers are constrained as to what sale price can be achieved for any particular size or type of dwelling, and, bar exceptional circumstances, there is a limit to the price that can be achieved i.e. a one bedroom flat in a particular location cannot be expected to sell for more than a given figure. Such considerations also apply to the rent that could be charged for a private letting.

5.12 There is no correlation between the gross floor area of a dwelling and the rent that can be charged by RSLs or Councils under existing regimes. Likewise, intermediate tenure arrangements such as Low Cost Home Ownership, which reflect in part the capital value of the dwelling, will not increase because of the size of the dwelling. For these reasons it is not expected that the Internal Floor Area standards of themselves increase the value of affordable housing.

Consequences for Density & Build Costs

5.13 The standards are based on the Gross Internal Area (GIA) of the dwelling. The GIA is the whole enclosed floor area within the external walls including areas occupied by internal walls (whether structural or not) and partitions; bathrooms, WCs, showers, changing rooms; columns, piers, whether free standing or projecting inwards from an external wall, chimney breasts, lift wells, stairwells; lift rooms, plant rooms, tank rooms, fuel stores.

5.14 Some agents and developers quote floor areas that reflect either the Net Internal Area or something equivalent to the net useable area i.e. a definition that gives a smaller area than the GIA. In a number of instances the sales particulars do not state the floor area, or, where they do, do not define the way in which the floor area has been calculated. The data provided by Rightmove, for example, suffer from this problem. On the information available it is impossible to say how many of the private dwellings, that have been recently constructed, have a GIA which is less than that proposed by the Guide. However, as detailed in Table 7 it is considered that the typical sizes used by developers are smaller than those proposed in some cases. The effects have been calculated by reference to the figures set out in Table 7.

5.15 All publicly funded dwellings have for some years been required to meet HQI Standards. However, the data provided by HCA for the NAHP funding round 2008-11 suggests that a significant number of affordable dwellings are smaller than the proposed new standards.

5.16 As has been noted previously, there will be sites where it is effectively impossible to increase the external envelope of the building, and therefore the gross external floor area available is fixed. In such instances, a requirement to build dwellings that are larger than would otherwise be considered could mean that fewer dwellings are constructed and that the mix of dwellings is altered. However, in many instances where the increase in floor area is less than c 5%, it is considered that designers are likely to be able to find ways to accommodate the additional area without breaching the fixed external constraints. On other sites, there will be the freedom to increase the gross area of the building, if required, to accommodate the same number and mix of dwellings, albeit at an increased cost.

5.17 The impact on small schemes, especially on constrained sites, could be more significant than analysis suggests. these sites are likely to be exclusively private market housing, being below the thresholds for affordable housing. In such cases a reduction in the number of dwellings able to be built can have a proportionately greater effect on the land value. However, the London Plan already requires all new development, both private and affordable, to be built to Lifetime Homes standards. The proper application of these standards effectively dictates that certain dimensions have to be incorporated, and, therefore, they are unlikely to be achieved in dwellings with a GIA that is substantially below those proposed.

5.18 The Requirement is unlikely to lead to a reduction in the number of houses that are built as in the majority of cases there will be sufficient room to accommodate larger houses, if required, without a reduction in the number proposed. there will be an implication in terms of the build cost and land value. In respect of the flat schemes the Schemes suggest that the Requirement can be met with an increase in the gross internal floor area.

Table 12: Impact of Internal Floor Area Requirement on no. of dwellings

Scheme 1	Scheme 2	Scheme 3	Scheme 4	Scheme 5	Scheme 6	Scheme 7	Scheme 8
0%	0%	0%	0%	0%	0%	0%	0%

5.19 In the majority of cases a designer and developer will be able to accommodate the change in sizes, if required, without a reduction in the number or mix of planned dwellings. For those sites that are so constrained such that this cannot be achieved then it is calculated that the reduction in the number of dwellings is unlikely to exceed c 6%, except on small schemes of 10 dwellings or less.

5.20 The impact of the Requirement on build costs for each of the schemes is derived from a calculated increase in the overall building GIA, in order to accommodate the larger floor areas.

5.21 The eight schemes tested were all assumed to be able to accommodate the necessary increases in unit GIA via reconfiguration and expansion in the overall building GIA. The impact on build cost is highest in the smaller schemes, i.e. those composed of few dwellings, due

both to the reconfiguration options being more constrained and the proportion of existing dwellings that are below the required GIA.

Table 13: Increase in Build Costs due to Internal Floor Area Requirement

	Scheme 1	Scheme 2	Scheme 3	Scheme 4	Scheme 5	Scheme 6	Scheme 7	Scheme 8
2009	10%	8%	3%	1%	2%	2 -3%	3%	3%
2013	10%	8%	3%	1%	2%	3%	3%	3%

Consequences for Land Value

5.22 As shown below, land value typically decreases by c.10-25%. Schemes 1 and 2 show a materially higher impact as a result of a significant increase in the GIA. In the case of Scheme 1 this impact is exacerbated by the fact that it is a small development, and the effect on the build cost is disproportionately higher.

5.23 None of the schemes provide for a loss in unit numbers. Where there is a loss in the number of dwellings, as well as a proportionately greater build cost due to the requirement for larger units, the impact on the residual land value will be materially larger.

Table 14: Reduction in Land Value due to Internal Floor Area Requirement

	Scheme 1	Scheme 2	Scheme 3	Scheme 4	Scheme 5	Scheme 6	Scheme 7	Scheme 8
2009	47 - 55%	23 - 28%	11 - 13%	3 - 4%	6 - 9%	2%	2%	2%
2013	29 - 39%	17 - 21%	6 - 10%	2 - 3%	4 - 7%	2%	2%	2%

Summary of Findings

5.24 The proposed Minimum Internal Floor Areas will mean that both private and affordable housing will be built to an increased GIA above which would otherwise be delivered. We do not believe, in the short term perspective taken by this study, that purchasers or those renting will pay an additional price for this, and, therefore, it is judged to be a Requirement that has a cost implication but no uplift in value.

5.25 The Internal Floor Area Requirement will not in most cases usually lead to a decrease in the number of dwellings that can be built on a given site, apart from those which are heavily constrained. the Requirement will mean, however, that dwellings, both private and affordable, will have to be larger than would otherwise be built, and therefore there will be a resultant increase in the GIA and hence the cost of construction. The Requirement has less impact on larger developments, which are usually better able to reconfigure their layout and can also

spread the increase costs across a large number of dwellings, therefore diluting the impact. The consequence of this Requirement will usually be more significant for small schemes. However, in the majority of instances, it is not considered that the Requirement on its own will render a scheme unviable.

5.26 We believe that the impact on new schemes could be less than the examples tested suggest as the Requirement will be designed into the scheme from the beginning, rather than retrofitted, and therefore much of the impact should be able to be designed out.

Private Open Space

5.27 The Guide requires that houses and ground floor flats should, as a preference, have private gardens, whilst dwellings on upper floors should have access to a terrace, balcony or the use of roof areas for additional amenity. In exceptional circumstances, the Requirement should be met with an enclosed winter garden or internal living space of the same size. It sets out minimum requirements of 5 Sq M of private outdoor space for 1-2 person dwellings, with an extra 1 Sq M of space for each additional occupant. The Guide also requires that on flatted developments, balconies should have a depth of not less than 1.5 metres. The revisions to the Guide do not alter these Requirements.

Consequences for Values

5.28 Research and experience suggest that many prospective purchasers attribute a value to a balcony or a terrace. However, the question arises whether the sizes required by the Guide and the resultant build cost is matched by an increase in the expected sale value or rent. In many instances, especially low value areas, the revenue to be derived will not match the additional cost. Clearly the balance will differ from place to place but overall it is expected that this Requirement will impose a cost burden that is only partially matched by an increase in revenue. The tested Schemes suggest that few flatted developments have balconies or terraces available for every flat, and that those that do exist are often less than the new standards. Analysis has been carried out on the basis that balconies will be provided to all flats, and that for private flats where there was previously no balcony, some additional value will arise.

5.29 In the case of affordable housing, it is assumed that no additional rent or capital receipt will arise. Intermediate tenure models can allow for the capture of the additional market value, if it arises, but only if the resultant mortgage and/or rent remains affordable. the assumption may, therefore, slightly understate the relative value, but intermediate tenure only accounts for 9% of the dwellings in the tested schemes.

