

# **Housing Space Standards**

August 2006



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A report by HATC Limited for the  
Greater London Authority

August 2006

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The views expressed in this report are those of the consultants and do not necessarily represent those of the Greater London Authority.

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Finally, of course, responsibility for all errors and omissions, opinions and recommendations lies with HATC. We hope that this report proves influential in the debate about dwelling space standards.

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## Contents

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INTRODUCTION .....	5
EXECUTIVE SUMMARY .....	7
1    TRENDS IN DWELLING SIZES AND MIX .....	20
1.1    Trends in Space Standards and Dwelling Mix in the UK .....	20
1.2    Trends in UK & London Dwelling Mix .....	29
1.3    International comparisons .....	33
1.4    Market and customer demands .....	36
1.5    Stakeholders Views .....	38
1.6    Initial findings/conclusions on trends in dwelling size and type .....	41
2    IMPACT OF CHANGES IN PROCUREMENT METHODS .....	42
3    CASE STUDY INFORMATION.....	43
4    MENTAL HEALTH & WELL-BEING: the Relationship with Dwelling Space.....	44
4.1    New Zealand Ministry of Social Policy (2001) .....	44
4.2    Journal of Social Issues (2003) .....	45
4.3    SHARP (University of Glasgow 2005) .....	47
4.4    Other Sources .....	48
4.5    Conclusions.....	48
5    MECHANISMS FOR SETTING SPACE STANDARDS .....	50
5.1    Mechanisms Used in England to Date .....	50
5.2    Mechanisms Used Elsewhere .....	51
5.3    Current Options .....	54
6    PROPOSALS .....	56
6.1    What drives internal space standards? .....	56
6.2    Our Approach.....	57
6.3    Methodology .....	59

6.4	Proposals.....	65
6.5	Caveats.....	72
7	IMPLEMENTATION ISSUES.....	73
7.1	Are Minimum Space Standards a Legitimate Planning Matter? .....	73
7.2	Are Building Regulations a Better Vehicle?.....	74
7.3	Obtaining Space Standard Information.....	74
7.4	Using the Standards – Development Control .....	75
7.5	Using the Standards - Applicants.....	76
7.6	Pieds-a-Terre, Holiday Homes etc.....	77
7.7	Effectiveness of Standards – Loopholes and Side-Effects .....	77
7.8	Density Definitions .....	80
7.9	Data capture .....	80
8	IMPACT ASSESSMENT.....	81
8.1	Assessment .....	81
8.2	Costs .....	83
8.3	Benefits.....	88
8.4	Related Issues.....	89
9	RECOMMENDATIONS .....	90
10	APPENDICES .....	91
	APPENDIX 1 - Literature Review Bibliography .....	92
	APPENDIX 2 - Literature Review: Summaries .....	95
	APPENDIX 3 - Methodology.....	118
	APPENDIX 4 – London Dwelling Mix: Graphs .....	119
	APPENDIX 5 - UDP / SPG space standards .....	122
	APPENDIX 6 - Stakeholders Responses.....	131
	APPENDIX 7 - Case Study Data .....	149
	APPENDIX 8 – Furniture etc used in Standards .....	150
	APPENDIX 9 – Tetlow King Advice on Planning Powers .....	151

## INTRODUCTION

This study has been commissioned by the GLA as part of their review of the London Plan. It is one of a number of reviews that were commissioned in December 2005 for this purpose. The Introduction and Objectives of the study in the GLA's Brief state:

*"There has been growing concern that the internal space of new dwellings may be getting smaller. There is evidence that less family size housing is being provided. There is however concern that internal space within both family and non-family homes may also be reducing. This has implications for both accessibility and for sustainability and for quality of life including health. In addition there is a relationship between size of units and affordability. In recent years, Government targets have focused on unit output rather than the quality of provision. The London Plan, while establishing general design principles (including Lifetime Homes and wheelchair provision), does not give specific guidance on standards. It is imperative that good quality housing is provided to create a suitable and sustainable living environment for now and future generations.*

*The potential role of internal space standards for dwellings is to be considered within the forthcoming review of the London Plan and this project will form the basis for any revised policy. The GLA is currently anticipating presenting the draft report of the first review of the London Plan for Mayoral approval in spring 2006.*

*The purpose of this study is to attain an understanding of the evolution, role, operation, and impact that space standards have had and may have in the future within London and to propose policy for incorporation in the London Plan and related guidance."*

This was expanded in HATC's Project Management Plan, so that the study is to provide:

1. *"a snapshot of current custom and practice, recent trends and likely future trends in new residential development internal & external space standards, and the views of significant developers;*
2. *a review of good practice guidance on housing space standards currently available;*
3. *a review of the experiences of other organisations within the UK and elsewhere who have introduced minimum space standards;*
4. *a cost/benefit analysis of setting minimum standards at different levels;*
5. *advice on implementation issues;*
6. *recommended way forward."*

The work has involved undertaking an extensive literature review of trends in space standards and dwelling mix in the UK and abroad, as well as undertaking interviews with stakeholders. We have also examined how space standards have been implemented historically, and in different countries and whether space standards could be set through the planning system.

We have also undertaken a literature review to identify the link between dwelling space standards and health, well-being and educational attainment, as part of the cost/benefit analysis.

We have attempted, regrettably with limited success, to gather case study information about current developments that have received planning permission and are being progressed, to provide an informative backdrop against which any proposals can be assessed, and their likely effect determined.

We have considered space standards from a quantitative as well as qualitative perspective and have proposed a set of space standards that are designed to set minimum requirements in key habitable parts of the dwelling, whilst allowing the designer as much flexibility as possible in how they achieve the standards.

Further details on the methodology are set out in Appendix 3.

We should like to emphasise that our approach to this work has been that, if required, the space standards proposed should represent a "safety net" rather than an attempt to quantify normal good practice. In short, they should only impede dwelling types that are clearly too small to be sustainable over the 100 or so years that we expect properties to function.

The work has been overseen by a GLA Steering Group, and has benefited from helpful comments from a Reference Group which has included representatives from the GLA, ALG, Shelter, London Housing Federation and the Housing Corporation. Although invited, representatives from the Home Builders Federation have not participated.

# EXECUTIVE SUMMARY

## Introduction

This report looks at how much space is provided in the dwelling for a stated level of occupancy. We do not specifically address questions of dwelling mix. Terms such as "large dwellings" or "small dwellings", therefore do not refer to four-bedroom houses or one-bedroom flats respectively. They might refer to a one-bedroom flat with generous space standards as opposed to a one-bedroom flat that is very "tight". It is important to bear this distinction in mind as terms such as "large units" or "small units" are often used to refer to dwelling mix rather than space standards.

## Trends in Space Standards

Over the last 90 years, a number of attempts have been made to define minimum space standards in public sector provision. The approach has become progressively more sophisticated over the years, progressing through number of rooms, minimum floor space for rooms and the dwelling as a whole, to functional/activity based requirements. The Parker Morris Report (1961) is still the most commonly cited benchmark for space standards amongst practitioners, in England and elsewhere in the UK, although it is a benchmark that neither the public nor private sectors seek to achieve.

The amount of space provided in private and public sector housing has ebbed and flowed. Space standards have been set as part of the various publicly-funded housing programmes instituted over the decades, not as general requirements applicable to all sectors through the Buildings Regulations or planning system. As new space standards are introduced or updated, public sector standards improve for a while but then tail off. Private sector standards are influenced by these changes and show a similar pattern of ebb and flow, although less pronounced.

In the absence of controls, developers (both public and private sector) will tend to reduce the size of dwellings being developed whilst trying to minimise any reduction in value. Studies indicate a pattern of increased "cramming" of rooms (such as additional bathrooms) into dwellings leading to smaller habitable rooms and significant reductions in storage space.

We note that data is not collected on dwelling or room sizes as part of the process of obtaining planning permissions or Building Control approval, and there is therefore very limited data available on these dwelling characteristics apart from specifically-commissioned research. We recommend that such data is collected to allow future studies or reviews to be built on a more extensive database.

## Trends in Dwelling Mix

The overall picture in London is:

- a very clear trend towards overwhelming provision of flats (80% of the dwellings produced),
- Reduction in the provision of three and four-bedroom accommodation ( to c.10% & 5% respectively of total production)

- increase in the provision of one and two-bedroom accommodation (to c.25% & 60% respectively of total production)

The net effect is the progressively greater incidence of two-bedroom flats in both the private sector and housing association sectors.

This profile of housing production, when coupled with the demographic makeup in London means that there is an increasingly poor match between the needs of the population and the accommodation being provided in the private and housing association sectors. Specifically, London households require dwellings with more bedrooms than are currently being produced. This has implications for future overcrowding.

### **International comparisons**

Space standards in the UK are below the European average, indeed UK standards appear to be near the bottom of the range. There is also some evidence that the differences between space standards in public and private provision are greater in the UK than elsewhere in Europe.

Space standards are commonly set in other countries, usually through the local equivalent of the Building Control/planning permission system. In some cases, space standards are expressed as floor area, either of the dwelling as a whole or habitable rooms. In others, it is derived from functional criteria based on use of the rooms.

When properties are being marketed, the norm in most European countries is to define dwelling size by floor area, whereas in the UK it is by the number of bedrooms.

### **Homebuyers' Preferences**

There seems to be a mis-match between homebuyers' preferences and what the market is providing. Homebuyers express a preference for houses rather than flats, more bedrooms and larger rooms for living and storage. This is perhaps unsurprising, but still represents dissatisfaction with what is being provided. CABE's work finds a strong preference amongst families and older people for detached houses, and detached or semi-detached houses amongst first time buyers. It is only pressures of affordability that drives purchasers towards terraced housing or flats.

In addition market demands appear to be pushing in the direction of increased space and flexibility, and the ability for more rooms to be "multi-use" rather than rooms that are designed so as to be capable of only allowing one use, such as bedroom. This suggests that dwellings developed to very "tight" space standards will be seen as less attractive (and therefore less valuable) than dwellings with more space.

### **Stakeholders Views**

The stakeholders interviewed also highlighted the trend towards two-bedroom flats and falling space standards, coupled with a high incidence of open-plan designs (probably to disguise the lack of space).

The lack of privacy arising from open-plan designs was seen as a major issue, meaning that bedrooms in particular need to be multifunctional (places for privacy, study and recreation, not just sleeping, dressing etc). It was noted that a lack of internal recreational space is often associated with inadequate external recreational space.

The lack of internal storage space was also seen as a major issue.

## **The Relationship between Space and Well-Being**

Does it matter if residents have insufficient space? Is it simply a preference denied, or are there more serious implications? Do cramped living conditions affect residents health or well-being?

Research on the effects of space standards on residents had tended (understandably) to have focused on overcrowding. Altman (1975) outlines the effects:

*"As the number of persons within homes increases:*

- \* *The number of social contacts increases*
- \* *Privacy decreases*
- \* *The number of unwanted social interactions increases*
- \* *Parents may be unable to monitor the children's behaviour*
- \* *Access to simple goals such as heating or watching television may be frustrated*
- \* *Activities such as using the bathroom have to be coordinated with others*
- \* *Sick persons may not receive the care they require.*

*Pressures arising from these situations may lead to interpersonal aggression, withdrawal from the family, sexually deviant behaviour, psychological distress or physical illness."*

It is worth noting that these pressures would arise through living in cramped or crowded conditions, or through being forced to live in more open-plan layouts. In fact, as we have seen, these two factors (a reduction in space, and open-plan designs) tends to go hand-in-hand, reinforcing these pressures.

It is difficult for causative links to be clearly identified, although there does appear to be associative links:

- There is some limited evidence to support a relationship between overcrowding and social and emotional development in children.
- The very limited evidence available points to an independent relationship between overcrowding and educational attainment.
- the University of Glasgow SHARP project reported that a move from "tight" space standards to more spacious dwellings significantly reduced family tensions.

It seems reasonable to assume that these pressures are not simply triggered at some level of crowding, but are progressive, and that cramped living conditions will increase stress and affect the mental health and well-being of residents, particularly children.

There also seems to be supporting evidence that both adults and children need to have external recreational areas in which they feel safe and which they see as within their "ownership". This may be gardens or communal play areas, or private balconies which are large enough to fulfil their recreational function (as opposed to having to be used for external storage).

The main issue seems to be that the individuals within the dwelling need sufficient private space to be able to undertake the normal functions of living together with

(crucially) space for private recreational activity within the home and outside the home. In accommodation designed for households of more than one or two people, this implies that there are either two separate living areas, or the bedrooms are large enough to allow the occupant(s) to use them for their private recreational activities or study/work as well as places for sleeping, dressing etc. in addition, residents need access to suitable private external space or as well as (ideally) private external space that allows occasional (controlled) social interaction such as the equivalent to a conversation across a garden fence.

## **Implementation Vehicles**

Since 1919 England has used the following vehicles for setting minimum space standards:

- funding conditions for publicly-funded developments
- insurance policy requirements

Funding conditions have been used for decades, but have only applied to publicly-funded developments undertaken by councils and/or housing associations.

Space standards featured briefly in the National House Building Council's requirements in the 1980s. Whilst they existed they applied equally to public and private housing.

Design guidance has been issued by the public and voluntary sector with the aim of influencing all developments, but with very limited effect on any sector unless the guidance is adopted as a funding condition.

England has not used the following vehicles to set minimum space standards:

- the planning system (until recently)
- Building Regulations
- funding conditions for privately-funded developments (e.g. mortgage lenders setting minimum standards before they will lend against a property)

In other European countries, space standards are promoted by either fiscal incentives or regulatory requirements. In most other countries in Europe, Planning and Building Regulation functions are combined into a single Building Permit, the standards for which in many countries include space standards.

## **Can Space Standards Be Set Through the Planning System?**

The London Plan (February 2004) and the Planning and Compulsory Purchase Act 2004 represent a watershed. We believe that that space standards are now in principle capable of being considered a '*material planning consideration*' and a component of '*sustainable development*'. The success of the GLA in incorporating a requirement for new developments to be built to Lifetime Home standards as an enforceable policy further supports the view that residential space standards could be set in and enforced through the planning system.

We note that government may possibly be moving towards including space standards in the Building Regulations. The emerging Code for Sustainable Housing includes a requirement for compliance with *Lifetime Homes*, which has implications for space

standards, especially for houses. Whilst it seems clear that the building regulations are also a mechanism through which space standards could be set, it is not clear that they are a more logical or obvious mechanism until such time as a national position on space standards is adopted. There is no indication that that would occur in the short term, and we therefore do not consider that the Building Regulations are a vehicle that the GLA could use in the short term to set minimum space standards.

## **Proposals**

Our first main recommendation is that space standards have to be set by reference to the number of people it is expected will occupy the dwelling. Self evidently, a dwelling that is a suitable size for two people would be too small for four people. However, the number of occupants of the dwelling is likely to fluctuate over the 100 years or so of the dwelling's life. Developers will argue that their products tend to be under-occupied, and this may be true at the point of sale, but this is not a reliable prediction of its level of occupancy over its life.

Therefore, the only sensible assessment of the likely level of occupancy of a dwelling is the designed level of occupancy. We recommend that space standards are set on a per person (bedspace) basis, and that the applicant is required to declare the designed occupancy of the dwellings in the planning application.

Our proposals have been framed in the light of a number of principles, the most significant of which are:

- a) To propose "safety-net" standards rather than "good practice" standards i.e. to set standards that would only impede the development of dwellings of such low space standards that there is significant concern about their long-term sustainability and suitability for the designed level of occupancy.
- b) Standards should not unnecessarily inhibit designers' ability to respond to market demand in terms of how space in the home is – or can be – used.
- c) Design efficiency is determined by the designer; space standards should not impose inefficiencies
- d) Minimum standards should address functionality issues only. Decisions on whether to provide higher standards (such as additional ensuite bathrooms, utility rooms etc) are solely commercial decisions.
- e) Proposals should be easy for the designer to understand and for the planning officer to implement.

There is a tension between ease of use and robustness. We have struck a balance between these competing imperatives by proposing Baseline Standards which are very simple to use. We then propose some Additional Standards which could be adopted if it is felt that their added complexity of implementation can be managed.

The Baseline Standards consist of:

- minimum floor areas for the combined cooking, eating and living areas (CEL areas, the Kitchen/Dining/Living areas), allowing the designer to distribute the spaces between these three areas as they wish.
- minimum floor areas for bedrooms (in order to comply with the Housing Act 1985 requirements regarding overcrowding),

- aggregate bedroom floor areas to be achieved in a dwelling, but allowing flexibility for the designer to distribute that space as they wish (subject to meeting the minimum floor areas derived from legislation).
- minimum floor area requirements for internal storage.

The Additional Standards address:

- minimum room dimensions and proportions
- "dirty" storage
- internal playspace
- external recreational space (balcony)
- mobility

The standards have been prepared as objectively as possible, by considering how the space in the various rooms will be used. We believe that by focusing on the functionality of the key areas of the dwelling, from the residents' perspective, our proposals are built on the firmest foundations available. We have therefore drawn heavily from the anthropometric data and furniture schedules included in the Building Research Establishment's *Housing Design Handbook* (1993) and the National Housing Federation's *Guide to Standards & Quality* (1998). The standards are set out below.

**THE PROPOSED BASELINE STANDARDS ARE:**

- 1) the minimum floor area for the aggregate of the cooking, eating and living areas (CEL areas) is to be<sup>1</sup>:

**Table 1**

<b>CEL AREAS (m<sup>2</sup>)</b>	
<b>1p</b>	<b>22</b>
<b>2p</b>	<b>22</b>
<b>3p</b>	<b>24</b>
<b>4p</b>	<b>27</b>
<b>5p</b>	<b>30</b>
<b>6p</b>	<b>33</b>
<b>7p</b>	<b>36</b>

***NB: Cooking, eating and living (Kitchen / Dining / Living) areas exclude any utility area or space taken up on plan by staircases or hallways/corridors connecting these areas***

- 2) The minimum floor area for bedrooms to be based on:

- a) Aggregate bedroom areas to be no less than 7m<sup>2</sup> per single bedroom and 12m<sup>2</sup> per double/twin bedroom provided AND
- b) Each bedroom to have a minimum internal floor area of 6.5m<sup>2</sup> for a 1 person bedroom, and 10m<sup>2</sup> for a 2 person bedroom<sup>2</sup>.

***NB1: in larger dwellings each bedroom does not have to be at least 7m<sup>2</sup> or 12m<sup>2</sup> floor area; the designer is free to distribute the total amount of space among the bedrooms as they see fit so long as the aggregate space equates to the minimum requirements stated AND the individual rooms meet the minimum requirement of 6.5m<sup>2</sup> and 10m<sup>2</sup> noted above.***

***NB2: ensuite bathrooms or shower rooms do NOT count towards this minimum.***

***NB3: the floor space taken up by built in wardrobes in bedrooms counts towards the bedroom floor area***

- 3) Storage cupboards: 1m<sup>2</sup> floor area for 1p dwelling plus 0.25m<sup>2</sup> per additional person.

<sup>1</sup> From Table 5, rounded to the nearest m<sup>2</sup>

<sup>2</sup> From Housing Act 1985, with the 10.2m<sup>2</sup> requirement rounded down to 10m<sup>2</sup>.

## **THE PROPOSED ADDITIONAL STANDARDS ARE:**

- 1) Minimum room dimensions (at the narrowest/shortest point)**
  - a) living area: 3.2m**
  - b) double/twin bedroom width: 2.6m**
  - c) bedroom length: 3m**
  - d) habitable rooms to be no longer than twice their width, or no wider than twice their depth (i.e. the ratio 2:1 not to be exceeded)**
- 2) "Dirty" storage (internal to the dwelling or block, or external)**
  - a) for flats without private gardens: 1m<sup>2</sup>**
  - b) for houses bungalows and flats with private gardens for up to four people:2.5m<sup>2</sup>**
  - c) for houses, bungalows and flats with private gardens for five or more people:3.0m<sup>2</sup>**
- 3) Internal play space: nothing for the first two occupants and then 2m<sup>2</sup> for each additional person.**
- 4) External recreational space (balcony): 3m<sup>2</sup> for 1 person or 2 person dwellings plus 1m<sup>2</sup> per additional person**
- 5) Mobility: compliance with *Lifetime Homes* standards<sup>3</sup>.**

We have looked at the possible effect of the Baseline Standards on overall dwelling size. We have only done this for flats, as flats are the predominant dwelling type being developed.

To get to a Minimum Internal Dwelling Area (MIDA) from the Baseline Standards, an assumption has to be made about how much space in addition to bedrooms, cooking, eating, living and storage areas needs to be added on for bathrooms and circulation area. We had hoped that the case study information would provide us with a good indicator of what this "add-on" might be. Unfortunately, because of the paucity of case studies available we do not feel confident that our assumption is reliable, and we would therefore wish to highlight that the MIDA is provisional until such time as more case study information is available.

We are also concerned that if MIDAs are published they could suffer the fate of many previous minimum dwelling standards - they rapidly turn into maximum dwelling standards.

We do not recommend that MIDAs are used, but have been asked to produce them as an aid to both designers and planning officers. However, we would advise that if they are published, they should be clearly flagged as simply an indicator of whether a dwelling may or may not comply with the proposed Standards, to allow planning officers to focus their attention on the dwelling types most likely to fail the standards. We do not believe the MIDAs to be sufficiently reliable to be used as standards. We fully appreciate the argument about the need to provide standards which are quick and simple for planning officers to implement, but believe that this can be achieved by asking the designer to schedule the Baseline Standard information as part of the planning application information provided. Providing this information will take the

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<sup>3</sup> Already a separate requirement in the London Plan.

designer approximately three minutes per dwelling type, and is therefore not onerous on them, whilst making it very easy for the planning officer to assess compliance with the Baseline Standards without the need for a MIDA.

However, as requested, we have developed indicative Minimum Internal Dwelling Areas for flats of different levels of designed occupancy:

**WE SUGGEST THE FOLLOWING MINIMUM INTERNAL DWELLING AREAS, TO BE USED AS AN INDICATOR:**

**Table 2**

<b>MIDA (m<sup>2</sup>)</b>	
<b>1p</b>	<b>37</b>
<b>2p</b>	<b>44</b>
<b>3p</b>	<b>57</b>
<b>4p</b>	<b>67</b>
<b>5p</b>	<b>81</b>
<b>6p</b>	<b>92</b>
<b>7p</b>	<b>105</b>

**Implementation Issues**

We would wish to emphasise that these standards are considered to be a safety net, and are not to be taken as a statement of good practice or as an upper limit of what is desirable.

The emerging standard application form, APP1, does not ask for this information. There is, however, nothing to stop local planning authorities asking for more information than is requested on 1APP. We therefore do not see this as a barrier to setting and implementing these space standards.

How difficult will it be for the planning officer to assess compliance with the standards? We recommend that the revised APP1 or its local equivalent asks the designer to complete the following table (Table 3), which provides the necessary information for each dwelling type in the proposed development:

**Table 3**

Dwelling Type	Bedspace	Aggregate K/D/L area (m <sup>2</sup> )	Aggregate Bedroom areas (m <sup>2</sup> )	Are any bedrooms below minimum? (Y/N)	Internal storage area (m <sup>2</sup> )
Flat type A					
Flat type B					
Flat type B1					
Flat type C					
Flat type D					
Flat type E					

This would allow the planning officer to very quickly see whether the Baseline Standards have been met. It would be for the planning officer to decide what level of sample checking to undertake, to check that the information provided in table by the designer is accurate.

Is it a major administrative burden on the applicant to provide this information? With the almost universal use of CAD, we estimate that it would take the designer approximately three minutes per dwelling type to provide the information required. We do not consider this to be a significant task in the context of preparing a planning application.

It is reported by some developers that there is a demand in London for small accommodation for temporary use such as pieds-a-terre. Setting minimum space standards should not interfere with the development of such accommodation, which is for a different use (temporary) than mainstream residential development where it is expected that the household will be living "full-time" in the dwelling. Under the Greater London Council (General Powers) Acts 1973 (as amended) and 1984, the use of residential accommodation for 'temporary' accommodation occupied by the same person for less than 90 nights is a material change of use requiring planning permission. We should therefore like to make it clear that our recommendations are only intended to apply to 'permanent' accommodation.

### **Loopholes & Side Effects**

We have considered the question of whether the implementation of space standards may inadvertently set a condition upon the level of occupancy of the dwellings. We do not think that this is likely.

How might developers respond to these space standards? One response might be to try to pull back doors to bedrooms and living areas into what was previously circulation area, so that that space can be considered part of the bedroom or the CEL<sup>4</sup> area. This might work where corridors are approximately 1200mm wide, but in narrower corridors the design is likely to fall foul of *Lifetime Homes* Criterion 6 which requires a 300mm space adjacent to the leading edge of an opening door. However, it must be

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<sup>4</sup> Cooking/Eating/Living i.e. kitchen/dining/living areas.

acknowledged that this response may work on some schemes, and can only be stopped by setting more detailed - and therefore more complex to administer - space standards.

Another response may be to declare dwellings to have a lower designed occupancy than they are subsequently marketed for. For example, the second bedroom in a two-bedroom flat may be declared as a single bedroom (a 2b3p dwelling) and thus comply with the bedroom space standards. Could it then be marketed as a 2b4p dwelling by, for example, producing marketing literature showing a double bed in that room? We believe that this is likely to fall foul of the Property Misdescriptions Acts 1991, but legal advice should be taken on this point.

This "loophole" could also be managed if local planning authorities set clear requirements for unit mix. Issues of unit mix are outside the remit of this report and so have not been considered, but this is an obvious potential control mechanism which we assume planning authorities will use.

### Impact Assessment

As previously noted we were able to obtain only very limited case study data and do not feel at all confident that it is a representative sample of current designs. However, we assessed the Baseline Standards against the data. The bedroom standard was very close to the average bedroom sizes in the case studies, but the CEL standard was greater than a significant number of the case studies, particularly in the smaller (one-person and two-person) dwellings.

Overall the space standards may cause an average increase in the dwelling size of 2% - 6%, although these are estimates based on insufficient data.

The provisional MIDAS were plotted against the mean and ranges for the different dwelling type is with results shown in Table 4.

**Table 4**

	No.	Min	Mean	Max	Baseline MIDA
1 person	2	25	28	31	37
2 person	8	31	42	48	44
3 person	9	51	60	66	57
4 person	10	62	67	81	67
5 person	7	73	92	143	81
6 person	2	101	113	125	92

However, we reiterate that we do not believe these conclusions are reliable and recommend that the GLA commission further case study analysis.

## **Costs of the Standards**

The Home Builders Federation have argued (inter alia) that the introduction of minimum space standards will exacerbate affordability issues. We are not persuaded by this argument and have provided detailed reasons why.

The implication on housing capacity is difficult to assess. Slightly larger flats will make blocks wider or deeper which some sites can accommodate but others cannot. The developer may then be faced with the loss of some units, but may be able to go higher, or negotiate a reduced separation distance between blocks.

Designers will have greater opportunity to overcome any potential reduction in density brought about by space standards on large sites than they will on small sites. 60% of the housing capacity identified in the 2004 London Housing Capacity Study is on large sites. It is therefore unclear whether space standards will have any effect at all on housing capacity, and if they do it is likely to be marginal only.

## **Benefits of the Standards**

As previously noted there is evidence of associative links between crowding and stress, educational achievement and mental health. Avoiding the most cramped conditions will reduce the incidence of these disadvantages on households who inhabit the dwellings over the next century.

Environmental sustainability is best served by providing buildings that have a reasonably long life, which requires them to have sufficient inbuilt flexibility for them to adapt to changing needs of their lifetime. The main factor which provides flexibility and adaptability in dwellings is space.

## **9 RECOMMENDATIONS**

- 1) That the GLA considers options for implementing the standards and adopt the Baseline Standards and the Additional Standards set out in pages 13 and 14, and publish the Minimum Internal Dwelling Areas (Table 2 on page 15) as indicators of whether the Baseline and Additional Standards are likely to be achieved.
- 2) That the GLA commissions further case study analysis to test these proposed standards against current practice and to assess implications on cost and value.
- 3) That the GLA encourages London Boroughs to modify their planning application forms to require the following additional data requirements as a starting point with a future view to seeking an alteration to 1APP (the standard national planning application form):
  - (i) Design occupancy of the dwellings (number of bed spaces)
  - (ii) aggregate floor area of cooking/eating/living area of each dwelling
  - (iii) individual bedroom floor areas of each dwelling

- (iv) floor area of built in storage cupboards
- (v) net internal dwelling floor area.

# 1 TRENDS IN DWELLING SIZES AND MIX

## 1.1 Trends in Space Standards and Dwelling Mix in the UK

### 1.1.1 Before 1911

In 1911 80% of the UK housing stock was privately rented. Landlords often built working class housing to the lowest possible standards. Change came as a result of several demands:

- Public health and bye-law movements which set basic standards for housing, especially in terms of space and access
- Growth of the national infrastructure - water, sewerage, railways, all of which made work and home locations more flexible, and amenable
- Philanthropy - for example Octavia Hill and the Peabody Trust
- Provision of housing by councils.

### 1.1.2 The Tudor Walters Report, 1919 Housing Act, Homes Fit for Heroes

The Tudor Walters Committee was established by government to review housing conditions at the end of the First World War. Its recommendations included state subsidised housing, with standards and densities based on the Garden Cities, as promoted by Ebenezer Howard. The 1919 Housing Act enacted the Tudor Walters recommendations, giving local authorities the remit to develop council housing for rent which had to comply with the criteria set out in Table 5.

**Table 5-** Tudor Walters Requirements

<b>Criteria</b>	<b>Standard</b>
Minimum room number	At least three ground floor rooms
Minimum bedroom number	At least three, of which two must take two beds
Essential	Bathroom and larder
Density	12 dwellings per acre
External	Built as semis or in short terraces
	Cottage appearance enhanced by front and rear gardens
	21m minimum distance between facing rows of houses

### **1.1.3 Inter-War**

This period saw the overall housing stock grow by 52% when compared with 1911. There were waves of suburbanisation during this period, characterised by municipal housing development in the 1920s and private development during the 1930s.

The interaction of the Tudor Walters space standards and methods of financing council housing produced council houses that were beyond the means of many working class families, and so there were subsequent reductions to council housing standards during the 1920s and 1930s. There was a marked reduction in the number of houses built with a parlour, the bathroom was sometimes sacrificed for a bath in the kitchen, and the dimensions of rooms became less generous. These reductions in standards reduced costs and so opened up the council housing market to lower income groups.

Private developers during the 1930s emulated some of these reductions in standards, to offer owner-occupation to lower income groups.

### **1.1.4 1939 – 1951**

*"A separate house for every family that wishes to have one"*

Toward the end of the War, there was raft of government commissions preparing for peace time re-construction, one of which was the Dudley Report of 1944, which reviewed guidance on housing standards post-Tudor Walters.

Extreme housing shortages, depleted labour force and scarcity of building materials called for radical solutions - this is the period of prefabrication and non-traditional building. Despite limitations and unprecedented demand, the standards of housing were generally high, with average space standards reaching their highest in 1949.

#### *1944 and 1949 Housing Manuals*

This provided guidance to local authorities on housing and estate design, covering lay-out of sites, density, house types, size of rooms, flats, efficiency in building, new methods and materials, heat, insulation, etc.

In view of the immediate post-war needs of younger families, the 1944 edition (based on the Dudley Report) emphasized the provision of two-bedroomed temporary and three-bedroomed permanent houses.

The long-term housing programme called for a greater variety of dwelling types as illustrated in the 1949 edition. Its designs are based on 900-950 ft<sup>2</sup> for a 3-bedroomed house instead of 800-900 in the 1944 Manual, and special attention is given to lay-out, grouping, etc. the 1949 Housing Manual standards are set out in Table 6.

**Table 6-** 1949 Housing Manual standards

No of bedrooms	No of persons	Internal floor area m <sup>2</sup>
Two storey house* or maisonette		
2	4	69.7 – 74.3
3	5	83.6 – 88.3
3	6	91.1 – 95.7
4	6	92.9 – 101.3
4	7	102.2 – 109.2
Flats		
1	1	27.9
2	1	32.5
2	2	46.5
3	4	65.1
4	4	69.7
4	5	79.0
4	6	83.6
5	6	88.3
5	7	92.9
Dwellings for aged persons		
1	2	41.8 – 51.1
2	3	51.1 – 60.4

\* Three storey houses exceed two storey by 9.3m<sup>2</sup>

### 1.1.5 1951 - 1967

A change of government led to a change in housing policy. Harold Macmillan's "People's House" was introduced in an effort to expand completions and meet demand. Space standards steadily reduced throughout the 1950s, especially in terms of storage and circulation space. The Ministry of Housing and Local Government publication *Flats and Houses: Design and Economy* (1958) set space standards for maisonettes and flats which were significantly lower than 1949.