5.30 It should be noted that the Requirement to build balconies with a minimum depth of 1.5m could lead to problems with shading and overshadowing of flats below. This could impact in some instances on the value of those flats unless the designer is able to mitigate the effect. Planning staff at the GLA report that this requirement is regularly met on schemes referred to

the Mayor without problems due to shading and overshadowing. No adjustment for this potential consequence is made, and we do not have any evidence to suggest what the reduction in value might typically be.

Consequences for Density & Build Costs

5.31 this Requirement will be unlikely to affect houses. It is also considered unlikely that the Requirement will lead to a reduction in the number of flats planned for any particular site in the majority of cases. Examples where the Requirement could lead to a potential loss could be sites where the building has to be set back to allow the balconies to be built within an existing ownership to avoid the need for the agreement of a third party, or where internal areas have to be provided thus increasing the size of flats and/or buildings.

5.32 The analysis of the impact on the schemes tested shows no loss of dwellings.

Table 15: Impact of Private Open Space Requirement on no. of dwellings

Scheme 1	Scheme 2	Scheme 3	Scheme 4	Scheme 5	Scheme 6	Scheme 7	Scheme 8
0%	0%	0%	0%	0%	0%	0%	0%

5.33 The impact of the Requirement on build costs for each of the schemes, including allowance for preliminaries, professional fees and a contingency, is detailed below.

Table 16: Increase in Build Costs due to Private Open Space Requirement

	Scheme 1	Scheme 2	Scheme 3	Scheme 4	Scheme 5	Scheme 6	Scheme 7	Scheme 8
2009	2%	3%	2%	0%	0 - 1%	0%	0%	0%
2013	2%	2 - 3%	2%	0%	1%	0%	0%	0%

Consequences for Land Value

5.34 The appraisals suggests that the land value for the flatted schemes could be reduced by up to 13%, see Table 17 below. The impact on Schemes 1 to 5 varies depending on how compliant the Base Scheme is. For example, all the dwellings in Scheme 4 included balconies of sufficient size so there is no impact. Analysis suggests that the Requirement will impact most flatted developments. The effect will be more pronounced in those few cases where the Requirement leads to a loss in the number of dwellings, as well as an additional build cost.

Table 17: Reduction in Land Value due to Private Open Space Requirement

	Scheme 1	Scheme 2	Scheme 3	Scheme 4	Scheme 5	Scheme 6	Scheme 7	Scheme 8
2009	4 - 12%	5 - 10%	1 - 9%	0%	1 - 3%	0%	0%	0%
2013	5 - 8%	3 - 7%	0 - 6%	0%	1 - 2%	0%	0%	0%

Summary of Findings

5.35 there is no evident impact on houses.

5.36 Whilst many purchasers of flats will pay a premium, it is not believed that in most cases this will be sufficient to cover the cost of constructing the balcony or terrace.

5.37 The required minimum depth of 1.5 m might in some cases lead to problems with shading and overshadowing of flats below, although this is not reported to be a problem for those schemes reviewed by the GLA. If significant then this could depreciate the value of those flats that are affected. The high level analysis undertaken, based on typologies, does not permit the modelling of this impact.

5.38 There is no data that shows the extent to which current or recently consented schemes incorporate balconies or terraces for every flat, but, based on our experience, we would expect the number to be small. Further, given that the development industry typically builds balconies with a smaller depth and area than that proposed, especially in areas of low value, there is anticipated to be an increase in the cost of construction.

5.39 the Requirement will have an impact on land value, and the calculations suggest this could be as much as 10% in some circumstances.

5.40 It should be noted that in some cases it may be difficult to meet this requirement without a material impact on the number of dwellings that might be constructed. in such cases the impact on land value will be more significant than that illustrated by the tested Schemes.

Floor to Ceiling Height

5.41 The Guide requires that the floor to ceiling height of all habitable rooms in new dwellings, houses and flats, be not less than 2.5m. The Guide goes on to say that a minimum floor to ceiling height of 2.6m is desirable, and taller heights for ground floors are to be encouraged. This is a revision as originally the Requirement in the draft Guide was for a minimum height of 2.6m together with a need for greater height for single aspect rooms depending on their depth. The Requirement for different ceiling heights depending on whether a room is single aspect or not and its depth, has been deleted.

5.42 the analysis here focuses on the Requirement for a minimum height of 2.5m.

Consequences for Values

5.43 It is recognised that a greater floor to ceiling height can provide better levels of daylight and ventilation, and that the larger heights to be found in Georgian and Victorian housing, for example, are popular with a number of purchasers. Nonetheless, there is no apparent evidence or research that suggests that purchasers or those renting will be prepared to pay more simply as a result of a slightly greater floor to ceiling height. It is assumed, therefore, that this is a cost without any corresponding increase in the value of private dwellings, either capital or rental. Similarly, it is assumed that no corresponding increase in the value of affordable dwellings can be achieved.

Consequences for Density & Build Costs

5.44 There is no data available that analyses the floor to ceiling height of schemes, but as the draft Guide notes the trend has been for a number of years towards a height which is less that that proposed. Most developers are working to a height of c 2.3 - 2.45m, and therefore the Requirement will only lead to a small increase in total height of buildings. Whilst this is something it is expected that could be accommodated in the majority of cases, there will be instances where sites are subject to a strict height constraint that could lead to a loss of dwellings as one floor or more has to be removed.

5.45 The analysis of the impact on the Schemes shows no loss of dwellings.

Table 18: Impact of Floor to Ceiling Height Requirement on no. of dwellings

Scheme 1	Scheme 2	Scheme 3	Scheme 4	Scheme 5	Scheme 6	Scheme 7	Scheme 8
0%	0%	0%	0%	0%	0%	0%	0%

5.46 It is assumed that that there will be an additional cost to most Schemes as a result of this Requirement given that the standard to be imposed is greater than that which many developers or developments currently use. Table 5 sets out the ceiling heights assumed for each Scheme.

Table 19: Increase in Build Costs due to Ceiling Height Requirement

	Scheme 1	Scheme 2	Scheme 3	Scheme 4	Scheme 5	Scheme 6	Scheme 7	Scheme 8
2009	1%	2 - 3%	1%	0%	0%	1%	1%	1%
2013	1%	2 - 3%	1%	0%	0%	1%	1%	1%

Consequences for Land Value

5.47 The appraisals suggest that the land value for houses could be reduced by up to 3%, and for flats by up to 7%, see Table 20 below. Schemes 4 and 5 meet the minimum ceiling height Requirements and therefore show no impact on either build cost or site value.

5.48 In those few cases where the Requirement leads to a loss in the number of dwellings, as well as an additional build cost, the impact will be materially greater.

Table 20: Reduction in Land Value due to Ceiling Height Requirement

	Scheme 1	Scheme 2	Scheme 3	Scheme 4	Scheme 5	Scheme 6	Scheme 7	Scheme 8
2009	5 - 7%	7 - 10%	2 - 4%%	0%	0%	1%	1%	1%
2013	3 - 5%	5 - 7%	1 - 3%	0%	0%	0 - 1%	1%	1%

Summary of Findings

5.49 The new requirement for minimum ceiling heights, 2.5 m, is only marginally above that which is currently adopted by many developers, c 2.3-2.45 m. Whilst higher ceiling heights do create a more spacious feeling there is no evidence that the new standard will lead to an increase in sale or rental values. The Schemes adopted have in some instances floor to ceiling heights that are less than that proposed, which will lead to an increase in the cost of construction. The increase in cost reduces the residual land value, but in the majority of cases by less than 5%.

5.50 In those areas where there is a strict restriction on the overall height of development the Requirement could have a much greater impact if it results in a loss of dwellings, and, therefore, revenue.

Dual Aspect

5.51 The original draft Guide made a presumption against single aspect dwellings. This has now been revised to provide that developments should avoid single aspect north-facing dwellings, particularly at ground floor level, and that dwellings with three or more bedrooms should be

dual aspect. Further, all developments should provide an appropriate mix of single and dual aspect dwellings. We also understand that there is further clarification in the accompanying text to the Guide, which explains the definition of 'dual aspect' that is to be applied.

5.52 The analysis undertaken by Sheppard Robson, see Appendix 3, illustrates how dual aspect can be achieved on the Schemes adopted. There is not considered to be any impact for houses as in the vast majority of cases they are dual aspect.

5.53 With regard to flats it is not usually the case that developers will automatically provide larger units with a dual aspect. In a typical single aspect flat, a designer will sometimes offer an open plan layout to gain efficiency within the block design. Typically, separate living and dining - kitchen would require more frontages to achieve daylight. This will extend the facade and will increase cost. Whilst this requirement only applies to 3 bed units, it could also predetermine the block efficiency, especially in tight urban sites further extenuating the cost impact.