Three further key developments during this period were:

- Material shortages had been overcome, so the non-traditional form of construction ceased
- A programme of often low-cost building in the private sector got underway
- A change in the public subsidy system in favour of developing flats rather than houses

### 1961: Parker Morris & Design Bulletin 6

This seminal report set out area standards derived from an assessment of the functions of a dwelling and rooms. It also highlighted the need for storage space, and called for all rooms in the house to be heated. Its standards were expressed in terms of numbers of residents. The Parker Morris standards were further developed by the Ministry of Housing and Local Government in the publication *Design Bulletin 6* (DB6)

What were seen as minimum areas in the Parker Morris report quickly became maxima for public subsidy purposes in the Government's *Housing Cost Yardstick*.

This period was the heyday for council house building and slum clearance, with public sector house building exceeding private in several years. However, the adoption of dwelling space standards did not always lead to well designed, popular housing. This was also the era of multi-storey, industrialised building, Radburn layouts, etc many of which proved unpopular. This highlights that good quality design requires not just good space standards, but also good site planning and good quality construction.

This was also a period in which a considerable amount of good practice guidance was published, including the Greater London Council's *Generic House Plans* and *Housing Layout* guidance; Scottish Special HA *Design Guidance* and *Generic Dwelling Types*; and publications by the Architectural Press. All of these were based on the Parker Morris standards.

The Parker Morris standards are set out in Table 7:

**Table 7-** Parker Morris Standards

<b>Dwelling type</b>	<b>1p</b>	<b>2p</b>	<b>3p</b>	<b>4p</b>	<b>5p</b>	<b>6p</b>
<b>Internal Floor Area (m<sup>2</sup>)</b>						
Flat	29.7	44.6	56.7	69.7	79.0	86.4
Maisonette				71.5	81.8	91.9
Single story house	29.7	44.6	56.7	66.9	75.3	83.6
2 storey semi or end				71.5	81.8	91.9
2 storey centre terrace				74.3	84.5	91.9
3 storey house					93.8	97.5
<b>Storage Space (m<sup>2</sup>)</b>						
Houses	2.8	3.7	4.2	4.7	4.7	4.7
Flats and maisonettes – internal	0.7	0.9	1.1	1.4	1.4	1.4
Flats and maisonettes - external	1.9	1.9	1.9	1.9	1.9	1.9

#### 1.1.6 1967 - 1979

During this period, there was a policy switch from redevelopment to rehabilitation of existing houses via Housing Action Areas and General Improvement Areas, and a growing political consensus that owner occupation should be the mainstream tenure

rather than public sector rented housing. As a result, there was little guidance in relation to new build space standards.

Standards were also introduced for those with reduced mobility in Department of Environment HDD Occasional paper 2/74 *Mobility Housing* (DoE 1974), and HDD Occasional Paper 2.75 *Wheelchair housing* (DoE 1975). Mobility housing was seen as ordinary housing designed to Parker Morris standards but also suitable for use by disabled people without the need to negotiate steps of stairs. Wheelchair housing on the other hand is purpose-designed housing for disabled people who use a wheelchair and therefore need additional circulation space and special provisions not normally incorporated into ordinary housing.

Some of these standards were eventually incorporated into Part M of the Building Regulations in 1999 and formed the basis of the Lifetime Home Standards developed by the Joseph Rowntree Foundation in 1991 (see below).

### **1.1.7 Since 1979**

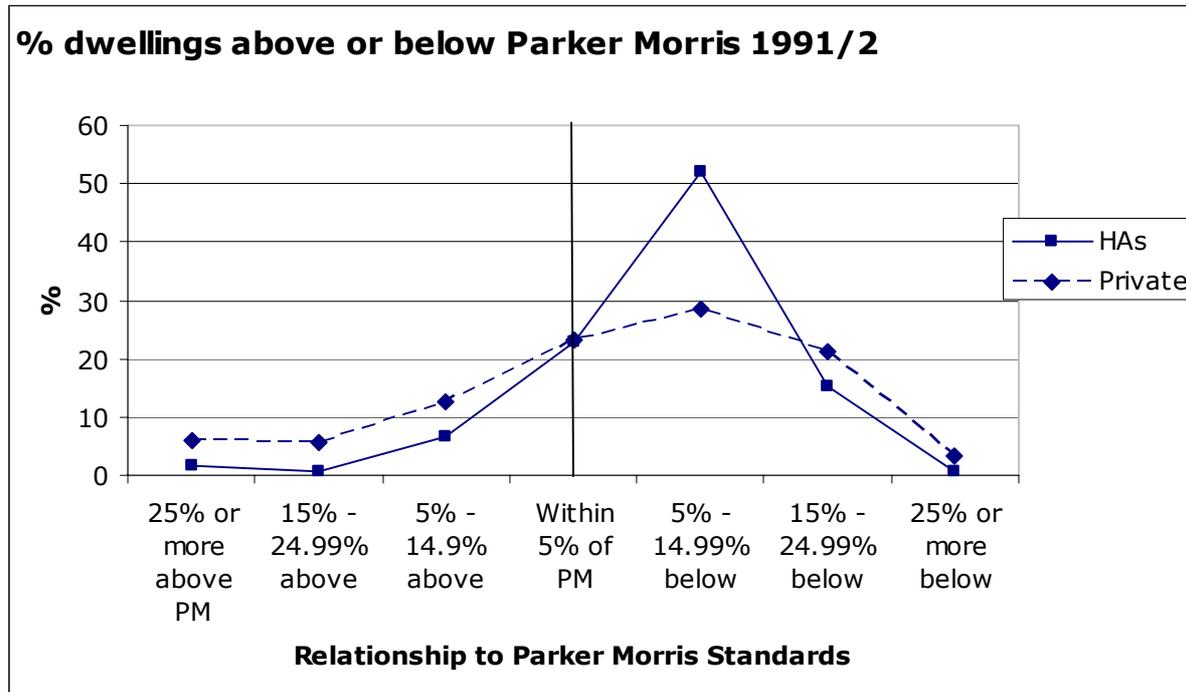
In the early 1980s the National House Building Council (NHBC) introduced basic functional criteria for storage space in kitchens and elsewhere in dwellings and minimum bedrooms size for housing which received NHBC warranty. This was discontinued after a few years, as it was felt that these questions were more appropriately left to market forces.

In the 1980s, the Joseph Rowntree Foundation (JRF) became particularly concerned about the quality of British housing and in particular how inaccessible and inconvenient many houses were for large segments of the population - from those with young children through to frail older people and those with temporary or permanent disabilities. In 1991 the *Lifetime Homes* concept was developed by a group of housing experts who came together as the Joseph Rowntree Foundation *Lifetime Homes* Group, eventually publishing the 16 design criteria that are now known as the *Lifetime Homes* standards.

The Housing Corporation introduced minimum housing quality standards for housing association properties developed with public subsidy. The standards were published in a series of documents, the most recent of which are the *Scheme Development Standards*, which were first published in 1993. They have been updated regularly, with the latest edition being published in 2003.

But what was actually being built? In an assessment of housing developed in 1991/2 in both the private sector and housing association sectors, Karn and Sheridan (1994) identified that for both sectors the most frequently developed dwelling types were between 5% and 15% below Parker Morris. While more than half of the housing association stock fell into this category, the private sector showed wider variety of dwelling types, with a greater proportion that were even smaller (as well as a greater proportion that were larger). This last point is perhaps unsurprising given that the private sector will deliver generous space standards for the appropriate niche markets. However, it was interesting to note that small private sector dwellings were measurably smaller than housing associations. See Figure 1 below.

**Figure 1**



Karn and Sheridan's conclusions were that:

- There was a continuing decline in the standards of homes built by housing associations
- Other design changes had also occurred which adversely affects usable space such as combining living and circulation spaces
- The housing association properties most consistently below PM were those using standard house types of private housebuilders
- The private sector provided a wider range of floor space standards – but the worst floor space standards in the private sector were substantially lower than the worst in the housing association sector, and the best substantially better
- Comparison of space standards is complicated by lower occupancy in the private sector
- Both sectors provided extremely poor storage space
- The private sector demonstrated a much greater provision of amenities – semis, garages, larger gardens, shower rooms and en suite bathrooms
- New housing association homes were being built in a form which allowed little scope for enlargement or adaptation at a later date – terraces and/or small plot sizes, and rooms too small to remedy the lack of internal floor space

In response to Karn & Sheridan and continuing concern about the financial pressures on housing associations which were likely to manifest themselves as a reduction in standards, the Joseph Rowntree Foundation funded the National Housing Federation (NHF) to develop a detailed series of functionally based space standards, the NHF's *Guide to Standards & Quality* (published in 1998). This document followed the approach of Parker Morris, namely that of identifying the amount of space needed to allow rooms and dwellings to fulfil their functions, although it came to different conclusions over the amount of space needed by occupants. The main functions of rooms and dwellings (in terms of space standards) were identified as:

- \* Allowing sufficient space for the stated furniture requirements (furniture mix and dimensions of items of furniture were specified)
- \* allowing sufficient space for the items of furniture to be used (e.g. space in front of the chest of drawers to be able to open and close the drawers, space by the side of a bed to be able to make a bed), known as access zones
- \* allowing sufficient space for the occupants to be able to move around within the rooms, known as passing zones
- \* allowing sufficient space for occupants to be able to move between rooms (circulation areas)
- \* allowing sufficient space for occupants to be able to undertake normal activities within the rooms (e.g. space to get dressed in a bedroom, space to play or converse in a living-room)
- \* allowing sufficient space for storage.

As the standards were driven by considerations of usability from the occupants perspective, there are applicable to all types of occupants. Insufficient storage space, or insufficient space for normal furniture requirements affect owners and tenants equally, whether the housing is affordable, cheap or expensive.

Both the NHF's *Guide to Standards & Quality* and JRF's *Lifetime Homes* set functionality requirements for rooms and dwellings rather than setting minimum floor areas. This has the advantage of being more effective in ensuring sufficient space is provided, reflecting issues such as the designed room shape, size and position of windows and doors. However, they suffer from the disadvantage of being more complex to use.

The fact that neither of these sources of guidance recommends minimum floor areas may have contributed to their limited take-up on a voluntary basis in the housing association and private sectors. However, *Scheme Development Standards* require housing associations to "have regard to" the internal space standards of the NHF's *Guide to Standards & Quality*. In practice this is a requirement to comply with the NHF guidance unless there is a significant barrier to doing so, and so developments designed by housing associations have, by and large, met these standards.

In conjunction with the development and publication of the *Guide to Standards & Quality* in 1996/7 the Department of the Environment commissioned international consultancy DEGW to develop a methodology for scoring housing quality. This new tool, the Housing Quality Indicator (HQI) drew upon previous attempts at developing such a tool in France, New Zealand and elsewhere and devised a scoring mechanism for the housing quality standards set out in the *Guide to Standards & Quality*. The development of the HQI was a major piece of research and development in which DEGW developed a series of matrices indicating room dimensions that would be likely to meet the more detailed functional-based space standards. These were further developed to indicate likely dwelling floor areas that will allow the detailed space standards to be achieved.

Until recently the *Housing Quality Indicator (HQI)* has been little more than measurement and evaluation tool, rather than a mechanism for setting standards. However, this is changing as the Housing Corporation has recently set a minimum *HQI* score for unit size as a condition of Social Housing Grant. It is usual Housing Corporation practice to progressively raise standards over time (such as has been done recently with the EcoHomes standard), and we may see a similar pattern emerged with the unit size requirement in *HQI*.

Meanwhile, in the private sector, studies (RICS 2005) suggest that more rooms (en suite bathrooms, utility rooms) are squeezed into a given floor space, and that this trend is continuing. The anecdotal evidence (Wren et al, Evans & Hartwich, RICS, CABE 2005,) suggests:

- House builders consistently produce dwellings which are 5-10m<sup>2</sup> below published public sector standards, for equivalent occupancy.
- The trend in the 1980s for private sale studio flats with extremely limited floor space has reappeared in the last few years, in London and certain city centres.

Why has this happened? Over the last ten years, there has been significant interest in how densely land should be developed for residential and other uses. Interest has also developed in the interaction between space standards and density. Support for higher density accelerated when the Urban Task Force argued that higher density housing development was achievable, desirable and sometimes necessary to meet housing need. Central and London government policies currently promote increases in the density of new housing developments and advocate increases in densities across existing urban areas, particularly where there is a good public transport infrastructure.

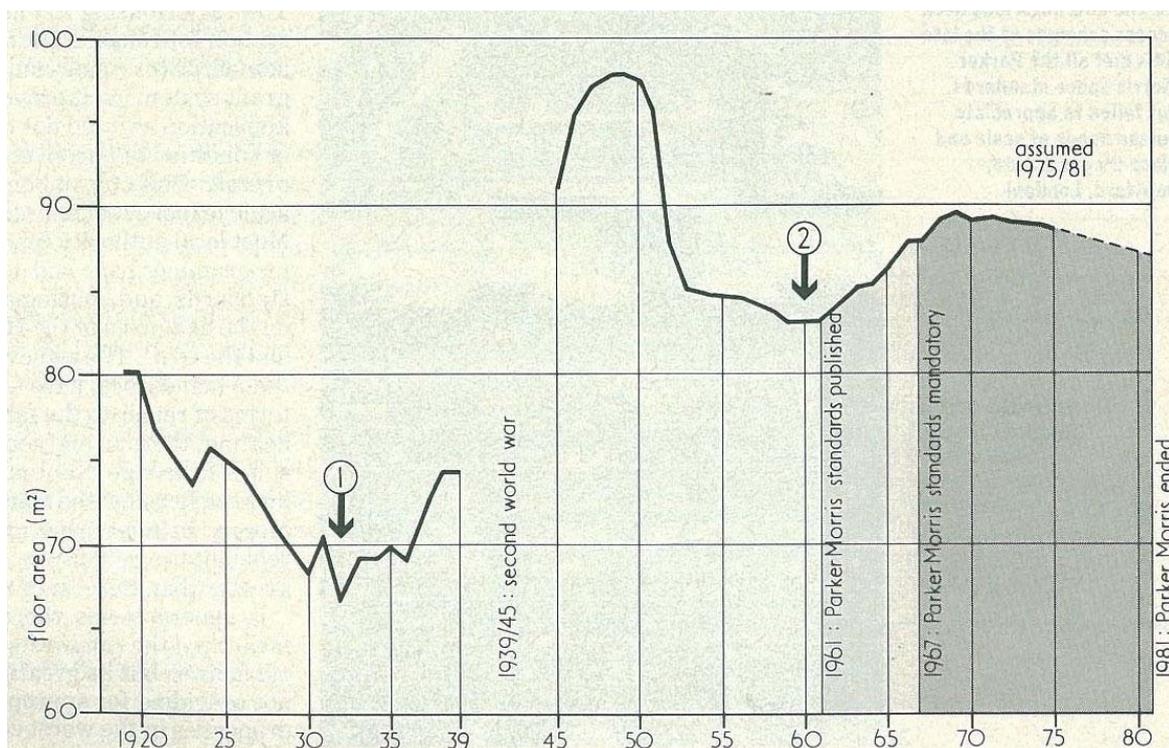
However, although central government advocates increasing densities and will intervene where density in suburban locations is less than 30 dwellings per hectare (dph), there is almost nothing further in terms of density and space standards which can be construed as a policy steer. The result of this policy vacuum has been that developers have the freedom to interpret "increased density" as equating to a "reduction in dwelling size".

### **1.1.8 Conclusions on trends in space standards in England**

Over the last 90 years, a number of attempts have been made to define minimum space standards in public sector provision. The approach has become progressively more sophisticated over the years, progressing through:

- Number of rooms (*Tudor Walters*)
- Minimum floor space for rooms and the dwelling as a whole (*Parker Morris/DB6*)
- Functional/activity based requirements, including provision for disabled people (*Guide to Standards & Quality, Lifetime Homes*)
- Quality indicators encompassing site attributes, dwelling fabric performance and design quality (*HQI*).

Private and public sector standards ebb and flow. As new standards are introduced or updated public sector standards improve for a while but then tail off. Private sector standards are influenced by these changes and show a similar pattern of ebb and flow, although less pronounced. This is illustrated in the following graph (Illustration 1) which plots the average floor space for a 5 bedspace house in England and Wales over the period 1919-75. It shows the lean years in the 1930s and the late 1950s when space standards were pruned most.



**Illustration 1** ("State housing in Britain" Stephen Merrett, 1979)

The guidance has varied, but has been broadly consistent within a range of about +/- 10% since the Second World War. The Parker Morris Report (1961) is still the most commonly cited benchmark for space standards amongst practitioners, in England and elsewhere in the UK, although it is a benchmark that neither the public nor private sectors seek to achieve.

A comparison of public sector standards since 1949 is set out below in Table 8:

**Table 8**

Standard	1949 Housing Manual*	Parker Morris**	NHF Standards & Quality***	HQI (mid point)
Internal floor area m <sup>2</sup> by number of occupants/bedspaces				
1	27.9	30.6	Does not distinguish	<b>32.5</b>
2	41.8	45.5	45	<b>47.5</b>
3	51.1	57.8	57	<b>62</b>
4	65.1	75.7	67	<b>71</b>
5	78.9	85.9	80 (F) 95 (H)	<b>80 (F) 83.5 (H)</b>
6	83.6	97.5	93 (F) 105 (H)	<b>90 (F) 97.5 (H)</b>
7	<b>92.3</b>		<b>105 (F) 117 (H)</b>	<b>111.5</b>

\* 1949 standards assumed very limited internal storage i.e. cupboards as opposed to store rooms.

\*\* includes full height internal storage provision of 3-5m<sup>2</sup> per dwelling.

\*\*\* estimated, as no floor areas given in this publication

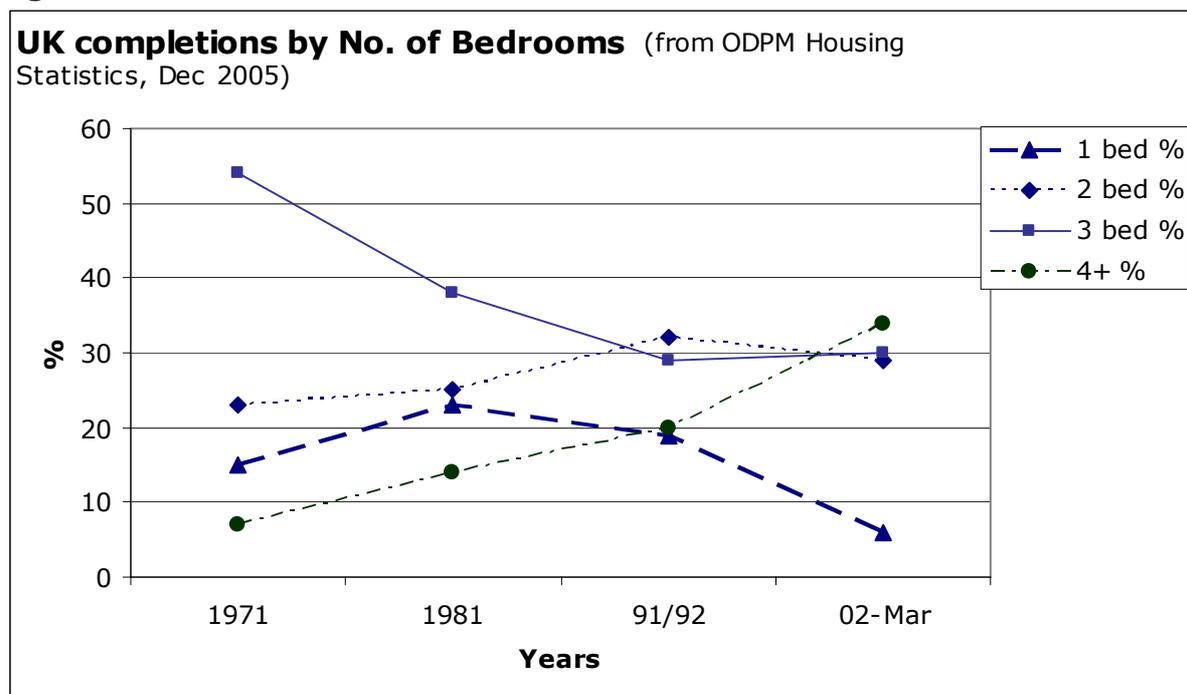
## 1.2 Trends in UK & London Dwelling Mix

ODPM Housing Statistics 2005 provide information on trends in dwelling mix at a national and regional level.

Over the past 30 years marked changes are apparent in the number of bedrooms in new dwellings. In particular the following points are noteworthy:

- nationally, there has been a significant decrease in the provision of one bedroom and three-bedroom dwellings with an increase primarily in four-bedroom dwellings. Two-bedroom dwellings have remained at 25-30% of total production (see Figure 2);
- The number of bedrooms varies by tenure: only 9% of RSL completions in 2002/03 have four or more bedrooms, compared with 36% in the private sector.

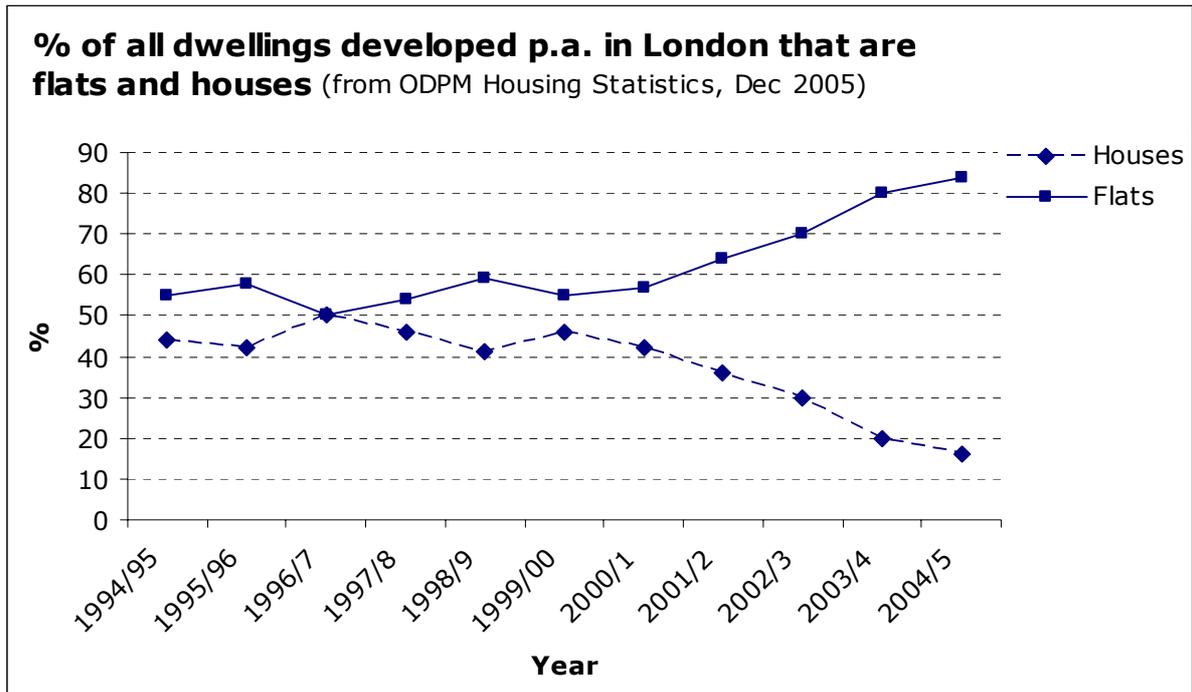
Figure 2



However the position is significantly different in London. In London there are very few houses developed, nearly all new production is flats. In addition, increasing proportions of the dwellings are two-bedroom accommodation with falling proportions of three-bedroom and four-bedroom accommodation. These points are detailed in the following series of graphs.

Figure 3 shows how over the last 10 years both private sector and HA development has moved away from providing a fairly equal split of houses and flats to overwhelmingly the provision of flats.

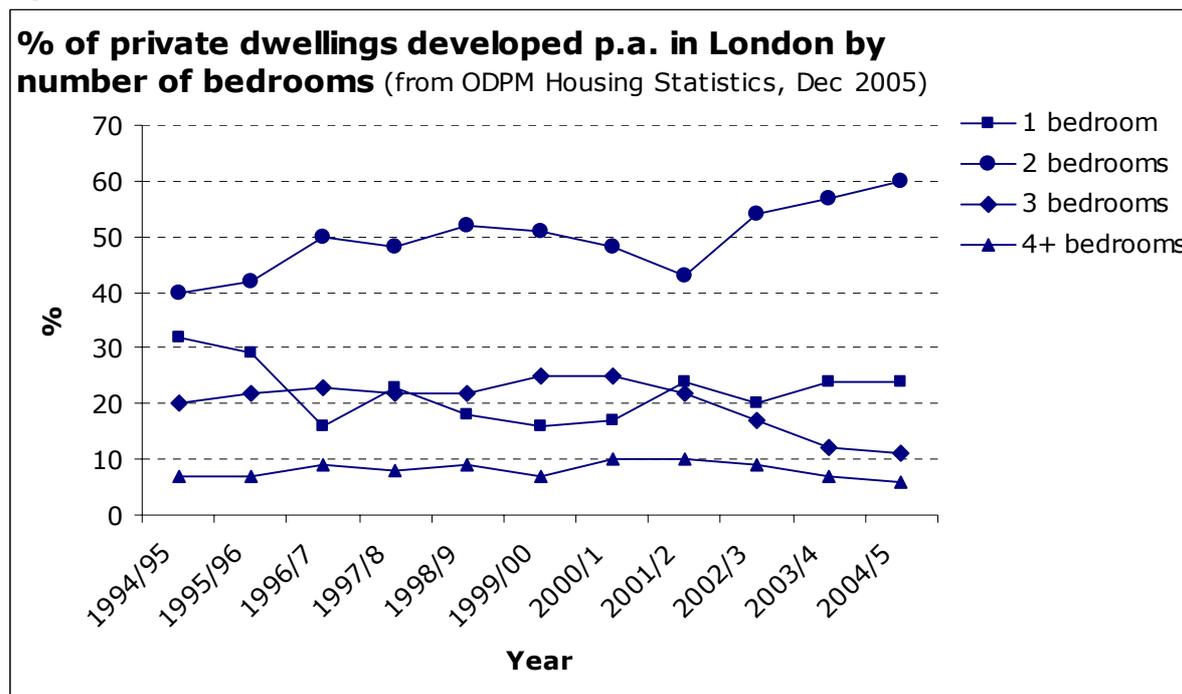
**Figure 3**



For the flats developed, the proportion of three-bedroom flats has remained static over the last 10 years at approximately 5%, the proportion of one-bedroom flats at approximately 20%, with two-bedroom flats rising from circa 25% to nearly 60%. Detailed graphs are included in Appendix 2.

Figure 4 highlights the rise of the two bedroomed dwelling in London over the last 10 years.

**Figure 4**



The overall picture in London seems to be

- a very clear trend towards overwhelming provision of flats,
- relative stability in the production of one-bedroom and four-bedroom dwellings
- a reduction in the provision of three-bedroom accommodation.

The net effect is the progressively greater incidence of two-bedroom flats in both the private sector and housing association sectors.

The trend towards flats with fewer bedrooms in London contrasts with the demographic composition of the population in the city. This shows that household size in London is greater than that in the rest of the country:

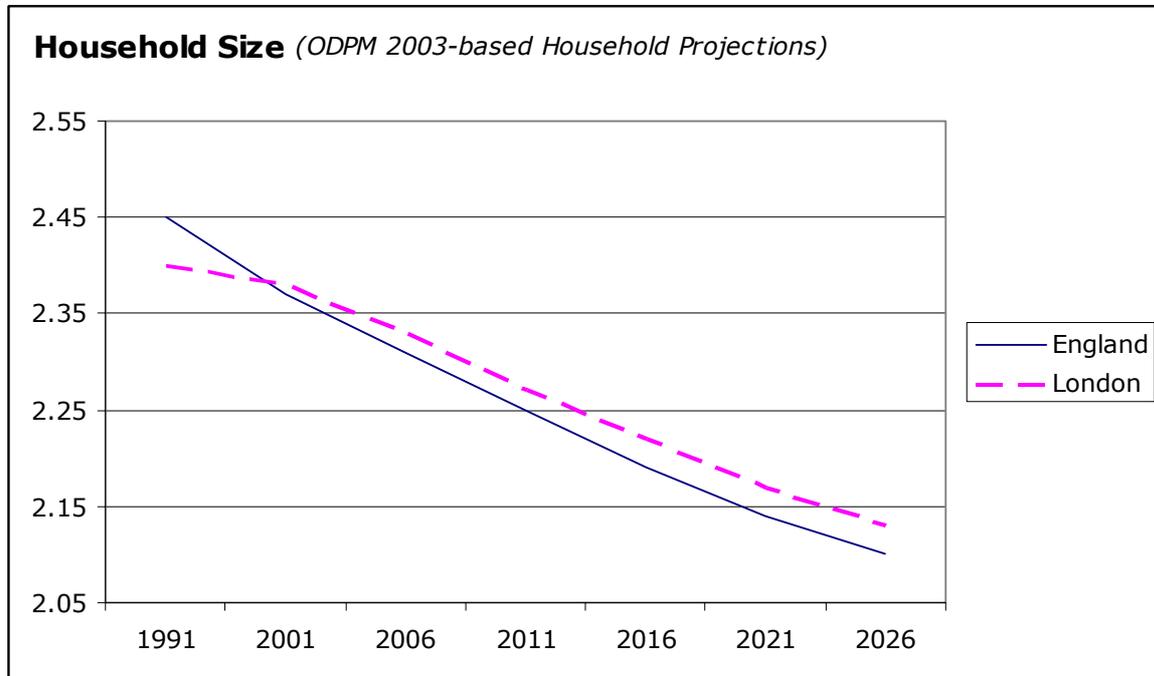
- Average household size in London in 2006 is 2.33 while it is 2.31 for England as a whole and is projected to decline at a slightly lower rate<sup>5</sup> (see Figure 5)
- 43.2% of London households are made up of families, compared with 39.7% in the UK as a whole<sup>6</sup>.
- 2.2% of households in London comprise more than one family, compared with 1.0% in the UK as a whole<sup>2</sup>.
- 20.8% of households in London comprise two persons, compared with 28.4% elsewhere in the UK<sup>2</sup>.
- The only, relatively small, counter to this trend is that 30.4% of households in London comprise one person, compared with 28.9% in the UK as a whole<sup>7</sup>.

<sup>5</sup> ODPM 2003-based Household Projections, March 2006

<sup>6</sup> ODPM Housing Statistics, Dec 2005

<sup>7</sup> Census 2001

**Figure 5**



The conclusion to draw from this information on trends in dwelling mix and demographics in London is that there is an increasingly poor match between the needs of the population and the accommodation being provided in the private and housing association sectors. Specifically, London households require dwellings with more bedrooms than are currently being produced. This has implications for future overcrowding.

## **1.3 International comparisons**

### **1.3.1 Introduction**

A number of research projects<sup>8</sup> have investigated comparative space standards in England and other countries in Europe (and in one case Australia). These studies also investigated systems of Building Regulations, implementation and control.

They show that each country except England has some requirements for the size of habitable rooms, and in some countries there are further requirements related to accessibility and the size of dwellings. These standards apply to both public and private sector provision.

### **1.3.2 Space Standard Metrics**

The criteria for space standards are expressed as follows:

- Belgium: gross habitable area per occupant
- Denmark: gross dwelling area
- France: nett habitable area per occupant
- Germany: minimum areas for rooms
- Netherlands: habitable area for dwelling, plus functional space standards for individual rooms
- Norway: minimum areas for rooms
- Scotland: functional criteria and minimum space for some rooms
- Sweden: gross dwelling area.

### **1.3.3 Scotland**

Apart from a short period in the late 1980s, Scottish Building Regulations have set minimum space standards (expressed in a variety of manners) since 1963. These are investigated in more detail in Section 5.2. As a consequence, anecdotal evidence and experience suggests that newly built dwellings in Scotland are larger than those in England. However, it has not been possible to find reliable data to support that view.

### **1.3.4 Scandinavia**

A combination of the regulatory environment and financial arrangements for new housing provision in both public and private sectors has combined to achieve significantly higher space standards than in England. This is despite the fact that household sizes are smaller than England, and that economic conditions are broadly comparable.