5.54 An unexpected consequence of the Requirement might be that developers in some cases seek to offset the additional cost by providing larger, more expensive dwellings than would otherwise be considered; this would reduce both the number of flats and the number of potential purchasers able to afford them. This outcome, to the extent it arises, would probably be short-lived until developers change their development models to respond more cost effectively to the Requirements.

Consequences for Values

5.55 Although it is recognised that most purchasers would express a strong preference for dual aspect, if given the choice, the research and experience suggests that this Requirement will not lead to an increase in the sale or rental value of flats.

Consequences for Density & Build Costs

5.56 It is not considered that the Requirement will affect houses. However, the Requirement could result in a reduction in the number of flats in some instances, as shown by Scheme 4. The potential for this outcome has been much reduced by the amendment made to the Guide. low density blocks and tower blocks are more accommodating of this Requirement, although it can still lead to a loss in dwellings. Where the Requirement has an impact it can result in the inefficient use of building cores.

5.57 The analysis of the impact on the Schemes shows no loss of dwellings except for Scheme 3.

Table 21: Impact of Dual Aspect Requirement on no. of dwellings

Scheme 1	Scheme 2	Scheme 3	Scheme 4	Scheme 5	Scheme 6	Scheme 7	Scheme 8
0%	0%	-8%	0%	0%	0%	0%	0%

5.58 The impact of the Requirement on build costs for each of the Schemes, including allowance for preliminaries, professional fees and a contingency, is detailed below. The only impact is on Scheme 3 as all other Schemes are either compliant or can be made compliant via design alterations that carry no additional cost impacts.

Table 22: Increase in Build Costs due to Dual Aspect Requirement

	Scheme 1	Scheme 2	Scheme 3	Scheme 4	Scheme 5	Scheme 6	Scheme 7	Scheme 8
2009	0%	0%	5 - 7%	0%	0%	0%	0%	0%
2013	0%	0%	6 - 7%	0%	0%	0%	0%	0%

Consequences for Land Value

5.59 Only Scheme 3 is affected. The greatest consequence within that example arises as a result of the reduction in the number of dwellings.

Table 23: Reduction in Land Value due to Dual Aspect Requirement

	Scheme 1	Scheme 2	Scheme 3	Scheme 4	Scheme 5	Scheme 6	Scheme 7	Scheme 8
2009	0%	0%	1 - 14%	0%	0%	0%	0%	0%
2013	0%	0%	2 - 12%	0%	0%	0%	0%	0%

Summary of Findings

5.60 It is not believed that housing schemes will be affected, and that the majority of flatted schemes will be able to comply via design alterations that entail no additional build cost. However, the greater the number of dwellings with three or more bedrooms that a development includes, the higher the possibility that it may be affected by the Requirement. As Scheme 3 illustrates, the Requirement could, in some cases, lead to a loss in the number of dwellings, which will have a material impact.

Energy

5.61 The Guide requires that development proposals should be designed to meet the minimum targets for carbon dioxide emissions reduction. This repeats the London Plan, Policy 5.2:

2010-2013: 44%,

2013-2016: 55%,

2016-2031: Zero Carbon.

5.62 The Requirement remains unaltered, and must be complied with. A 44% reduction in energy use equates to a rating of Level 4 under the Code for Sustainable Homes (CSH).

Consequences for Values

5.63 There is little evidence to date that prospective purchasers or those seeking to rent will pay a premium for dwellings that are built to a higher standard even though the occupier can enjoy a significant saving on energy costs. It is possible that purchasers will become increasingly willing to pay a premium, but the scale and timing of this is uncertain. Similarly, we have attributed no additional value to the affordable housing.

Consequences for Density & Build Costs

5.64 There are not considered to be any consequences for density and will not lead to a loss in the number of dwellings.

Table 24: Impact of Energy Requirement on no. of dwellings

Scheme 1	Scheme 2	Scheme 3	Scheme 4	Scheme 5	Scheme 6	Scheme 7	Scheme 8
0%	0%	0%	0%	0%	0%	0%	0%

5.65 It has been assumed for the base case that as of 2009 all private dwellings are to be built to comply with Part L of the Building Regulations and all affordable dwellings to Code for Sustainable Homes Level 3. the consequences of building private dwellings to CSH 3 and affordable dwellings to CSH 4 has been tested. It is noted that there are already schemes being built to Level 4 and that as of April 2011, any new affordable housing that requires public funding will be required to achieve Level 4.

5.66 It can be expected that as the technology and materials used to achieve higher standards and experience of installing and running it becomes more widespread, so the costs of constructing dwellings to meet the Code for Sustainable Homes Level 4 or above will decline.

5.67 It is assumed that that in 2013 all dwellings will be built to Code for Sustainable Homes Level 4, which is the current national timetable proposed by Government. By 2013, therefore, the Guide will not impose an additional cost.

5.68 The impact of the Requirement on build costs for each of the Schemes, including allowance for preliminaries, professional fees and a contingency, is detailed below.

Table 25: Increase in Build Costs due to Energy Requirement

	Scheme 1	Scheme 2	Scheme 3	Scheme 4	Scheme 5	Scheme 6	Scheme 7	Scheme 8
2009	2 - 3%	2 - 3%	2 - 3%	2 - 3%	2 - 3%	3%	3 - 4%	3 - 4%
2013	0%	0%	0%	0%	0%	0%	0%	0%

Consequences for Land Value

5.69 The consequences of the Requirement are judged only to arise in the period up to 2013, and are illustrated in the Table below. The reductions in land value range between 2 and 15%, with housing Schemes being impacted less than flatted Schemes.

Table 26: Reduction in Land Value due to Energy Requirement

	Scheme 1	Scheme 2	Scheme 3	Scheme 4	Scheme 5	Scheme 6	Scheme 7	Scheme 8
2009	10 - 15%	6 - 10%	7 - 12%	7 - 11%	7 - 11%	1 - 3%	2 - 5%	2 - 4%
2013	0%	0%	0%	0%	0%	0%	0%	0%

Summary of Findings

5.70 This is a Requirement, which can be expected to have only a limited impact due to the short timeframe during which the Guide imposes a higher burden. Further, it is noted that for the schemes seeking public funding for affordable housing the long-standing requirement is to achieve Code 4 with effect from April 2011.

5.71 It can be expected that as the technology and materials used to achieve higher standards and experience of installing and running it becomes more widespread, so the costs of constructing dwellings to meet the Code for Sustainable Homes Level 4 or above will decline. This is, therefore, an item where some of the impact could be expected to reduce both as a result of a decline in the cost and possibly an increase in the value that purchasers and those renting attribute to this item.

Shared Circulation

5.72 The Guide has been amended to provide that it is preferred that the number of dwellings accessed from a single core should be no more than eight per floor. It is understood that the obligation will be required in respect of dwellings containing family social rented dwellings (two bed four person and larger).

Consequences for Values

5.73 There is no apparent evidence that this Requirement will lead to an increase in sale or rental values.

5.74 There is the risk that additional cores, if required, will lead to increased service charges. we understand there is an analysis, which suggests that on the basis of eight dwellings to a core, the service charge burden can be met within the existing current regime for the payment and recovery of service charge by RSLs. the study has not been provided to us and these conclusions cannot be verified.

Consequences for Density & Build Costs

5.75 There are not considered to be any consequences for density.

Table 28: Impact of Shared Circulation Requirement on no. of dwellings

Scheme 1	Scheme 2	Scheme 3	Scheme 4	Scheme 5	Scheme 6	Scheme 7	Scheme 8
0%	0%	0%	0%	0%	0%	0%	0%

5.76 The impact of the Requirement on build costs for each of the Schemes, including allowance for preliminaries, professional fees and a contingency, is detailed below. All the Schemes either meet the Requirement or can be reconfigured without additional cost impacts, apart from Scheme 3, whose reconfiguration has a minor cost.

Table 29 Increase in Build Costs due to Shared Circulation Requirement

	Scheme 1	Scheme 2	Scheme 3	Scheme 4	Scheme 5	Scheme 6	Scheme 7	Scheme 8
2009	0%	0%	1%	0%	0%	0%	0%	0%
2013	0%	0%	1%	0%	0%	0%	0%	0%

Consequences for Land Value

5.77 As only Scheme 3 is affected by the Requirement it is the only Scheme to show an associated reduction in land value, albeit a small one:

Table 30: Reduction in Land Value due to Shared Circulation Requirement

	Scheme 1	Scheme 2	Scheme 3	Scheme 4	Scheme 5	Scheme 6	Scheme 7	Scheme 8
2009	0%	0%	2 - 4%	0%	0%	0%	0%	0%
2013	0%	0%	1 - 3%	0%	0%	0%	0%	0%

Summary of Findings

5.78 It is not expected that the Requirement will have a material impact on the delivery of dwellings.

5.79 The majority of developments should be able to accommodate the Requirement without an impact on either build cost or land value.

Living/Dining/Kitchen

5.80 The Guide has been amended to provide that only dwellings for Social Rent with three bedrooms or more should have two living spaces, e.g. a living room and a kitchen/dining room (Guide para. 4.4.3); originally the Requirement applied to both affordable and private housing.

5.81 Most developers would not seek to provide separate areas for the living room and dining room within private sale flats. The Requirement for affordable flats above a certain size to have Dual Aspect means that this Requirement to provide separate rooms for large Social Rent units will be easier to achieve and should not entail additional cost above that which is incurred in creating Dual Aspect accommodation.

Consequences for Values

5.82 These is no apparent evidence that this Requirement will lead to an increase in the sale or rental value of affordable housing. In some cases the result may be that three bedroom dwellings are converted to two bedroom dwellings, which may have an impact on values.

Consequences for Density & Build Costs

5.83 There are not considered to be any consequences for density or the number of dwellings that would be built within the Schemes. In some instances schemes may have to reconfigure their

layout, and on occasions developers may also seek to reduce or remove three bedroom dwellings in order to overcome the Requirement.

Table 31: Impact of Living/Dining/Kitchen Requirement on no. of dwellings

Scheme 1	Scheme 2	Scheme 3	Scheme 4	Scheme 5	Scheme 6	Scheme 7	Scheme 8
0%	0%	0%	0%	0%	0%	0%	0%

5.84 The impact of the Requirement on build costs for each of the Schemes, including allowance for preliminaries, professional fees and a contingency, is detailed below. The Requirement has no cost impact except for a small amount in respect of Schemes 4, 7 and 8.

Table 32: Increase in Build Costs due to Living/Dining/Kitchen Requirement

	Scheme 1	Scheme 2	Scheme 3	Scheme 4	Scheme 5	Scheme 6	Scheme 7	Scheme 8
2009	0%	0%	0%	0%	0%	0%	3%	3%
2013	0%	0%	0%	0%	0%	0%	1%	1%

Consequences for Land Value

5.85 The consequences of the Requirement on land value are assessed to be:

Table 33: Reduction in Land Value due to Living/Dining/Kitchen Requirement

	Scheme 1	Scheme 2	Scheme 3	Scheme 4	Scheme 5	Scheme 6	Scheme 7	Scheme 8
2009	0%	0%	0%	1 - 2%	0%	0%	2 - 4%	0 - 1%
2013	0%	0%	0%	1 - 2%	0%	0%	2 - 4%	0 - 1%

Summary of Findings

5.86 The Requirement potentially has some impact on the layout of those Schemes comprising dwellings of three bedrooms or more. The Requirement is unlikely to have a material impact on the delivery of dwellings, but it may tempt some developers and designers to consider providing dwellings with fewer bedrooms in order to circumvent it. Where there is an impact it is considered that the effect on the costs of construction is minor.

Cumulative Impacts

5.87 In addition to looking at each Requirement in isolation, the cumulative impacts on each Scheme of implementing the Requirements have also been examined.

Consequences for Values

5.88 It is appreciated that the dwellings will in many or most cases feel more spacious and will have their own private open space. However, it is not believed that a scheme, which incorporates all the Requirements, will command a greater value under current/2013 market conditions; private open space is assumed to add value to private market dwellings. The dwellings are likely to be easier to sell, which would have a positive benefit in terms of cashflow, but the modeling has not sought to incorporate this potential benefit.

Consequences for Density & Build Costs

5.89 The detailed analysis of the cumulative effects is set out in Appendix 3. It should be noted, however, that because there is interdependency between a number of the Requirements, the design and layout would alter in ways that are different from those that apply if one simply takes each requirement in isolation.

Table 34: Impact of cumulative effect of the Requirements on no. of dwellings

Scheme 1	Scheme 2	Scheme 3	Scheme 4	Scheme 5	Scheme 6	Scheme 7	Scheme 8
0%	0%	-8%	0%	0%	0%	0%	0%

5.90 For houses the principal impacts are the Requirements for Internal Floor Area, Floor to Ceiling Height and Living/Dining/Kitchen.

5.91 For the flatted schemes the principal impacts are the Requirements for Dual Aspect, Internal Floor Area, Private Open Space and Floor to Ceiling Height.

5.92 The greatest impact on build costs occurs in respect of Schemes 1 and 2, due to the relatively large increase in GIA as a result of the Internal Floor Areas. For the rest of the flatted Schemes there are only small increases in build cost.

5.93 The broader consequences of the guide on the delivery of housing, based on our analysis, are discussed at paragraph

Table 35: Increase in Build Costs due to cumulative effect of the Requirements

	Scheme 1	Scheme 2	Scheme 3	Scheme 4	Scheme 5	Scheme 6	Scheme 7	Scheme 8
2009	15 - 16%	13 - 14%	6 - 7%	3 - 4%	5%	7 - 8%	8 - 9%	8 - 9%
2013	13%	10 - 11%	3 - 4%	1%	2 - 3%	4 - 5%	5%	5%

5.94 The analysis by Davis Langdon, Appendix 4, shows the details behind each Scheme. As a benchmark, the increase in the assumed cost of construction of an individual dwelling within each Scheme is set out in Table 36:

Table 36: Increase in Build Costs per dwelling due to cumulative effect of the Requirements

	Scheme 1	Scheme 2	Scheme 3	Scheme 4	Scheme 5	Scheme 6	Scheme 7	Scheme 8
2009	£24,000	£18,000	£10,000	£6,000	£7,000	£9,000	£10,000	£10,000
2013	£20,000	£17,000	£6,000	£1,000	£2,000	£6,000	£6,000	£6,000

5.95 The greatest impact on build costs occurs in respect of Schemes 1 and 2, due to the relatively large increase in GIA as a result of the Internal Floor Areas. For the rest of the flatted Schemes there are only very small increases in build cost.

Consequences for Land Value

5.96 The consequences of the Requirement are assessed to be:

Table 37: Reduction in Land Value due to cumulative effect of the Requirements

	Scheme 1	Scheme 2	Scheme 3	Scheme 4	Scheme 5	Scheme 6	Scheme 7	Scheme 8
2009	71 - 92%	38 - 60%	21 - 31%	12 - 20%	9 - 27%	11 - 35%	13 - 25%	13 - 22%
2013	37 - 52%	22 - 30%	14 - 18%	3 - 5%	6 - 9%	6 - 15%	8 - 17%	8 - 17%

Summary of Findings

5.97 The effect of the Guide on each Scheme is detailed below.

- Scheme 1: The land value is principally affected by the need to increase the GIA by 10%. The second largest impact arises because it is small (number of dwellings).

- Scheme 2: The land value is principally affected by the need to increase the GIA by 8%.
- Scheme 3: The land value is principally affected by the reduction in unit numbers due to the Requirement for Dual Aspect.
- Schemes 4 - 8: The land value in 2009 is principally affected by the increase in build costs due to the Requirement to achieve Code for Sustainable Homes Level 4. In 2013 the land value is principally affected by the need to increase the GIA.

6. ADDITIONAL CONSIDERATIONS

Future Proofing

6.1 The perception surveys indicate that over 50% of new build residents feel that they are not able to adapt their homes to meet potential future needs. There are a number of Requirements or standards in the Guide that address this, principally by adopting Lifetime Homes criteria. These standards are themselves currently under review, and the Lifetime Homes Foundation has recently issued its proposed changes for public consultation.

6.2 The proposals in the Guide effectively address the concerns for the need to ensure that dwellings can be adapted in respect of both private housing and affordable dwellings.

Planning/Regulatory Impacts

6.3 Analysis of the Guide suggests that there are a number of potential planning and regulatory consequences.

London Plan

6.4 If the current proposal for the Guide to inform SPG devolving from the draft London Plan is implemented, the Guide will have a significant positive and cohesive effect on residential design standards across London and for public and private tenures. Inclusion within the SPG will provide certainty and direction to the individual London Boroughs to ensure that the Guide is properly used and enforced.