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<sup>8</sup> Evans & Hartwich, Sheridan et al 2003, Sheridan 2004

**Table 9 - Comparative space standards: Norway, Sweden and Denmark**

Dwelling	Norway	Sweden	Denmark
One room (m <sup>2</sup> )		47	
Two room (m <sup>2</sup> )	53.9	65	70
Three room (m <sup>2</sup> )	63.6	80	83
Four room (m <sup>2</sup> )	83.6	96	96
Five room (m <sup>2</sup> )			110
Additional	Any room for living in must have a minimum volume of 15m <sup>3</sup> : with a standard ceiling height of 2.4m, this works out at 6.2m <sup>2</sup> as minimum room size	Also set minimum floor areas per room: <ul style="list-style-type: none"> <li>•Living room: 20m<sup>2</sup></li> <li>•Double bedroom: 12m<sup>2</sup></li> <li>•Single bedroom: 7m<sup>2</sup></li> </ul> Also set minimum storage space for clothes: - 2 rooms: 6m <sup>2</sup> 3 rooms: 7m <sup>2</sup> 4 rooms: 8m <sup>2</sup>	Also set some minimum floor areas per room: <ul style="list-style-type: none"> <li>• Living room: 20m<sup>2</sup></li> <li>• Bedroom: 10m<sup>2</sup></li> <li>• Storage: 3m<sup>2</sup></li> <li>• minimum ceiling height to be 2.5m</li> </ul>

Husbanken is the state funding agency for new housing in Norway, providing mortgages to first time buyers and loan finance to housing societies. Dwelling standards are spacious and the average home has 4 habitable rooms (a 2b4P dwelling with kitchen/diner, or a 3b5p with living/diner) in 100m<sup>2</sup>. This is significantly more than the 70-80m<sup>2</sup> that would be provided in this country for that type of dwelling. However, their statistics show a reduction in the average floor space for new dwellings from 121m<sup>2</sup> in 2000 to 100m<sup>2</sup> in 2004. In addition, a key element of Husbanken funding is the achievement of their Universal Design Concept, which is comparable with *Lifetime Homes*

In Sweden standards are set nationally, with local discretion. In many cases these tend to relate to disabled access and functional requirements similar to Standards & Quality. Their National Board for Housing sets standards for dwelling size, accessibility and site utilisation "to promote the availability of good quality housing at reasonable prices".

As well as setting minimum floor area and storage requirements, the Danish standards include recreational area requirements:

- If the plot ratio is more than 60% (being the total building area measured as a percentage against the total site area), then a recreation area should be equivalent to 100% of the floor area.
- If the building is entirely for young people then 50% of the floor area must be for recreation.
- This condition changes, for a plot ratio of 60-110% then recreation area is 50% of floor area, and where it is greater than 110% then recreation area is 30% of floor area.
- There are comprehensive regulations relating to the provision of parking for people with disability, access to the dwelling, and provision of lifts.
- Balconies are not a requirement.

### Other Countries

A comparative study of the housing and planning systems in Germany, Switzerland, Ireland and Australia found that the average size of new build dwellings was:

Germany	109m <sup>2</sup>
Ireland	88 m <sup>2</sup>
Australia	206 m <sup>2</sup>
UK	76 m <sup>2</sup>

Minimum standards for dwellings containing 4 habitable rooms (3 bedrooms) in Scandinavia were as follows:

Norway	86.3 m <sup>2</sup>
Sweden	96.0 m <sup>2</sup>
Denmark	96.0 m <sup>2</sup>

#### 1.3.6 Conclusions on international comparisons

- Studies by Policy Exchange and Liverpool University (for ODPM) indicate that floor space standards in the UK are below the European average. UK standards appear to be near the bottom of the range.
- In some cases, space standards are expressed as floor area, either of the dwelling as a whole or habitable rooms. In others, it is derived from functional criteria based on use of the rooms.
- There is also evidence<sup>9</sup> (less clear) that the differences between space standards in public and private provision are greater in the UK than elsewhere in Europe.
- The market norm in most European countries is to define dwelling size by floor area, whereas in the UK it is by the number of bedrooms. This factor is exacerbated by a greater use of cellular planning and dedicated circulation within dwellings in the UK than elsewhere in Europe.

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<sup>9</sup> Karn & Sheridan

## 1.4 Market and customer demands

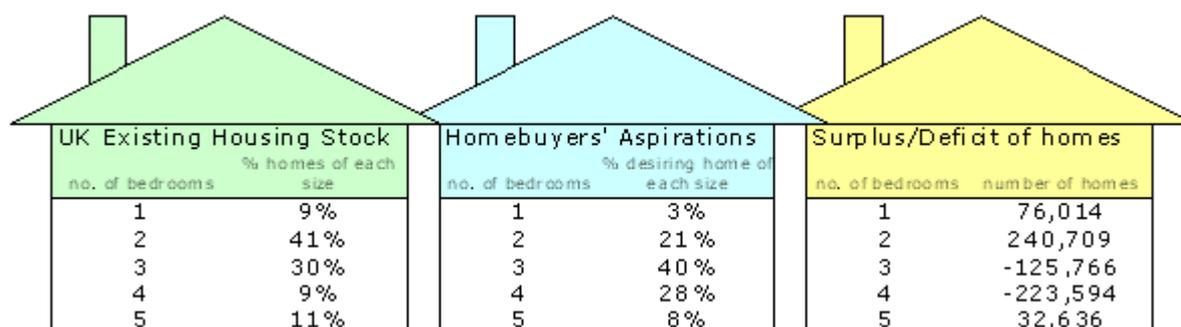
A considerable amount of research has been undertaken in recent years, attempting to find what makes housing popular or desirable. This has included work by JRF, Commission for Architecture and the Built Environment (CABE), Halifax bank and a number of academic institutions.

A number of studies carried out by CABE, Joseph Rowntree Foundation and others have looked at customer choice and preferences in housing design.

In the publication "What Home Buyers Want" (2005), CABE reports on customer expectations:

- New homes were perceived as having smaller rooms, very small bedrooms and no storage space when compared with older houses;
- More living space was preferred, as were fewer but bigger bedrooms;
- For families, kitchens needed to be big enough to accommodate a table for meals and for all lifestage groups this was regarded as the heart of the house;
- Specialised rooms for utilities and computers were also considered desirable;
- The emerging preference is for rooms that are capable of being used for a number of functions rather than a large number of bedrooms and this would mean providing more living space.

Research from the property website *propertyfinder.com* highlights the mismatch between homebuyers aspirations and existing housing stock. The website analysed the mix of housing in the UK and then asked people looking to move how many bedrooms they hoped to have in their new home. The survey results show a startling mismatch between the homes that exist and the homes that people actually want to live in (Illustration 2).



**Illustration 2**

In particular there appears to be a significant existing oversupply of one-bedroom and (particularly) two-bedroom accommodation and five bedroom accommodation, with a significant undersupply of three and four-bedroom accommodation. Unfortunately this

research did not look at regional attitudes, and we therefore do not know whether the clear picture portrayed by this national survey is a true reflection of the London position. However, evidence from elsewhere indicates that London residents and preferences are not significantly different from other people's, and that the difference in the patterns of residential occupation are due to the more intense constraints upon London residents than on others. In other words, there is no reason to suppose that Londoners' aspirations are different from other people's, only that their opportunities may be more limited (see below). CABA's research provides similar results with homebuyers reporting a preference for houses, either detached or semi-detached, and a general aversion to flats by most people.

A common theme is the enduring attraction of older properties. Many of the older properties (built before 1900 which have survived slum clearance programmes) have significantly more generous space standards, and with that comes the ability to change the use of rooms as lifestyles change.

However, research<sup>10</sup> also indicates that homebuyers recognise that choice in private housing is limited by affordability, regulation and location. Evidence suggests that there is a different balance of the criteria in London, compared with other parts of the country i.e. trading off space and location. The boom in "city living" in a number of city centres around the UK has increased significantly the number of people living in city centres outside London, although recent research by Institute for Public Policy Research (IPPR) suggests that the vast majority of residents in these locations are younger professionals at a particular stage in their housing career. Outside London, there is very limited provision for high density family housing in city centres.

In conclusion, there seems to be a mis-match between homebuyers aspirations for dwelling type (house/flat), number of bedrooms and amount of space provided for living in and storage. In addition market demands appear to be pushing in the direction of increased space and flexibility, and the ability for more rooms to be "multi-use" rather than rooms that are designed so as to be capable of only allowing one use such as bedroom. This suggests that dwellings developed to very "tight" space standards will be seen as less attractive (and therefore less valuable) than dwellings with more space. Whether this differential is sufficiently significant to make the value of the larger dwellings (in terms of £ft<sup>2</sup>) greater than those of the small dwellings is not currently known. Sales value in terms of £ft<sup>2</sup> is the major driver affecting private-sector design, and so gaining a greater understanding of the link between space and sales value per square foot may significantly assist the GLA in its impact assessment of policies on space standards. This suggestion is included in our Recommended Actions in Section 9.

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<sup>10</sup> Tunstall, Kintrea, Leishman, Burdett, CABA

## **1.5 Stakeholders Views**

A consolidated summary of the comments of the stakeholders interviewed is included at Appendix 4.

From these interviews, the following points can be elucidated:

**1.5.1 Dwelling mix trends:** the interviewees experience reflected the trends identified on page 29, namely the increase in the production of flats. Of particular interest was David Birkbeck's comments that the dwelling mix and typography is influenced by the availability of institutional funds for investment. This occurs because housebuilders' financial return is often assessed on the amount of capital tied up in work in progress. Developing houses allows housebuilders to match the rate of construction (and therefore the use of capital) more closely to the rate of sales. The development of blocks of flats is relatively capital-intensive and represents a greater risk. However, the availability of institutional funds in the last 10 years willing to commit to the purchase prior to construction has encouraged the development of blocks of flats.

**1.5.2 Internal floor area trends:** there is a common perception among stakeholders that in most niches in the residential markets, dwelling sizes have either remained the same or shrunk. Shrinkage tends to have occurred in the affordable housing sector whilst in the private sector dwelling sizes have either shrunk or, where they have been maintained, more rooms have been carved out of space (greater numbers of ensuite facilities etc). In the future, however, even private sector dwellings may shrink, exacerbated by the disparity between incomes and property prices leading to market pressures to develop cheaper (i.e. smaller) starter units.

**1.5.3 Floor areas and shapes of rooms:** again, there seems to be a consensus that designs have moved towards more open-plan rather than internal separation of rooms. With room sizes shrinking in the private sector (as noted in the previous comments) this may be to give an impression of space even in very small floor areas. This appears to have been coupled with a moved towards L-shaped rooms and (in the private sector) sometimes larger volumes.

**1.5.4 How space is used in the home:** the move to more open-plan arrangements emphasises the need for private personal space, modifying the traditionally-held view of the role of the bedroom. As well as being a room suitable for sleeping, it also needs to allow space for private study and recreation, a retreat from the noise and forced social interaction that comes from more open-plan living. In addition, there is continuing uncertainty over whether the kitchen space needs to be maintained, can be reduced (are meals only ever cooked in a microwave or are cookers and food preparation space still needed?), or (with households using more appliances) needs to be larger.

**1.5.5 The provision & distribution of storage space:** again there was a consensus that is the amount of space provided within the dwelling for general storage has diminished considerably -DB quantified this as a reduction from c. 10% to c. 3% of dwelling floor area. Increasingly roof spaces are used as bedrooms, further diminishing storage space. Lack of storage space within the dwelling was seen as a major issue.

**1.5.6 How storage space is used:** Increasingly, a garage is used as the main storage area as there is no space within the dwelling. This has obvious implications where garages are not provided (affordable housing and flats and some houses in the private sector).

**1.5.7 How external space for play / recreation is provided:** responses from the different stakeholders reflected their different drivers, but seem to amount to a consistent pattern of pressure upon external play/recreation space. DB's comments suggest that sufficiently-large individual balconies may be better than a communal garden challenges some traditional thinking, whilst JS's comments indicate that external balcony space is vulnerable to being "moved inside" if it permits the dwelling to accommodate another bedroom, thus increasing the household size whilst reducing the available private external space. This positive correlation between "tight" internal space and external space was also noted by the HC.

**1.5.8 Health or well-being of the occupants: (Do internal space standards & external recreational space standards affect the health or well-being of the occupants?)** all respondents who commented felt that there is a link, particularly the need for members of a household to have private space from one another (DB). RC cited evidence about potential damage to mental health, and JS cited reduced educational attainment and links to antisocial behaviour in children sharing bedrooms.

**1.5.9 Design factors affecting well-being: (What factors in dwelling design might affect resident well-being?)** The most commonly cited factors are sound insulation (between dwellings, and within the dwelling) and the availability of personal private space. Other factors are adaptability, storage space, visitor space, overlooking or overshadowing of habitable rooms (although this conflicts with DB's response to the next question).

**1.5.10 Estate design factors affecting well-being: (What factors in estate design might affect resident well-being?)** the main factors cited work car parking, overlooking of rooms and gardens (visual privacy) and personal security. DB's research seems to contradict the perception of other respondents on whether or not residents object to overlooking, while SC's comments highlighted the different parking issues of the level of provision provided for residents of needs, and how commuter parking is best managed. Other factors include waste disposal and lift access to upper floors.

**1.5.11 Using rooms for different functions: (Research indicates residents prefer to be able to use rooms for different functions. What is your response to this?)** All respondents agreed, and there was a common view that bedrooms now need to be multi-functional.

**1.5.12 Flight to the Suburbs? (There is a perception that families who are able choose are choosing to move to suburbs as that is the only place to obtain their preferred form of accommodation – houses with gardens. Do you think this is an accurate or inaccurate perception?)** There was general disagreement with this statement either because gardens were felt to be less important than space in the home

(JS) or because other factors such as schools and fear of crime were considered to be more important than either (several respondents).

**1.5.13 Counteraction? (If the perception is accurate, what could be done, in terms of dwelling design, to stop or reverse this migration?)** Not all respondents replied as the perception was felt to be inaccurate by several. However, responses included more space in the dwelling, provision of private external space and improvements in non-dwelling design e.g. security etc.

**1.5.14 Typical lifespan of dwellings? (What do you think is the typical lifespan of the flats being developed now, before the blocks need significant remodelling or redevelopment? What is the typical lifespan of the houses?)**

This question tended not to be answered specifically but responses fell into two categories. Modern construction methods with wider spans between structural walls was seen as helpful to future remodelling, and thus extending the life of the buildings and reducing their whole life costs. However, the move to smaller dwellings (bedsits, one-bedroom flats, two-bedroom flats with smaller rooms) was felt to build-in the need for remodelling earlier than would be the case if the dwellings were larger. The answer would therefore appear to depend upon the extent to which modern construction methods employed in blocks of flats will indeed facilitate easy re-modelling in the future.

### **1.5.15 Conclusions**

The stakeholders interviewed have highlighted the trend towards two-bedroom flats and falling space standards, coupled with a high incidence of open-plan designs (probably to disguise the lack of space).

The lack of privacy arising from open-plan designs was seen as a major issue, meaning that bedrooms in particular need to be multifunctional (places for privacy, study and recreation, not just sleeping, dressing etc). It was noted that a lack of internal recreational space is often associated with inadequate external recreational space.

The lack of internal storage space was also seen as a major issue.

## **1.6 Initial findings/conclusions on trends in dwelling size and type**

The literature review and stakeholder comments shows in very general terms that there have been many changes over the years in approaches to space standards and customer preferences, but that a number of common themes recur:

- A preference from customers for traditional style, low rise housing: CABE's work finds a strong preference amongst families and older people for detached houses, and detached or semi-detached houses amongst first time buyers. It is only pressures of affordability that drives purchasers towards terraced housing or flats.
- Such dwellings are sustainable, to the extent that and only for as long as people are unable to afford their preferred form of accommodation. However, being forced to accept accommodation that is disliked will not help the wellbeing of the residents.
- Home buyers want
  - houses rather than flats,
  - larger rooms and
  - more storage.
- In the absence of controls, developers (both public and private sector) will tend to reduce the size of dwellings being developed whilst trying to minimise any reduction in value: studies by BCIS, CABE, etc indicate a pattern of increased "cramming"<sup>11</sup> of rooms into dwellings leading to smaller rooms and significant reductions in storage space.
- The amount of space in the dwelling is one of a number of important factors that together constitute "good design". Work by CABE suggests that issues such as parking and street design are also very important to consumers in London and the South East.
- People are prepared to accept the trade-off between smaller and denser homes, when other factors and advantages are present.
- This suggests that careful consideration should be given to trade offs between dwelling size and site layout/density. There may be opportunities for "win win" by increasing both dwelling size and density: it is most definitely not either/or.
- There are disparities and inconsistencies amongst the statistical datasets that are available.
- Data is not collected on dwelling or rooms sizes as part of the process of obtaining planning permissions or Building Control approval, and there is therefore very limited data available on these dwelling characteristics apart from specifically-commissioned research which is patchy.

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<sup>11</sup> There are a number of explanations for the increase in the number of bedrooms. The first is the marketing of housing by bedroom as opposed to floor-space. There is a growing expectation that each child should have a separate bedroom, and that one or more bedrooms should have ensuite facilities. In addition it is likely that homeowners aspire to purchase homes with an extra room to use as a spare bedroom, storage or home office. With the cost of housing production being primarily related to dwelling floor area, all other factors being equal, housebuilders will meet such aspirations by providing as many separate rooms as possible within a given floor area. This "room cramming" approach inevitably results in smaller rooms with a consequent reduction in each rooms usefulness and flexibility.