6.5 However, for the Guide to work successfully in this context and to inform Borough Development Plan Documents, consideration should be given as to whether the Requirements within the Guide can be prioritised. Without weighting or some way of identifying which Requirements might be considered Essential, for example, the ability of designers, developers, landowners and those required to assess schemes to find compromises, where needed, could be hindered. The HQI Standards, for example, adopt a scorecard approach.

A Unified Set of Residential Design Standards

6.6 The Guide has been set up to help create a level playing field between tenures and to align the private and affordable elements, which often co-exist within the same scheme. This is intended to make it easier to make changes to tenures within a given scheme, and provide greater flexibility. The need for this has been particularly illustrated by economic events of the last two years. It will also help ensure that affordable housing which is delivered via a

S106 Agreement meets the needs and requirements of RSLs. This is a significant point for RSLs who have had to take on accommodation which are not fit or suited for their purposes.

6.7 Bringing together the plethora of existing standards, guidance and design documents into the Guide and SPG will have a positive impact, and allow for a clear, unambiguous and certain approach for public and private developers. Further, it is to be hoped that it may have the benefit of reducing the amount and variation of Borough-level design guidance and standards set out through individual Development Plan Documents and Supplementary Planning Documents. Training and skills development for planning decision-makers in utilising the Guide will be beneficial to ensure that it is used in a considered fashion rather than as a set of rigid rules. It is understood that HCA and GLA have recently launched an initiative that will provide training on the application of the design standards for public authorities. It would be helpful if this could be extended to include the private sector, or arrangements made to provide guidance and illustrative material.

6.8 It is a widely held view amongst developers that the existing system for planning development management is overly burdensome and bureaucratic, leading to delays. It is of concern as to whether the Development Management teams within Councils will have the staff or the time resources available to make the assessments that are required to ensure compliance with the Guide. Whilst it is the intention that the Guide should provide a more unified and streamlined approach, it could in fact complicate the assessment of applications and could lead to a 'check list' exercise provided first by the applicant and then simply reviewed by the planning authorities, rather than a more considered assessment that weighs the merits or otherwise of the scheme as a whole. Clearly training can go some way to help overcome this problem, but consideration should be given to the use of a standard form, perhaps akin to that used for appraising compliance with HQI standards, that will assist all parties in the application and assimilation of the Guide.

Guidance v Requirement

6.9 As already noted, some of the Requirements are to be found in the London Plan, both current and the proposed revision. The status of these Requirements is and will be clear and unambiguous.

6.10 When adopted, the Requirements of the Guide will apply to all residential development to be carried out on land owned by HCA and LDA, and from April 2011 to other residential development in London where there is an element of public funding subsidy. The wider intention of the Mayor is that elements of the Guide will be carried forward to all tenures across London through the London Plan, with guidance on their implementation in new Supplementary Planning Guidance (SPG).

6.11 It is recommended that consideration be given as to whether all the Requirements are of equal weight or value. This will assist where judgements have to be made as to the relative

benefits of features and aspects of a scheme in the event that not all the Requirements are met.

7. POTENTIAL CONSEQUENCES FOR DELIVERY OF HOUSING

Housing Land Availability and Capacity

7.1 The availability and capacity of land for residential development in London is critical to future delivery against London Plan housing targets. To understand the cumulative impact of the Requirements on future housing output it is necessary first to understand how capacity is identified to inform preparation of the targets.

7.2 The Borough housing delivery targets identified in Table 1 are aligned to the availability of future land for housing development. This analysis is based on the GLA's SHLAA that is underpinned by a site-level analysis of land capacity across the Capital.

7.3 The 2009 Strategic Housing Land Availability Assessment and Housing Capacity Study (SHLAA/HCS) is based on evidence that London has a theoretical physical capacity to accommodate 37,080 additional homes per annum from 2011 – 2021[3]. Identification of this capacity by the SHLAA was based on a 'constraints' model which combines capacity (calculated using the known site area, density and percentage mixed use, if applicable) with the 'probability' of sites being developed for housing, backed by a default density assumption based on the mid point of the appropriate density range for all 'potential' and some 'allocated' sites[4]. This approach results in capacity estimates which reflect the number and severity of the constraints identified

7.4 In addition to these assumptions, further policy considerations were taken into account through an aggregate policy/deliverability 'discount' , for example to reflect the aggregate impact of the introduction of new garden land and design polices and to address the impact of the recent house price boom on output assumed to come forward in the future from small sites. This aggregate discount reduced the physical capacity figure from 37,080 down to the DRLP housing provision target of 33,380 dwellings per annum for the period 2011-2021. While this approach may appear relatively conservative it has produced a target significantly higher than that in the 2008 Plan. This approach addresses concerns over 'town cramming' and is considered to provide a sound basis for setting achievable borough targets that should withstand changing market conditions.

7.5 A key principle of the SHLAA/HCS methodology is to provide flexibility when establishing capacity to take account of future changes in the housing market and planning policy, which

[3] For further information see the GLA's SHLAA/HCS report of study: http://www.london.gov.uk/shaping-london/london-plan/docs/strategic-housing-land-study-09.pdf
[4] Ibid

are likely to affect housing potential on individual sites. In particular, how the study deals with constraints and density assumptions for a given site are important considerations to ensure the resulting capacity provides some inbuilt resilience to changing conditions.

7.6 An identified 'constraint' will reduce the net developable area of a site and therefore limit its potential unit yield. In most cases a constraint identified in the SHLAA/HCS should be able to be overcome through the planning process and the use of mitigation measures. However the study does not simply assume this, and it is an issue that should be considered when development of a site is implemented. The preparation of planning frameworks for London's Opportunity Areas are good examples. the approach taken on large scale development opportunities can usually address major physical constraints the study may take into account (such as flood risk, local infrastructure and contamination), thus allowing housing potential to be maximised and potentially being greater than the SHLAA/HCS identified on a site by site basis. The difference is difficult to quantify but analysis of the unconstrained capacities (i.e. the calculated capacities assumed prior to having the constraints/probability model applied) shows there is potential for an extra capacity of around 2,500 dwellings per year over the ten year period to 2021. This means that should all the identified constraints be overcome on each site, an additional 2,500 dwellings per year could come forward for development over and above the 37,080 physical capacity identified by the SHLAA. In reality there will be constraints which cannot always be mitigated or completely overcome so it is not suggested this capacity will be entirely realised.

7.7 As noted above, unless boroughs indicated otherwise, for 'potential' and some 'allocated' sites default density assumptions based on the mid point of the appropriate density range were used to ensure that potential site capacity was not over ambitious and to allow for the consideration of larger family sized dwellings. This assumption can impact on the theoretical capacity of a site. To test the potential impact of this assumption, Annex Four of the SHLAA/HCS report sets out scenario based evaluations of the capacity results and the potential opportunities for increased output if the assumed mid point densities were increased to the top of each site's density range. The result of this evaluation suggested that with high density development there might be theoretical potential to increase capacity up to approximately 40,000 dwellings per year (or 41,000 if no account was taken of the new backgarden policy). Mechanistic application of this scenario to the final overall housing provision target of 33,380 could theoretically increase output to approximately 37,000 dwellings per year, or an addition of some 3,600 dwellings per year. It should be stressed that this is cited only for illustrative purposes and it should be noted that the Mayor's Draft interim Housing SPG and the Draft replacement London Plan emphasise 'optimising' rather than 'maximising' housing densities.

7.8 This summary of the prudent assumptions underlying the SHLAA and the draft Replacement London Plan housing targets makes clear that they provide a sufficient buffer against any quantified impact on housing delivery as a result of the introduction of the design standards

in the Housing Design Guide. The small percentage impact on delivery, as implied by the analysis in Section 5 and discussed further below, would be more than allowed for by any variations in the actual densities applied to a site, much less the allowances explicitly made in the SHLAA for the theoretical impact of constraints or the effects of new policies and other factors covered by the 'aggregate discount'

7.9 Table 34 provides a summary of the cumulative impact of introduction of the emerging standards on housing output and shows that it is most likely to be felt on some types of flatted development. Results from a sample such as that used in the present study cannot simply be extrapolated for London as a whole, much less over the 10 or 20 year term of the London Plan. However, it can provide as good a basis as any for illustrating 'what if ' scenarios. On that basis, it should be set in the context of the overall structure of London's historic and possible future dwelling output.