## **2 IMPACT OF CHANGES IN PROCUREMENT METHODS**

We have been unable to find any research which looks for any links between procurement method and space standards.

However, a recent JRF study, *Understanding planning gain- what works?* (Watson 2006) in Yorkshire has looked at the quality of housing being procured by housing associations through grant-free Section 106 Agreements i.e. private sector housing where the Housing association has had no control over the design or specification standards. This work shows that (*inter alia*) these dwellings fall significantly short of Housing Corporation Scheme Development Standards. Specifically, (and most relevantly given the mix of dwelling types currently being produced in London) flats were consistently approximately 10% smaller than affordable housing standards.

### 3 CASE STUDY INFORMATION

We experienced considerable difficulty in obtaining Case study information which has been disappointing, although not unexpected. The tight project timescale and budget did not allow us to obtain a reasonably representative sample of developments from individual Borough's and we therefore sought to obtain a range of standard dwelling types from developers. Unfortunately, most developers were not in a position to assist and in some cases, unwilling to assist. The Home Builders Federation also specified that they would not participate in this exercise, as set out in their letter to HATC on 17<sup>th</sup> February 2006.

However, we were able to obtain some information on projects in two London boroughs Newham and Greenwich as well as dwelling information from marketing sources provided by two developers advertising on their web sites. In addition two other developers helpfully provided typical dwelling plans.

Only house types that are designed for private sector use were analysed, as affordable housing has to comply with space standards as a condition of funding.

The standard dwelling ranges that have recently been developed by two developers to appeal to first-time buyers were generally rather small, whilst one of the schemes currently being marketed included dwellings that were significantly larger than other equivalents. Some of these dwellings were penthouses of a very large area. These were excluded from the case study data.

With those very large dwellings treated as outliers, and therefore disregarded, then the range of sizes, and average dwelling size for different numbers of bed spaces are as shown in Table 10:

**Table 10**

	No.	Min	Mean	Max
		-----m <sup>2</sup> -----		
1 person	2	25	28	31
2 person	8	31	42	48
3 person	9	51	60	66
4 person	10	62	67	81
5 person	7	73	92	143
6 person	2	101	113	125
Total	38			

These floor areas appear low compared to some other developments which have been identified through an on-line trawl but for which there has been insufficient time to include in the case study spreadsheets and analyse.

The case study data is included at Appendix 5.

## **4 MENTAL HEALTH & WELL-BEING: the Relationship with Dwelling Space**

### **4.1 New Zealand Ministry of Social Policy (2001)**

In a literature review prepared for the New Zealand Ministry of Social Policy on crowding, Grey (2001) quotes the World Health Organisation (WHO) Expert Committee on the Public Health Aspects of Housing, which refers to both occupancy standards and space requirements, which are included in most housing regulations. The Committee states that:

*"One of the fundamentals of the healthful residential environment should be safe and structurally sound, adequately maintained, separate, self-contained dwelling unit for each household so desired, with each dwelling unit providing at least the following:*

- 1) A sufficient number of rooms, usable floor area and volume of enclosed space to satisfy human requirements for health and for family life, consistent with the prevailing cultural and social pattern of that region and so utilised that living or sleeping rooms are not overcrowded*
- 2) At least a minimum degree of desired privacy:*
  - a) For individual persons within the household*
  - b) for members of the households against undue disturbance by external factors*
- 3) Suitable separation of rooms as used for:*
  - a) sleeping by adolescent and adult members of the opposite sex except husband-and-wife*
  - b) Housing of domestic animals apart from the living room of dwelling unit.*

*These needs can be expressed in terms of space requirements to perform household activities and/or occupancy standards".*

Grey also highlights the distinction between "density" and "crowding" *"The term "crowding is used in this document rather than the frequently used other term of "overcrowding. Density is an objective measure and has no positive or negative connotations. Crowding has definite negative connotations. The distinction is important 'because the same objective density may or may not be uncomfortable depending upon the situation. High-density doesn't always lead to crowding' (Jazwinski 1998). Crowding generally refers to people's psychological response to density. Crowding standards change over time as economic conditions and social expectations change."*

It is worth noting that whilst different countries have different definitions of what constitutes an unacceptable level of crowding, the phenomenon of crowding is a spectrum rather than a trigger-point. It will be a function of the ratio of people to separate rooms, the sizes of those rooms, and the amount of time those people spend together within the dwelling. Research has focused on the effects of crowding at the more extreme end of a spectrum. Grey goes on to cite other research indicating the effects of crowding on children:

*"Maxwell (1995) studied 114 children, all aged four, in daycare and Head Start classes in New York. She found that pre-schoolers who lived in crowded homes and went to crowded daycare centres suffered more severe behavioural and cognitive development problems than children in just one of these crowded settings."*

and

*"Data collected using a large-scale household survey into areas of West Belfast revealed an association between crowding and psychological distress among children (Blackman et al 1989)."*

Grey cites Altman (1975) who summarises some of the mechanisms through which psychological distress may occur.

*"As the number of persons within homes increases:*

- \* The number of social contacts increases*
- \* Privacy decreases*
- \* The number of unwanted social interactions increases*
- \* Parents may be unable to monitor the children's behaviour*
- \* Access to simple goals such as heating or watching television may be frustrated*
- \* Activities such as using the bathroom have to be coordinated with others*
- \* Sick persons may not receive the care they require.*

*Pressures arising from these situations may lead to interpersonal aggression, withdrawal from the family, sexually deviant behaviour, psychological distress or physical illness."*

*Grey's conclusion, in 2001, was that the "debate about the relationship between crowding and health is longstanding and inconclusive. The complexity of relationships makes it difficult to separate the effects of crowding from confounding variables such as the physical condition and type of housing, socio-economic factors and lifestyle choices. Issues of measurement and other methodological difficulties limits the ability to establish causality. Many researchers are left concluding that in practice it is not possible to move beyond the level of statistical association."*

## **4.2 Journal of Social Issues (2003)**

In 2003 the Journal of Social Issues (a Journal of the Society for the Psychological Study of Social Issues) devoted an issue to housing and health, entitled "The Residential Context of Health" (volume 59 number 3, 2003). The health issues examined were mental health rather than physical health. In particular, the Evans, Wells and Moch article "Housing and Mental Health: a Review of the Evidence and a Methodological and Conceptual Critique" provides an additional and updated literature review from that offered by Grey (2001).

Evans, Wells and Moch (2003) identify a number of housing design factors which influence mental health. Citing other research they observe that:

- \* "The effects of crowding on psychological distress ...are elevated by inadequate housing"*
- \* The negative psychological impacts of residential crowding are amplified among families living on upper floor levels"*
- \* "Children living in more crowded or noisier homes suffer fewer ill effects if they have a room where they can spend time alone"*

- ★ *"Parents with inadequate privacy may be less willing or able to socially engage their children. Both crowding and noise are negatively associated with parental responsiveness to young children"*
- ★ *"Size and quality of space can restrict flexibility, disallowing multiple uses of space, particularly important when the amount of space is limited. Difficulties in regulating social interaction, inability to control and regulate access to space, and lack of jurisdiction of the immediate environment might all contribute to feelings of low self-efficacy"*
- ★ *"The arrangement of rooms within a home can influence occupant's ability to control social interaction. Depth (number of interconnecting spaces) and permeability (number of interconnecting routes) influenced social stimulation. Adults in crowded homes, for example, suffer less psychological distress when the housing has greater depth".*
- ★ *"Several lines of evidence converge on characteristics of housing design that can facilitate or inhibit the formation and maintenance of social ties. These include (within the home) the provision of spaces where children can escape from over-crowding and other chaotic living conditions. This may extenuate impacts of suboptimal housing conditions. Noise, unwanted social interaction, and constant interruption all contribute to instability and unpredictably in young children's lives"*
- ★ *"Housing does matter for psychological health. This is particularly true for low income families with young children...highrise, multiple-family dwellings are inimical to families with preschool children. This appears to occur because of two factors:
 
  - *social isolation of mothers and*
  - *inadequate play opportunities for children."**
- ★ *"When economic policies require construction of such housing, efforts should be made to reduce the height and overall size of such structures. Particular attention should be paid to spaces to support neighbouring and informal contact with other residents and for adequate playspaces for children".*

In an article considering the specific physical and social environmental conditions where a number of separate American households share a dwelling and associated costs Ahrentzen identifies spatial properties of dwellings which make them more suitable for sharing:

- a) *"interior spaciousness;*
- b) *privacy of the circulation paths within the home (i.e. position of staircases and hallways);*
- c) *having multiple living spaces (dining-room, living room, kitchen) and the greater degree of enclosure of these living spaces through the use of walls, doors and transition spaces; and*
- d) *the relative position of the bedrooms."*

She goes on to say:

*"Additional environmental factors to consider that have been examined in other studies of privacy and crowding include:*

- \* room configuration (e.g. long, rectangular rooms provide more opportunities for distancing of separate, defined areas than do square rooms of the same square footage (Mostoller, 1989);
- \* open plan housing in comparison to semiopen and closed designs, all the same square footage (eg Gruel, 1993 found that respondents perceived greater crowding for household-orientated social interaction in scaled house models with an open plan than the other two types) and
- \* availability of views and natural lighting (bright spaces appear a larger; also views may provide opportunities to mentally distance oneself from the present condition; e.g. Mandel Baron & Fisher, 1980)."

### **4.3 SHARP (University of Glasgow 2005)**

The University of Glasgow is currently engaged in the Scottish Health, Housing And Regeneration Project (SHARP), and produced a qualitative report in 2005

This reports looked at residents views about how their new houses provided under a regeneration programme influenced their health and sense of well-being. The report says:

- \* *"Having a bigger house was important to residents. More space, whether it manifested itself in bigger rooms, more rooms, or just "more space"; or "a nice size" was a distinct benefit for many. More rooms were associated with less reported stress and fewer family fights. This particularly affected families with children."*
- \* *"One clear benefit for such households was a chance to let one or more of their children have rooms to themselves rather than having to share with another sibling, sometimes of the opposite sex. The issue of children's space was very important for the respondents. The main space that was defined as the children's own was their bedroom and it was especially important where new housing meant children of different genders who were moving into their teenage years could have their own room."*
- \* *"A larger kitchen could also have significant impact, with enough room for tumble dryers and washing machines or for a table which meant that the family didn't have to eat from their laps in the sitting-room."*
- \* *"Separate rooms for individual members of the family and rooms associated with a particular activity (e.g. the dining-room or an attic converted to a playroom) meant much to respondents who found that their family members had space to express their individuality, and spaces in which they could find privacy when they needed time on their own, or wanted to share time with their peers away from other family members. This seemed to be associated with less stress and improved familial relations."*
- \* *"For adults, gardens provided space in which they could sit out and relax or choose to socialise with their neighbours without intruding too much into private space or time. Socialisation opportunities were important."*
- \* *"The people interviewed during the course of this research seemed to regard gardens as almost another room and definitely an extension of their personal space. Importantly it was a space that would not be shared by the neighbours; gardens were regarded very territorially."*

## **4.4 Other Sources**

In the ALG's "Overcrowding: Key Facts" (ALG, May 2004) they say "Overcrowding has strong links with symptoms of poorer health such as meningitis, H. Pylori infection and respiratory conditions in children, and TB for adults. Links to educational performance have been less intensively researched in this country, but studies in France and New York have found links between overcrowding and lower educational attainment" citing Goux,D, Maurin,E (2003)*The effect of overcrowded housing on children's performance at school*, Paris, INEE and Citizens Housing and Planning Council (2001), 'Housing and Schooling'. The Urban Prospect, 7.2

In late 2003, the Office of the Deputy Prime Minister commissioned the Centre for Comparative Housing Research and the Health Policy Research Unit at De Montfort University, Leicester to review the evidence available at that time on the link between overcrowding and health and educational attainment. In "The Impact of Overcrowding on Health and Education: A Review of the Evidence and Literature" (ODPM 2004) De Montford's conclusions included the following:

- *There is mixed evidence of a relationship between overcrowding and mental health.*
- *Eighteen studies were found on overcrowding, childhood development, growth and education. There is limited evidence of an effect in these areas.*
- **Social and emotional development:** *There is some limited evidence to support a relationship between overcrowding and social and emotional development in children although it is not clear whether this is independent of confounding factors.*
- *The very limited evidence available points to an independent relationship between overcrowding and educational attainment. This conclusion is drawn mainly from a single study in France and although it is supported by earlier research, it needs to be treated with care.*

## **4.5 Conclusions**

There is much stronger evidence for links between the physical health and well-being of residents, and the condition of housing that they occupy, than there is between the mental health and well-being of residents and their housing. In particular, the evidence supporting a link between internal space standards and mental health and well-being is patchy. As Gray (2001) & ODPM (2004) note, it is difficult for causative links to be clearly identified, although there does appear to be associative links.

As noted earlier, research on the effects of space standards on residents had tended (understandably) to focus on the further end of the spectrum of crowding. However, it seems reasonable to assume that the pressures referred to by Altman (1975) are not simply triggered at some level of crowding, but are progressive. This is borne out by the qualitative research undertaken by Ahrentzen in the US and the University of Glasgow in the SHARP project, where a move from "tight" space standards to dwellings that comply with current Scottish Building Standards was reported as helping significantly reduce family tensions.

There also seems to be supporting evidence for the needs for both adults and children to have external recreational areas in which they feel safe and which they see as within their "ownership". In a market where the main typography being developed is blocks of

flats, this poses a particular challenge. Successful communal gardens and play areas are heavily dependent upon high-quality design, supported by high-quality management arrangements. As well as being potentially expensive, this is, self evidently, vulnerable to a reduction in management performance at some time in the future. This can then result in the communal areas failing to perform their function of supporting community cohesion and instead becoming areas that are corrosive to community cohesion, if local residents see them as the locus of crime and/or antisocial behaviour. An alternative approach is to provide private balconies, but they would then need to be large enough to fulfil their recreational function (as opposed to having to be used for external storage).

The main issue seems to be that the individuals within the dwelling need sufficient private space to be able to undertake the normal functions of living together with (crucially) space for private recreational activity within the home and outside the home. In accommodation designed for households of more than one or two people, this implies that there are either two separate living areas, or the bedrooms are large enough to allow the occupant(s) to use them for their private recreational activities or study/work as well as places for sleeping, dressing etc. In addition residents need access to suitable private external space which (ideally) allows occasional (controlled) social interaction such as the equivalent to a conversation across a garden fence.

## 5 MECHANISMS FOR SETTING SPACE STANDARDS

### **5.1 Mechanisms Used in England to Date**

As demonstrated in Section 1.1.8 a number of attempts have been made over the last 90 years to define minimum space standards in public sector provision in England. The most recent widely-recognised standard in England remains the Parker Morris report (1961), which was unusual in so far as its recommendations were also expected to apply to private housing as well as public housing.

Whilst space standards did seem to rise after the introduction of the Parker Morris report and the associated guidance in Design Bulletin 6, it rapidly tailed off in the private sector. Parker Morris was effectively abandoned in the public sector in 1981 when it no longer formed the basis for obtaining funding approvals for public or housing association housing.

For a few years in the early 1980s the NHBC provided some basic functionally-based space requirements, stating what appliances etc should be allowed for in kitchens and how much space to allow in bedrooms. There were also requirements for storage space. However, the standards proved unpopular and were withdrawn in 1985. It would have been difficult for the NHBC, as a membership-based organisation as well as an insurer, to try to enforce standards that were unpopular with the membership and which did not reduce the risks faced by the NHBC.

Building Regulations in England have never addressed questions of space standards. Indeed, over the last 20 years central control has relaxed with a move away from prescriptive/deemed-to-satisfy requirements to a greater emphasis on health, safety and energy efficiency. However, it is worth noting that the issue of internal space now appears to be entering the domain of Building Regulations with the proposal to include *Lifetime Homes* as an optional part of the draft Code for Sustainable Homes. The Code is being developed as a clear signpost of future trends in building regulations.

Whilst (until recently) space standards have not been included in Building Regulations, neither was this issue seen as relevant to planning. Central government advice exemplified by the 1992 edition of PPG3 (Housing) had explicitly stated that standards should be set by the market not through the planning system.

Public sector funding rules were therefore the only thing that significantly affected space standards. After 1981 when Parker Morris was no longer a requirement for publicly-funded projects the main influence was the Housing Corporation's cost guidelines, Total Indicative Costs (1981-1989) and Total Cost Indicators (1989-2006).