7.10 From the analysis in 4.10-4.16 and the proposed new housing targets outlined above (which assumes that the over-arching target will include 30,800 conventional homes), then affordable and private sector flats together might account for 80% of future housing output or, if the new targets are achieved, 24,300 dwellings pa. It would be prudent to assume that, as a minimum, the 8% output reduction identified for one of the sample schemes might be averaged across all those which were composed of flats, to give a minimum average reduction of at least 2%. This could form the base of a sensitivity range which might reasonably be expected to run to, say, -5%, with a contingent 'long stop' of say -10%. This might suggest a 'most likely' scenario under which output could fall by 240 to 1,220 units, with a 'worst case' scenario resulting in a reduction of 2,430 pa.

7.11 Even the worst case scenario falls within the 'aggregate discount' range use in the SHLAA (-3,700), though it does use up two thirds of this 'elasticity' which is intended also to accommodate other factors which will tend to reduce output. However, the 'most likely' scenario fits much more comfortably within the 'discount'. Given the other inherent flexibilities built into the SHLAA and underpinning the DRLP target (see above), and other relevant considerations set out below, introduction of the standards might pose some challenges to its short term realisation. On this basis at least it would not seem likely to fundamentally compromise it. However, the Mayor is advised to incorporate these sensitivity ranges into his monitoring systems to ensure that the standards can, if necessary, be refined to strike the right balance between encouraging housing output and securing quality accommodation.

7.12 These other considerations include the substantial existing pipeline of approved dwellings (163,000) equivalent to more than five years supply at recent completion rates. Of these, 73% have full permission, probably mainly to existing standards. This will give the construction sector a 'breathing space' to produce new development models which can more cost effectively address introduction of the standards for the longer term. Of the balance, a

number will be conversions and subdivisions, historically c 27%, and for houses, bungalows, and live work, c 12%.

7.13 This rather sanguine element of our analysis must be set in the context of other, more negative factors which must also be account for when forming a view on the impact of the standards on costs and output, especially in the shorter term.

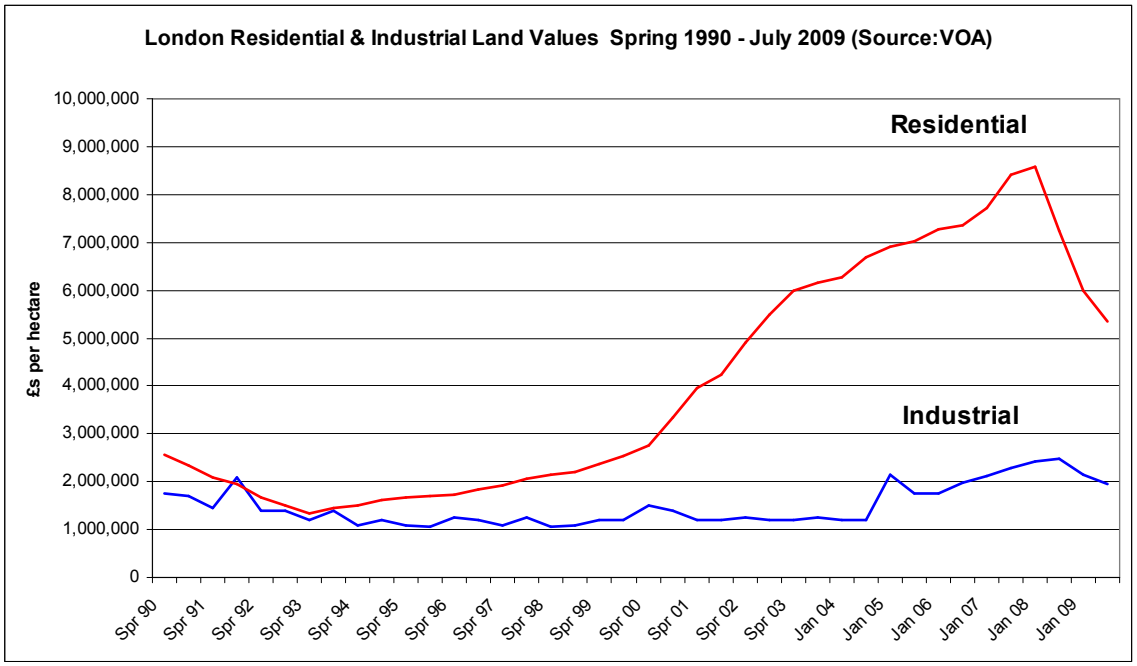
Land Values

7.14 For the last ten years or more there has been a significant premium for residential land, especially with respect of prevailing industrial land, as shown by the graph below which uses data from the Valuation Office Agency, Figure 1 below.

7.15 The financial crisis and recession has had a pronounced effect on residential land values with reports of a 70% fall in some secondary locations. Values across primary locations have typically fallen by 30% – 50%. London residential development land is reported by estate agencies and consultancies to have fallen in value by 40-50% since the peak of the market. Data from the VOA indicates that the average value of residential building land in London has declined by c 38%. Taking a consensus approach we conclude that there has been a c 40-50% decline from the London market's peak.

7.16 It should be noted that land values for other uses have also fallen for other uses, for example office and general employment, and in some cases these falls have exceeded those for residential land.

Figure 1: London Residential & Industrial land Values 1990 – 2009 provided by VOA



7.17 Whilst land values have fallen significantly since 2008, average values of residential land are considered to be much higher than for industrial land. It is notable also that the gap between the two is greater than at the bottom of the last recession in the early 1990s when they were almost identical.

7.18 There is no data to show how land values for B1 office or retail use have changed over time. However, capital values for both have fallen significantly since mid 2007 as a result of the rise in investment yields and then the reduction in rental values. The fall in capital values is greater than it has been for housing. Furthermore the market for development land in these sectors could be said to be more severely affected by problems with funding and capital rationing.

7.19 Land value for alternative uses may in some specific circumstances be higher than prevailing residential values. It is often not necessarily the case, however, that there can be a simple substitution between them, even where there is market demand. For example, the ability to develop land for retail, and other uses, has long been particularly circumscribed by national and local planning policy, most recently for example through PPS6 and PPS4. In many instances retail, for example is combined with other uses, including residential, to generate mixed-use schemes. It is wrong, therefore, to think that landowners often or usually have the opportunity to redevelop land for a multiplicity of uses, and can pick and choose which delivers the highest value, or that development for commercial uses is incompatible with residential development. In many instances it can be required as a result of both planning policy and the need for it to help make a scheme viable.

7.20 On average it can be suggested that redevelopment for residential use is likely to yield the highest return for landowners and developers. However, a significant proportion of the housing to be delivered is within boroughs where sale values and land values are below the London average. In these areas a small reduction in the residential land value could take it below the existing use value, even though the existing use value itself may be low. In such situations the way in which Local Planning Authorities respond will be critical in terms of ensuring and maintaining the supply of new dwellings.

7.21 As a counter to this it should be noted that the Guide is to be applied to public land, and therefore it is to be expected that the commercial considerations which apply to private landowners will not be relevant. To the extent that the implementation of the Guide requires a land subsidy, it is understood that this will be accommodated.

Influences on Private Landowners

7.22 Where it is clear that the only plausible option for redevelopment is to seek planning permission for residential development, it would be wrong to believe that landowners have no alternative but to accept the land value that follows from the detail of the planning permission granted and the prevailing market conditions.

7.23 The risk that the additional costs arising through compliance with the Guide, perhaps in combination with other factors (for example, a reduction in NAHP Grant), could make development unviable. There is at present a short term problem with viability given current market and economic conditions. It is expected that the issue, for many, should be relatively short-lived as it is linked to the economic cycle, and it is to be hoped that the worst of the conditions are now behind us. It is interesting to note that our calculations suggest that viability in 2013 is better than in 2009. However, it should be recognised that the simple passage of time or a general improvement in economic conditions will not mean that all schemes will be able to support additional costs to the same or equal extent. This applies whether the costs arise as a result of the application of the Guide, a reduction in NAHP Grant, or a new factor such as the proposed Community Infrastructure Levy. It remains to be seen whether the local planning authorities will insist, where viability is a genuine issue, on the application of all measures or will apply policy flexibly in order to maintain the delivery of new housing.

7.24 Many landowners can consider the costs that are newly imposed on development by planning policies, such as S106 contributions, to be akin to a tax to be avoided or mitigated. It is possible that many will view the Guide in the same light, although the effects of the Guide are not those of a tax. Experience suggests that some landowners, who do not have to sell, may choose to wait in the hope that those requirements in the Guide which lead to the extra costs may be repealed or amended by a future administration. Alternatively, they may choose to wait in the hope that any reduction in the supply of land for housing development will lead to an increase in its value, and thus offset the costs. This, of course, could happen regardless of the imposition of new higher design standards, but the Guide may encourage more owners to this point of view.