The Housing Corporation's *Scheme Development Standards* also set minimum space standards although for many years these were capable of a wide interpretation. After the publication of the NHF's *Guide to Standards & Quality* (1998) *Scheme Development Standards* were amended to make compliance with the internal space standards in the *Guide to Standards & Quality* a condition of funding. JRF's *Lifetime Homes* standards have never been a condition of funding by the Housing Corporation, but only a recommended standard.

Despite the negative government guidance prior to 2004, a number of local planning authorities (particularly in London) have tried to implement space standards. This is principally been via Supplementary Planning Guidance and informal advice notes (see Appendix 3). The experience has been mixed but rarely have detailed space standards proved critical to planning decisions, especially on appeal. More recently some

authorities have sought to have a proportion of dwellings built to *Lifetime Homes* standards, which include some implied minimum space standards for houses, but has little effect on space standards in flats.

The Planning and Compulsory Purchase Act (2004), however, represents an important watershed, and the resulting new system of spatial planning offers greater scope to address the broader interests of the community and quality of life issues. The new system is only just bedding down and experience is therefore very limited.

England has therefore used the following vehicles for setting minimum space standards:

- funding conditions for publicly-funded developments
- insurance policy requirements (for all developments)

Design guidance has been issued by the public and voluntary sector with the aim of influencing all developments, but this has had a very limited effect on any sector unless the guidance is adopted as a funding condition.

England has not used the following vehicles to set minimum space standards:

- the planning system (until recently)
- Building Regulations
- funding conditions for privately-funded developments (e.g. mortgage lenders setting minimum standards before they will lend against a property)

## **5.2 Mechanisms Used Elsewhere**

Comparison of published standards between England and other countries in Europe (including Scotland) suggest that not only are standards higher in other countries but that greater regulation exists to achieve those standards.

### **5.2.1 Scotland**

Scottish Building Regulations were introduced in 1963, and included space standards brought forward from the Scottish Housing Handbook: Part 3 (1956). These standards gave minimum room areas, aggregate areas and storage volume, relating to the number of apartments (rooms) in the dwelling.

In 1968 new design guidance was issued in the New Scottish Housing Handbook, Bulletin 1: Metric Space Standards, which were consistent with Parker Morris and DB6. The new guidance included minimum space for the dwelling overall and for storage, dependant upon the number of bed-spaces provided, but maintained that the size of individual rooms should be dictated by the way the room was to be used.

In 1971 the space requirements of Bulletin 1 were incorporated into the Building Regulations. In 1987 the space standards were removed from the Building Regulations, as part of general government policy at that time to deregulate. However, the 1990 revision to the Scottish Building Regulations re-introduced space standards, by a functional requirement, viz furniture/fittings plus activity spaces to use them. This is similar to the DB6 approach and to later work such as the *Guide to Standards & Quality*. Activity spaces, furniture schedules and dimensions are all set out. In addition, the regulations state that each dwelling must have a kitchen, containing certain equipment, space to use it, worktop dimensions and storage volumes.

The Scottish Building Standards Agency is currently consulting on new space standards to be incorporated into the Scottish Building Regulations, which develop this functional approach, but at the time of writing they are not finalised.

Compliance with Bulletin 1 space standards remained a requirement of publicly funded housing. Even when Housing for Varying Needs (another functionally based standard similar to *Lifetime Homes*) was published by Communities Scotland, many local authorities continued to tie funding to Bulletin 1 space standards.

In a significant number of local authorities, practice has been to require new housing to be built to Bulletin 1 standards, both for public and private sector housing. Whilst we can find no evidence that this has been the subject of any specific policy by the Scottish Executive, or that any evaluation has been carried out to establish the value for money of such policies, an exercise is currently underway to do that in respect of proposed amendments to the Building Regulations.

### **5.2.2 Norway**

In Norway their Planning and Building Regulations are combined in the Planning and Building Act 1997. Therefore, one piece of legislation covers planning, site utilisation, water usage, accessibility, dwelling performance and dwelling standards. Whilst there are no space standards specifically included in the legislation, there are requirements to facilitate access by disabled people (the Universal Design standards), which have much in common with *Lifetime Homes*.

However, as noted earlier the state funding agency for new housing in Norway, Husbanken, sets minimum space standards, which significantly influences both private and public sector developments.

### **5.2.3 Sweden**

In Sweden standards are set nationally, with local discretion. In many cases these tend to relate to disabled access and functional requirements similar to Standards & Quality. Their National Board for Housing sets standards for dwelling size, accessibility and site utilisation "to promote the availability of good quality housing at reasonable prices".

Planning and Building Regulations (which includes space standards for room sizes and storage) are combined into a Building Permit which is issued by a Local Building Committee. Standards are therefore set through the equivalent of the planning and Building Control process.

### **5.2.4 Denmark**

- There is a wide range of controls in housing, achieved by a combination of regulation and financial incentives.

### **5.2.5 Conclusions on international comparisons**

- In other European countries, space standards are promoted by either fiscal

- incentives or regulatory requirements.
- In most other countries in Europe, Planning and Building Regulation functions are combined into a single Building Permit, the standards for which in many countries includes space standards.

## **5.3 Current Options**

### **5.3.1 Introduction**

As noted in Section 5.1 the Building Regulations framework in England does not include reference to dwelling space standards. Central control was relaxed in the 1980s with Building Regulations moving from a prescriptive/deemed-to-satisfy approach, to a greater emphasis on health, safety and energy efficiency. However, it is worth noting that space standards have been included in Scottish Building Standards for some time.

A number of London boroughs have set housing space standards in Supplementary Planning Guidance, but as noted in Tetlow King's report that accompanies this report, these have had relatively little weight in planning terms. They have been offset by central government guidance through the 2000 edition of PPG3 which said that the planning system should not try to set of such standards.

However, central government's position seems to be changing in both these arenas.

### **5.3.2 Code for Sustainable Homes**

In the spring of 2005 the Construction Industry Research and Information Association (CIRIA), on behalf of Office of the Deputy Prime Minister (ODPM), conducted a series of workshops consulting with industry practitioners and academics on the establishment of a *Code for Sustainable Buildings*. HATC Ltd facilitated one of these workshops (on Flexibility and Adaptability), and it was our understanding at that time that the purpose of the Code was to establish a series of voluntary standards for the industry that would indicate future changes to the Building Regulations. In other words, that the content of the voluntary *Code* would flag what standards would become mandatory after a few years.

The housing sector was identified as the first part of the construction sector to which a *Code* should apply, and the ODPM has recently consulted with the industry on the introduction of a *Code for Sustainable Homes*. The proposed *Code* consists of six essential standards and a further six optional standards, one of which is *Lifetime Homes*. Another is the provision of private or semiprivate external space.

Thus, there are early indications that the Government perceives the provision of adequate space within the dwelling and private or semiprivate external space as important for long term sustainability, and is considering including some standards to this effect in the Buildings Regulations framework.

### **5.3.3 Planning and Compulsory Purchase Act 2004<sup>12</sup>**

The planning system has always encompassed residential amenity as a matter of fundamental concern but the application of specific space standards has largely been eschewed. Between 1980 and 2004 Government advice specifically discouraged such an approach. External standards have been applied more frequently than internal standards. Whilst some local authorities (especially London boroughs) have maintained

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<sup>12</sup> adapted from the Conclusion in Tetlow Kings report.

detailed planning policies these are largely confined to advice notes/SPGs to which they have been unable to attach much weight (details at Appendix 3).

The London Plan (February 2004) and the Planning and Compulsory Purchase Act 2004 represent a watershed. There can be little doubt that space standards are now in principle capable of being considered a '*material planning consideration*' and a component of '*sustainable development*'.

PPS1, PPS12 and draft PPS3 provide helpful recent government advice within the framework of the new planning system. Space standards are capable of being a key component in delivering government aspirations regarding

- quality of life;
- ensuring decent homes for all;
- maximising densities;
- providing an appropriate mix of house types capable of meeting demonstrated strategic and local needs;
- providing high quality residential environments;
- delivering sustainable design and construction.

The success of the GLA in incorporating a requirement for new developments to be built to Lifetime Home standards as an enforceable policy further supports the view that residential space standards could be set in and enforced through the planning system. However, whilst the current planning system provides scope for the application of space standards in general, a substantive case still needs to be made for their inclusion within the review of the London Plan.

## 6 PROPOSALS

### **6.1 What drives internal space standards?**

#### **6.1.1 Basic Internal Functionality**

Drawing on the Stakeholders' comments and the review of literature on mental health and well-being, and previous work undertaken by the BRE<sup>13</sup> and the Joseph Rowntree Foundation / National Housing Federation<sup>14</sup>, we suggest the following factors will determine whether a dwelling has sufficient internal space for the designed level of occupancy:

- 1) space for the furniture & equipment needed by residents (including occasional visitors)<sup>15</sup>
- 2) space to access / use the furniture & equipment, doors and windows
- 3) space to move around the home among the furniture & equipment
- 4) space to undertake normal living activities that do not just use furniture:
  - a) washing
  - b) dressing
  - c) cooking
  - d) eating
  - e) playing
  - f) socialising
- 5) space for storage of "clean and dry" items on shelves (linen, boxed up possessions, mops, hoover etc)
- 6) space for "dirty" storage such as bicycles
- 7) space to avoid feeling "cramped"
- 8) Sufficient separation of rooms to allow the required level of privacy

All except points 7 & 8 are capable of being reasonably objectively assessed.

Point 7 is primarily a matter of expectation and habituation. It is therefore ignored.

Point 8 - the degree of partitioning of spaces within the dwelling - is something that can change over the lifetime of the dwelling, so long as there is sufficient space overall. Designs that "work" when rooms are all separate will clearly "work" if the dwelling is converted to open-plan. The converse is not necessarily true.

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<sup>13</sup> Housing Design Handbook 1993

<sup>14</sup> The Guide to Standards & Quality, 1998

<sup>15</sup> Whilst the NHF's Standards & Quality reflected changes in lifestyles and kitchen equipment from the 1960s to the 1990s, those changes have continued in the last ten years, for example increased use of electronic equipment, proliferation of TVs, PCs, computer games and the apparent reduction in the occasions the household takes meals around a dining table. A "functional" approach to space must therefore consider how dwellings and rooms are being used, and how they are likely to be used in the future.

### **6.1.2 Intensity of Use**

How intensively dwellings are used by the occupants also determines whether the dwelling of a certain size is likely to meet the needs of the residents. Intensity of use is influenced by two factors:

1. level of occupancy (occupied to the full designed occupancy or not i.e having spare rooms)
2. duration of occupancy which is itself driven by two factors:
  - a. periodically used accommodation such as pieds-a-terre, holiday homes etc
  - b. daily residence pattern of occupants (using the dwelling as dormitory accommodation only, or residing in the accommodation day and night)

Taking these in turn:

- 1) There is no way of knowing what the level of occupancy will be over the life of the property; it may be lower than the designed occupancy at certain times, while at other times it might be higher. This has been true of much of the London housing stock over the last 100 years. The only sensible approach, therefore, is for a dwelling to be assessed on the basis of the designed occupancy level.
- 2) On the matter of duration of occupancy:
  - a) Although dwellings originally designed for permanent occupancy will by definition be suitable for temporary occupancy (such as holiday homes or pieds-a-terre), dwellings designed specifically for temporary or occasional use will not be suitable for permanent occupancy. We therefore need to differentiate between these uses for dwellings, and only seek to apply minimum space standards to accommodation designed for permanent occupancy.
  - b) Just as there is no way of knowing what the level of occupancy will be over the life of the property, there is no way of predicting the duration of occupancy by households over the life of the property. Dwellings therefore need to be designed so as to be suitable for residents who spend high proportions of time in the dwelling.

## **6.2 Our Approach**

The introduction of space standards as a planning requirement is relatively new, notwithstanding that many London Boroughs have introduced space standards and *Lifetime Homes* into their SPGs over recent years. Our approach has been determined by a number of principles:

- 1) To propose "safety-net" standards rather than "good practice" standards i.e. to set standards that would only impede the development of dwellings of such low space standards that there is significant concern about their long-term sustainability and suitability for the designed level of occupancy.
- 2) To address the areas of greatest importance to residents.
- 3) The amount of space needed in a dwelling is linked to the number of occupants.
- 4) As it is impossible to predict whether, over the life of the property (more than 100 years), the dwelling will be primarily under-occupied, over-occupied or occupied as

designed, the assessment of adequacy of space must assume that the property will be occupied by the number of people assumed by the designer.

- 5) Standards should not unnecessarily inhibit designers' ability to respond to market demand in terms of how space in the home is – or can be – used. Thus, so long as there is enough space allowed overall for similar functions, how that space is divided up between different functions is less important. For example, cooking, eating and living spaces are different functions, but similar insofar as they are all about daytime "living" activities in which the residents will move frequently between those areas. Bedrooms are used for significantly different functions from these areas, with significantly different patterns of use, incorporating sleeping and (in second / third etc bedrooms) privacy (either for study, such as homework or simply to have some private time) or recreation (having friends round, computer games etc).
- 6) Design efficiency is determined by the designer; space standards should not impose inefficiencies
- 7) Minimum standards should address functionality issues only. Decisions on whether to provide higher standards (such as additional ensuite bathrooms, utility rooms etc) are solely commercial decisions.
- 8) Proposals should draw upon existing work taking a functional-based, user-oriented approach rather than be created from new, specifically the anthropometric work contained within the BRE *Housing Design Handbook* and the NHF's *Guide to Standards & Quality*.
- 9) Proposals should be easy for the designer to understand and for the planning officer to implement.
- 10) Whilst recognising that planning applications do not currently require the designed occupancy (in terms of bed spaces) to be stated, we believe that assessing schemes on this basis is fundamental to being able to apply meaningful standards and have framed our proposals accordingly. This raises an Implementation question which has to be addressed (see Section 7).

In accordance with these principles, we propose a baseline or "safety-net" approach that focuses new requirements on the most important space issues, but we also highlight where further standards could be set to make them stronger and / or to cover more issues, should the GLA decide to move beyond our initial recommendations. We feel that this is the best way of managing change.

The primary areas that we believe should be addressed are:

- a) the amount of space allowed for cooking/eating/living
- b) the amount of space allowed in bedrooms
- c) internal general storage for "clean and dry" items

The secondary areas / issues that we believe could be addressed are:

- 1) room shape or minimum dimensions e.g width to ensure that the floor area is really useable
- 2) general storage for "dirty" items
- 3) space to allow for playing (within the dwelling)
- 4) private external space (gardens or balconies)
- 5) mobility issues

## **6.3 Methodology**

### **6.3.1 Data Sources**

Baseline space requirements (the minimum amount of space needed for rooms to be able to be used for their intended purposes) were derived by two mechanisms. Firstly, the project team drew from their experience of developing properties in the private sector and in the affordable sector. Secondly, the anthropometric data and the furniture schedules set out in the BRE *Housing Design Handbook* and the NHF's *Guide to Standards & Quality* were used to calculate the minimum floor areas needed to meet those requirements. These may be characterised as a qualitative and quantitative approach respectively.

We also note that the Housing Act 1985, in the overcrowding provisions, sets minimum space standards for the sizes of rooms dependent upon the number of people sleeping in them. These are:

1 person room:       6.5m<sup>2</sup> (70 sq ft)  
2 person room:       10.2m<sup>2</sup> (110 sq ft)  
(*Housing Act 1985 Part 10 S.326*)

These standards apply to all housing, public and private.