7.25 Even for those who are receptive to the Guide it will take time to work through all the ramifications and to change, where necessary, their residential designs and business models. Whilst developers and designers continue to adopt their recent or past practices, it is likely that the emphasis will be on the costs that arise by reference to what they might have expected to develop in the absence of the Guide. As shown in the analysis, retro-fitting the Requirements to a pre-existing design can magnify the extent of the design changes required and the costs of these. Given that it may take time even for those who design and build dwellings for their livelihood to adjust, it is likely that it will take longer for landowners, who may only be vaguely aware of the change.

7.26 Difficult economic conditions could exacerbate any consequences expected to arise from the introduction of the Guide, regardless of its timing. On the other hand there are a significant number of extant planning consents that are available to be implemented should market conditions permit. The introduction of the Guide will not of itself cause the supply of land for new housing to falter or stop, however, this presupposes that the planning authorities will be receptive to those genuine cases where scheme viability is challenged. It will also depend on developers preparing more than a simple retro fit of the Requirements, because as shown by

some of the analysis which accompanied the representations, that is would seem to be a good way to ensure that schemes remain economically challenged.

7.27 It should be noted that these considerations apply principally to private landowners, who may only have a single site to sell or realise a profit from, and who do not deal in the land market for their living. These comments do not apply to public landowners such as LDA and HCA, and whose land will account for some of the proposed new development.

Effect on Values

7.28 Many with whom we and the Client project Team have spoken believe that in general the impact of the Guide will be positive. However, at the present time it is felt that the proposed changes will have little or no implication for private residential capital and rental values.

7.29 It could be suggested that we and the development industry are unduly influenced by the financial and economic events of the last two years. We note that the Client Project Team has commissioned research that seeks to draw out the qualitative differences that the application of the Guide can be expected to make to raise the general level of quality. It is to be hoped that the increase in standard will be such that buyers will be prepared to pay, and those who finance them sanction, a premium for those developments that incorporate the requirements of the Guide. The general tone of those who submitted responses to the consultation exercise last year was also encouraging. Developers are receptive to ideas that can enhance their schemes although their judgment as to whether something is an improvement will differ on occasions from those promoting and applying the Guide. Nonetheless, the Guide will effectively challenge them to seek ways in which the Requirements can be met, and to adapt their thinking and models. The way in which they provide and finance new development continually evolves and the Guide will now be one of the important criteria that have to be taken into account. This would suggest that over the medium and long term the positive benefits of the Guide will emerge.

7.30 In the short term and in order to recover some of the cost of implementing the Guide, developers may conclude that they are better served by adopting larger dwellings (in terms of bed numbers), which in turn may mean fewer dwellings depending on the site constraints and the assessed market demand. Conversely, as noted some of the Requirements only apply to larger units, and there may be a countervailing pressure to change to smaller units.

7.31 To the extent affordable housing is linked via S106 agreements to the quantum of private development there is clearly a risk that significant changes to the number of private units will impact on the delivery of affordable housing. However, it is anticipated that a number of RSLs will look to carry out direct development themselves, and that affordable housing will be delivered by a number of routes other than through planning agreements.

Affordable Housing

7.32 The consequences for the construction of affordable housing depend on the amount of public subsidy that is made available both through Central Government and local councils, and also the extent to which new models of delivery come forward. Whilst the credit crunch, the fall in house prices and the recession have proved as problematic for RSLs as for private developers, some see this as an opportunity to develop new business models that are less reliant on grant funding, the transfer of dwellings under s106 agreements or the sale of dwellings.

7.33 It should be noted that many of the Requirements considered have a cost implication as much for affordable housing as they do for private housing. Further, it seems unlikely that there will be financial gains that can offset these costs given that rents for affordable housing are capped or limited and other models are reliant to some extent on below market rent or below market sale prices. For the purpose of modelling it is assumed that that 30% of a development comprises affordable housing (split 60% social rented and 40% 'intermediate tenure' i.e. assuming no policy change), and that the average grant per person is circa £23,000. The effect of the increase in building costs identified in the research suggests that the cumulative effect on the average cost of construction in 2009 could be up to an additional £7,000 per person per flat and £2,000 per person per house.

7.34 The London Housing Strategy, Section 3, provides examples of the many initiatives that are under consideration in order to assist in the delivery of affordable housing and housing that is affordable, albeit not in the legal sense applied by RSLs.

7.35 There are signs of new and deeper partnership working between RSLs and private developers, and on a number of schemes it is the affordable housing that is being developed first, effectively enabling the private housing to then be developed. Further much work is undertaken by Government and HCA to encourage local authorities to establish Local Housing Companies. There are examples both in London and elsewhere, for example Westminster Community, which show how councils are responding to the need to provide significant, additional numbers of affordable dwellings. While these initiatives may not lead to a return to the era of council house building, which was so important to the delivery of new dwellings following the Second World War until the 1970s, it is expected that they will make a material contribution to the delivery of new homes. However, even if the schemes succeed it is unlikely that in the short term they will make up for the shortfall arising from the decline in private house building and in the affordable housing, which is provided through S106 agreements.

Private Housing

7.36 To the extent that the Guide gives rise to a perceived or actual mismatch between costs and values, the problems can be expected to be overcome within about five years in the majority

of cases. It is notable that average annual house price inflation between 1995 and 2009 was 7-8% per annum in the UK and 8-10% per annum in London, whilst average annual build cost inflation was about 4%. Whilst these conditions may not return for some time or to the same degree, we believe it is reasonable to suggest that there is likely to be a significant positive difference in the rate of increase for values and build costs over the long term. Additionally, the benefit that flows from forecasted increases in sales values relative to build costs would be added to if buyers are prepared to pay a premium for the benefit of the Requirements.

7.37 It is intended that the Guide will fully apply to private housing only once the London Plan has been adopted and it has been translated to adopted SPG, its impact is already being felt by developers. Any scheme that includes affordable housing for which funding is to be sought will have to take into account the requirements of HCA as set out in the Guide. Accordingly, unless the affordable units are to be delivered in a stand alone block, all the dwellings, regardless of tenure, will have to be designed to the same specification at the outset.

7.38 To this extent, the impact on the delivery of private housing may be felt much more quickly than might otherwise be expected. It is hoped that, where it can be shown that the viability of schemes being promoted during the current, difficult market conditions are challenged by the imposition of the standards within the Guide, local councils and the HCA will be flexible and adaptable. However, given the substantial capacity in London's development pipeline (equivalent to some five years supply) the strategic impact could be diluted.

7.39 Landowners, developers and financers are concerned not only with the consequences of the introduction of the Guide, but also a number of other initiatives, all of which are expected to impact on the viability of development. These include the introduction of the Community Infrastructure Levy (CIL), the consequential changes to S106 contributions following the introduction of CIL, increasing environmental standards, and other regulatory proposals. There is a risk that, whilst the obligations imposed through the Guide might not of themselves stop development activity, the Guide in combination with other changes could do so. If this set of circumstances arises then local planning authorities could be in a difficult position, given, for example, that CIL will be imposed by statute and there will be only limited exemptions.

7.40 Our models suggest that the impact of the Requirements is reduced when values are high. The average values we have adopted for the purpose of our modeling are in most cases substantially less than the prevailing average figure for London. For example the figures we have used for the flats ranges from + 5% to - 40% of the average for London. All the modeling, except for Hackney, has adopted figures below the London average. Analysis suggests that if values that c 20% higher than the London average are adopted then the effect on the Residual Land Value would be significantly improved. It should be expected, therefore, that in a number of areas even adopting current values and costs the impact of the Guide could be anticipated to be relatively modest. As illustrated in Table 2, about 22% of dwellings are scheduled to be provided in boroughs that have average prices above that of London, and

some 55% of the target is within boroughs that have average values which are higher than Hackney. The impact on Land Value will be significant, even in areas with high sale values, for those schemes that lose dwellings as a result of changes bought about by the Guide.

7.41 A simplistic, mechanical, reading of the cumulative physical impact of all the requirements (summarized in Table 34) might imply that overall output might be reduced, on average, by only 1%. Given the vicissitudes of the London land market, it would be much more prudent for the longer term to set this as the bottom of a range which anticipated up to, say, a 5% reduction in output with a ''backstop' contingency test for, say, 10%. The Mayor is advised to incorporate such a sensitivity range in his monitoring arrangements.

8. CONCLUSIONS & RECOMMENDATIONS

Introduction

8.1 In this section we draw together our conclusions and set out recommendations for the revision of the Guide.

Impact on Costs and Values

8.2 The charts below detail the outcome of the analysis in summary form. The details are contained in Appendices 4 and 5.

Conclusions

8.3 This project has been an iterative process, initially testing the implications of the requirements set out in the draft Guide, and then refinements made to them in the light of consultation. As a result a number of changes are being made to the draft Guide, and it is believed that these will have a significant effect in mitigating the consequences for density (loss of dwellings) and constructions costs and the impact on residual land values which would otherwise have resulted. Effort has been concentrated on the revised requirements, rather than the original ones, in order to provide the Client Project Team with an assessment of the cost and value impacts that flow.

8.4 Within the timescale we have considered it is believed that in most instances neither buyers nor those who rent are likely to pay a premium for the benefits that will flow from adopting their requirements of the Guide. In some cases it is expected that there will be an increase in values, for example the provision of private open space, but this is not expected to off set the entire cost. It is anticipated that the standards will make dwellings easier and quicker to sell, thereby aiding cashflow.

8.5 In the longer term, it can be expected that purchasers may be prepared to pay premium for some of the requirements, but it is likely to be some time before there is clear evidence of this; perhaps a matter of greater concern for the shorter term Housing Strategy than the 20 year London Plan.

8.6 In the majority of cases none of the Requirements examined will of themselves lead to a reduction in the number of dwellings that might be built. There will clearly be some instances where dwellings are lost or the mix of dwellings is altered so that in aggregate fewer but larger (number of bedrooms) are built. In other cases developers may seek to provide smaller (number of bedrooms), and therefore perhaps more dwellings in order to avoid Requirements that are only triggered for larger dwellings.

8.7 An analysis of the density assumptions that have been used in the SHLAA suggest that in the majority of cases delivery of the number of dwellings proposed in the London Plan is unlikely to be compromised as a result of the need the build bigger dwellings or to use a slightly different configuration.

8.8 Calculations on the impact on land value suggest that the bigger problem arises from the potential effect on viability. This problem is not expected to arise in the case of most housing schemes, but it could be material in the case of flats, particularly where there is a reduction in the number of dwellings and/or the scheme is relatively small. The effect of the imbalance between cost and value is likely to be reduced if as seems likely, the rate of increase in sale values outstrips build costs. The process will be helped if and when purchasers pay a premium for features and standards arising from the Guide.

8.9 Notwithstanding these qualifications, there will be many instances where the viability is sufficiently robust, even in the current difficult conditions, to be able to afford the Requirements. However, in a number of cases especially those where sale values are less than the average for London the initial impact may be significant. Such schemes are likely to require the local planning authorities to be understanding of the problems with viability arising from current, economic conditions together with the impact of the Guide.

8.10 It is noted that c 73% of dwellings to be delivered in the London Plan are on sites that are already consented. Whilst some of these consents may lapse or otherwise not be taken up we assume that the majority will be utilised, and therefore will not be subject to the Guide. It is estimated that some 27% of all dwellings will be conversions, extensions or subdivisions, and therefore it will be difficult to apply the Guide. In respect of the other sites a number will be suitable only for houses, and therefore in our judgement unlikely to be affected by the introduction of the Guide. Of the remainder we estimate that c 55% are within boroughs where average sale prices are higher than those used for the purpose of this modelling, except Barnet. We would therefore expect any issues in respect of viability to probably be short lived i.e. to last no more than the next 3-5 years. For other sites which are on private land there may need to be careful consideration as to how the Guide is applied so that any genuine issues with viability can be addressed, and if possible overcome.

8.11 As with all planning documents there is often a trade off between a rigid application of policy and the delivery of development. The Guide effectively presents investors, developers, designers and planning authorities with a series of standards, not all of which need necessarily be given equal weight. Whilst many of the standards may be deemed to be essential the Client should give consideration as to whether there should be some further differentiation between the Requirements so that any trade off can be made in a consistent and structured way across all the boroughs.

8.12 Whilst the Guide has the commendable aim of bringing together guidance and standards that are currently found in a variety of documents, there is concern that it will be applied in a way that reduces the potential benefits that would otherwise arise. In particular, both applicants

and planning officers may resort to check lists or similar devices simply to address what is a long list of Requirements and to meet what can be already challenging time scales for considering and determining planning applications. We understand that training is to be provided to the public sector, and we would suggest that consideration be also be given to extending this to the private sector and to the provision of written guidance to enable both applicants and officers to understand better how to apply the Guide.

8.13 The changes proposed by the Guide, and the costs that arise, are not the only issues that currently confront those seeking to develop new housing. There is significant concern as to the potential adverse impact of CIL, the continuance of S.106 agreements in tandem with CIL, and increasing regulatory requirements, in particular on environmental matters. Therefore, whilst the Guide may not of itself hinder or stop development activity, there is a great danger for the short term at least, that, when taken with other factors, it will have this effect. It is recommended that local planning authorities be reminded of this danger and that consideration be given as to the priorities for the implementation of the Guide and other policy requirements as well as for the Requirements within the Guide.

8.14 The effects of the Guide could be felt in particular by those promoting small scale, residential schemes, i.e. 9 dwellings or less. In the short term, many builders and their advisors are unlikely to be familiar with many of the requirements which currently apply to affordable housing, and will therefore find it particularly difficult and costly to understand and then incorporate the Requirements within their schemes. Further, the costs imposed under the Guide may be proportionately higher for small schemes, and therefore their effect perhaps that much greater. This could therefore be an impediment to the delivery of small sites on which the London Plan housing targets are in part reliant. As these schemes are below the threshold for affordable housing it is possible that this impact will not be noticed until 2012 and beyond, though this view must be qualified with recognition of the scale of London's development pipeline, much of which is approved at exiting standards.

Suggestions

8.15 In the initial advice to the Client Project Team a number of suggestions were made in respect of Requirements in the original draft Guide. These were :

1. Reduce the number of Requirements and prioritise them;
2. Amend the supporting text so that it is clear and can provide greater clarity as to the justification and interpretation of each Requirement;
3. Consider framing the Requirements to allow for exceptions or the possibility of acceptable alternative solutions, i.e. as the draft replacement London Plan does for studios;
4. Consider a distinction between those Requirements that are absolutely required for affordable housing and those that need not apply to private housing;

5. Shared circulation space (3.2.1): Relax the Requirement, particularly for low-density schemes and where development appraisals indicate that additional lift cores are unviable;
6. Internal space standards (4.1.1 / 4.2.2): the SPG should provide clear guidance on application of the Requirements to dwellings of less than 50 sq m;
7. Living/ Dining/ Kitchen areas (4.4.1): This Requirement should not be prescribed for private dwellings, but limited to affordable dwellings;
8. Minimum Bedroom Areas (4.5.1): It is considered that there is potential for a range of areas to be used here, rather than a single minimum Requirement. The reference to dimensions should be deleted;
9. Private Open Space/ Balconies (4.10.1): This Requirement is not practical in all cases, and the proposed sizes are large. Consideration should be given as to whether this Requirement is imposed in all cases. If it is, then the Requirement should be set out in a way that can allow for furniture, but without specifying a minimum depth;
10. Dual Aspect (5.2.1): The wording set out in the explanatory text "Single aspect flats will only be permitted where the design is shown to allow adequate daylight and ventilation to all habitable rooms" should replace the wording of the Requirement;
11. Floor to Ceiling Heights (5.4.1 / 5.4.2): This Requirement can be addressed effectively other than by a rigid rule on floor to ceiling heights, for instance through the desire for good quality natural light and ventilation in a home. If it is believed that there is a need to specify a figure, stakeholder consultees would wish it to be 2.4m;
12. Daylight and Sunlight (5.5): Support the replacement of the Requirement with the requirement to comply with BRE 'Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice'.

8.16 As can be seen, the changes that have been made to the Guide deal with many of the points originally raised. Some of the Requirements have not been altered, for example Private Open Space, or the change that was been made has not to the extent originally recommended e.g. Floor to Ceiling Height. However, the changes that have been made are, it is considered, significant.

8.17 The Requirement for Private Open Space remains of concern, in particular, and it is recommended that the Guide or SPG makes it clear that planning officers be allowed to exercise discretion as to how it is applied in practice to ensure that both viability is maintained and that there are no unintended consequences such as shading to flats below. The principal area which needs to be considered is now in respect of training and education of all users of the Guide as to how to apply the Guide in such a way that it does not fetter development especially whilst market conditions remain challenging.