### **6.3.2 Space Requirements - Qualitative**

The qualitative approach (the experience of the team) resulted in the minimum space requirements for bedrooms and the aggregate amount of space needed for the kitchen/living/dining areas shown in Table 11:

**Table 11**

Bedrooms:	<b>7m<sup>2</sup> for a single bedroom and 12m<sup>2</sup> for a double or a twin bedroom</b>
Kitchen/dining/living:	<b>21.75m<sup>2</sup> for a 1 person or 2 person dwelling with an extra 2.5m<sup>2</sup> for each additional person</b>

### 6.3.3 Space Requirements - Quantitative

The quantitative approach produced the minimum floor areas shown in Table 12 & Table 13

**Table 12**

<b>Bedrooms</b> <i>from Guide to Standards &amp; Quality / BRE Housing Design Handbook</i>			
	Single	Double	Twin
Calculated	7.2	11.7	12.1
Rounded	7	12	12

**Table 13**

<b>Basic Requirements &amp; Incremental Increases in m<sup>2</sup></b> <i>from Guide to Standards &amp; Quality / BRE Housing Design Handbook</i>						
	<b>Kitchen</b>	<b>Living</b>		<b>Dining</b>	<b>Increment</b>	<b>Total</b>
	<i>units &amp; access space</i>	<i>furniture, access, activity &amp; passing</i>	<i>layout allowance</i>	<i>seats, table, passing</i>		
		<b>20%</b>				
1p	<b>No distinction drawn between 1-person and 2-person dwellings</b>					
2p	6.4	9.6	1.9	4.2	0.0	<b>22.2</b>
3p	0.6	0.6	0.1	0.5	1.9	<b>24.1</b>
4p	0.0	1.5	0.3	0.7	2.5	<b>26.5</b>
5p	1.0	1.2	0.2	0.7	3.2	<b>29.7</b>
6p	1.8	1.0	0.2	0.5	3.4	<b>33.1</b>
7p	1.0	1.0	0.2	0.5	2.6	<b>35.7</b>

These floor areas were calculated by taking the furniture schedules, furniture dimensions, access zones, passing zones and activity zones set out in the NHF's *Guide to Standards & Quality* (derived from the BREs *Housing Design Handbook*), calculating the resulting areas required and simply aggregating them. Some minor changes to the furniture schedules were introduced, all of which slightly reduced the space requirements and none of which increased it. An example is omitting the focal point fire. Full details are included at Appendix 6

This approach (simply aggregating the areas required for the furniture, access zones etc) assumes that all items of furniture, access zones etc could be butted up against one another without any resulting space left over in the room. This is true for kitchen fitments, which do exactly that, without any wasted space. It is also largely true of dining areas (i.e. dining chairs around a table). However, this is extremely unlikely to be true of living areas. The following two illustrations have been taken from the two *Guides*, and show how there will inevitably be space between items of furniture in a

living area. In the extract from the *Guide to Standards & Quality*, the "unnecessary" space needed to allow furniture to be laid out, is the floor area in white.

In calculating the amount of space needed for living areas, we have therefore included a factor to reflect this inability to tessellate furniture. We have not had the opportunity as part of this project to undertake an analysis of what this factor is likely to be. We have therefore taken a prudent estimate that it may represent an additional 20% of the space required by the furniture and zones. This is shown as the "Layout Allowance" in Table 13. However, we would recommend that further work is undertaken to ascertain what a reasonable minimum figure is.

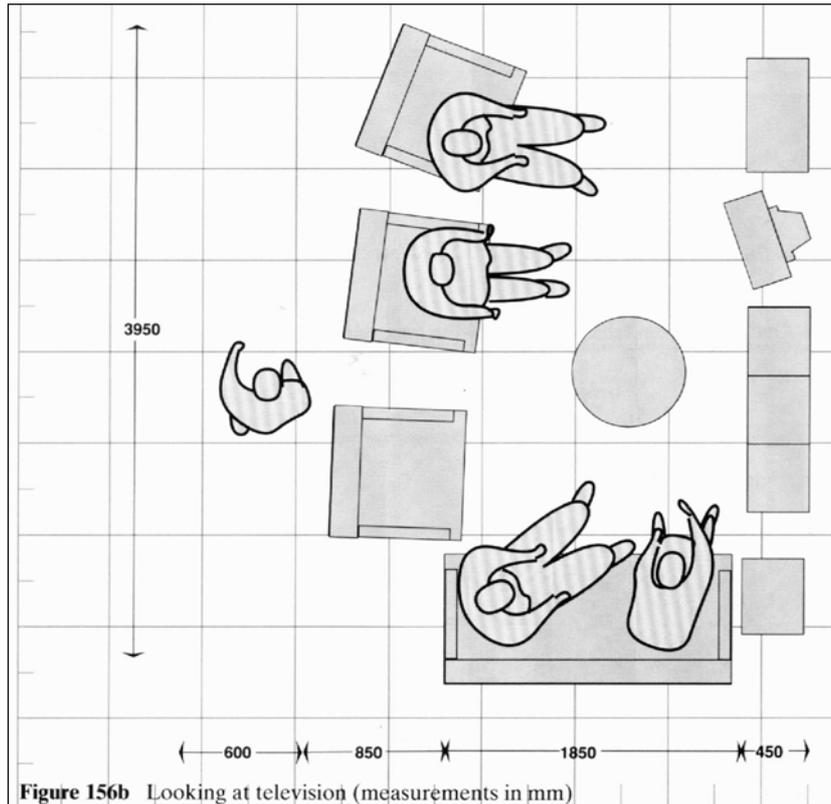
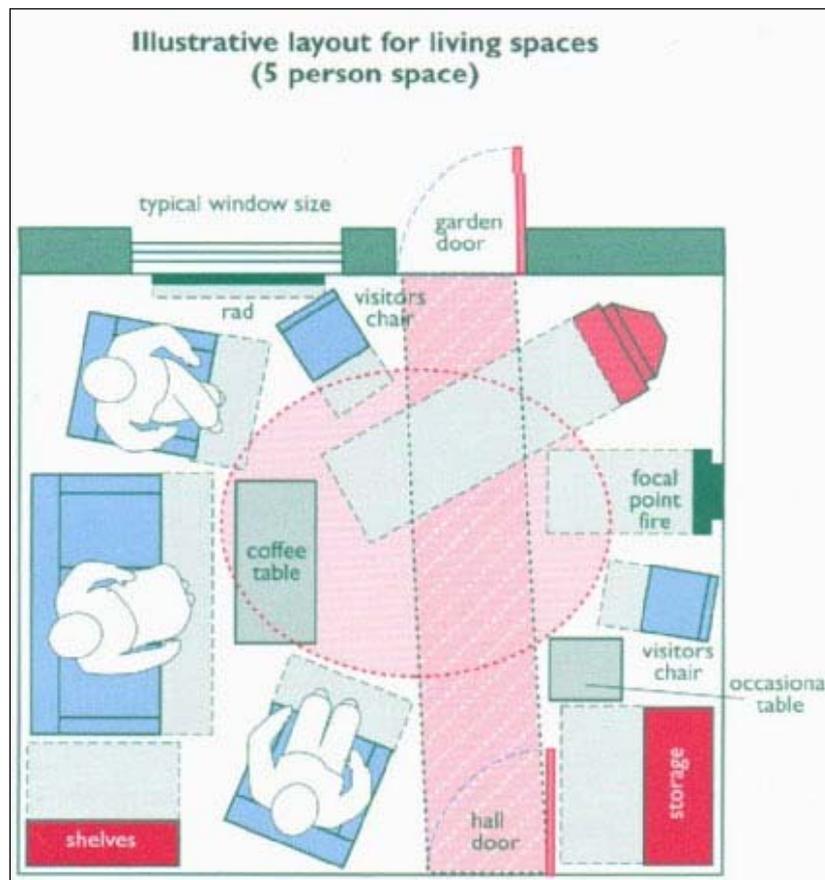


Figure 156b Looking at television (measurements in mm)

*BRE housing design handbook*



From *Guide to Standards & Quality*, NHF 1998

### 6.3.4 Comments

The first observation must be that there is great similarity between the qualitative and quantitative as estimates of the amount of space needed to allow the users of rooms or areas to perform normal activities.

The next observation must address the question of whether or not a dwelling designed for a single occupant has a lower space requirements than one designed for two occupants. At first glance the answer is "it does". However, on inspection of the detailed space requirements of a two person dwelling it is difficult to see where space savings might arise for a 1 person dwelling. Neither the *Housing Design Handbook* or the *Guide to Standards & Quality* differentiate between 1 person and 2 person dwellings in terms of kitchen fitments and appliance space requirements. The 2 person requirements are for a space for a sink and drainer, cooker, fridge, washing machine, broom cupboard and a double base unit. It is not seem reasonable to expect to provide less for a 1 person dwelling.

The dining area assumption for a 2 person dwelling is that space should be allowed for a small table with two chairs around it. It does not seem reasonable to reduce this to one chair in a 1 person dwelling, and the reduction in space standards would be minimal

The furniture schedule in the *Guide to Standards & Quality* for a 2 person dwelling requires space for comfortable seating for two people (assumed in this paper to be a two seat settee, not two armchairs which take up much more space), a television a coffee table a storage unit and space for two dining chairs for occasional visitors. Again, it does not seem reasonable to assume that the occupant of a 1 person dwelling would require any less.

We note that this analysis differs from custom and practice (developer's house types for 1 person dwellings are smaller than those for 2 person dwellings), and that those London boroughs that set minimum dwelling areas in their Plan policies or Supplementary Planning Guidance all differentiate between 1 person dwellings and 2 person dwellings. Indeed, the space required for a 1 person dwelling is generally considered to be approximately two thirds that required for a 2 person dwelling (30m<sup>2</sup> as opposed to 45m<sup>2</sup> respectively).

It may be that the difference arises from a reduction in the space needed for the bathroom, storage and circulation areas in a 1 person dwelling when compared with a 2 person dwelling. However, this does not seem likely and is not borne out by our (limited) case study information where the bathroom, storage and circulation areas in 1 person dwellings is 25%, whereas in 2 person dwellings and larger it is 30%. We are therefore unable to identify a good reason why 1 person dwellings should be assumed to require significantly less space than 2 person dwellings.

Thirdly, the incremental increase in space standards isn't smooth, but averages 2.7m<sup>2</sup> for each additional person beyond 2 people. Again, this is very close to the qualitative assessment of 2.5m<sup>2</sup> for each additional person.

### 6.3.5 Internal Storage

There is little hard data on the amount of internal storage space required by households. The most recent of which we are aware is contained in the NHF's *Guide to Standards & Quality*:

- A minimum of 0.5m<sup>2</sup> floor area for tall storage and
- 0.75m<sup>2</sup> shelf area per person, with a minimum of 1.5m<sup>2</sup>.

This requirement is expressed, unusually, in terms of shelving provided. This was because site visits highlighted the number of occasions when residents of affordable housing had not been able to put shelves into the storage cupboard provided. A storage cupboard of 0.5m<sup>2</sup> floor area therefore provided only 0.5m<sup>2</sup> of storage. The addition of three shelves would have increased this to 2m<sup>2</sup> of storage.

This issue is unlikely to arise in housing generally, and the standard as expressed in the NHF document would be extremely difficult to implement and police.

There are additional NHF requirements for "dirty" storage which are 1m<sup>2</sup> for flats without private gardens and 2.5m<sup>2</sup> - 3.0m<sup>2</sup> for dwellings with private gardens, depending upon the number of occupants.

Only one London Borough seems to set quantified minimum requirements for general storage in new housing. Haringey's SPG3a says: *"In addition to habitable and non-habitable space, all new residential development must provide separate storage space and recycling space amounting to no less than 7.5% of the required minimum habitable floor area of the particular unit size. For example, a one bedroom flat must provide storage area of no less than 3.6 sq metres. This floor space must be over and above the habitable floor space provided as part of the development. The storage space will provide an opportunity for the internal storage of, among other things, buggies, prams and bicycles"*.

However this requirement covers both "dirty" storage as well as "clean and dry" storage. It is worth noting that Haringey clearly do not consider that occupants of flats without private gardens have a significantly reduced requirement for "dirty" storage when compared with residents in properties with gardens.

We also note that bicycle storage may well be covered by sustainability policies.

Given that the lack of internal storage is highlighted by residents (CABE 2005) as a major source of dissatisfaction we believe that the space standard should address the issue, but do so in a manner that is easy to assess i.e. by stating the floor area of the dwelling, not shelving area or volume.

We suggest a starting point of 1m<sup>2</sup> floor area for a single person dwelling increased by 0.25m<sup>2</sup> for each additional occupant.

It may be observed that including storage space as a requirement should mean that a reduced percentage is used as the "add-on" allowance for bathroom and circulation space. The existing figures of 25% for 1p and 2p dwellings and 30% for larger dwellings is derived from the (limited) Case study information, where those non-"habitable" areas include storage space and as well as bathrooms and circulation areas. By setting a specific space requirement for storage, and then applying the same add-on percentage, are we not double counting?

Perhaps, if the 25%/30% figures were considered to have small margins of error. However, these figures have been flagged as needing extra work, as we do not feel confident that they are a fair indicator of the space taken up by bathrooms, circulation etc, as we have insufficient Case study information. We therefore think that the margin of error is potentially significant, and it is for that reason that no adjustment has been made even though storage space requirements have been set.

## **6.4 Proposals**

### **6.4.1 What Is the Appropriate Metric?**

As noted in Section 6.2 (para 3) the amount of space needed to allow dwellings to function adequately is determined by the intended number of occupants of the dwelling.

The planning system has generally measured dwellings in terms of numbers of habitable rooms or (occasionally) numbers of bedrooms. However, it is impossible to determine whether a dwelling with (for example) 4 habitable rooms and with an internal dwelling floor area of 60m<sup>2</sup> is of an adequate size or not. If the habitable rooms are a dining room, a living room and two single bedrooms (designed for occupancy by two people), it would be spacious. If the habitable rooms are one living/dining room and three double/twin bedrooms (designed for occupancy by six people) it would be completely inadequate.

Similarly, it is impossible to ascertain whether a two-bedroom property with an internal dwelling floor area of 60m<sup>2</sup> is reasonably functional or not without knowing whether the bedrooms are designed for single occupancy (a 2 person dwelling), or double occupancy (a 4 person dwelling), or one each.

We therefore strongly recommend that space standards are set and assessed on the basis of the designed level of occupancy expressed as the number of persons or bed spaces rather than number of habitable rooms or bedrooms.

We recognise that this presents an implementation issue as information about the designed level of occupancy is not currently collected as part of the planning application process. However, this is addressed in Section 7.3.

### **6.4.2 Minimum Internal Dwelling Area (MIDA)**

Should the minimum standards for the bedrooms, the cooking/eating/living area and general storage be extrapolated to a minimum internal dwelling area?

There is clearly a relationship between the robustness of design standards and their complexity. Simple standards are more vulnerable to abuse, and therefore less effective whilst robust standards can be complex to use and difficult to implement, and so can also be less than fully effective.

The space standard that is the easiest to operate is that of a Minimum Internal Dwelling Area (MIDA) for a stated number of occupants. Should the "habitable" areas (the bedrooms and the cooking, eating and living areas) therefore be extrapolated to a likely minimum dwelling size?

Providing indicative dwelling floor areas would certainly be very helpful to designers in the early stages of design development (RIBA stage C). It is at this stage that the designer needs to have a feel for the overall dwelling size as the detailed internal layout will be developed at later stages.

The limited case study information that we have obtained indicates that the "add-on" needed for bathrooms, circulation space etc should be approximately 25% for dwellings

designed to be occupied by 1 or 2 people, and 30% for larger dwellings. These figures would produce MIDAs as shown in Table 14.

**Table 14**

<b>MINIMUM INTERNAL DWELLING AREA (MIDA) m<sup>2</sup></b> (25%/30% add-on)							
	K/D/L	Beds	K/D/L/B	Add-on	Storage	Total	Rounded Total
<b>1p</b>	22	7	29	7	1	37.3	<b>37</b>
<b>2p</b>	22	12	34	9	1.25	43.9	<b>44</b>
<b>3p</b>	24	19	43	13	1.5	57.5	<b>57</b>
<b>4p</b>	27	24	51	15	1.75	67.4	<b>67</b>
<b>5p</b>	30	31	61	18	2	80.9	<b>81</b>
<b>6p</b>	33	36	69	21	2.25	92.0	<b>92</b>
<b>7p</b>	36	43	79	24	2.5	104.8	<b>105</b>

Setting the space standard in terms of a MIDA suffers from the major disadvantage that a dwelling may be larger than the MIDA, and yet provide insufficient space in the "habitable" areas because it has been designed with a lot of circulation space, additional bathrooms etc. However, this is exactly what has been happening over the last decade or so - bedrooms have been shrinking to accommodate extra bathrooms. It is reasonable to assume that those pressures will continue to apply, and therefore "inefficient" design will still feature in planning applications. Using MIDA would therefore mean that some dwellings obtain planning permission even when they are unsuitable in terms of space standards of "habitable" areas.

Conversely, a designer may be able to provide an appropriate amount of space for the "habitable" areas with a highly efficient design where the overall internal dwelling floor area may be less than the MIDA. Planning applications could then be refused on the grounds of insufficient space, even though there is an appropriate amount of space in the "habitable" areas. The planning system would effectively be penalising good design.

Obviously, MIDA is a less well-targeted Performance Indicator of the adequacy of bedrooms, cooking, eating and living areas than measuring those areas directly. However, it is simple to use. How could the benefit of simplicity of use still be retained whilst avoiding the potential disadvantages of approving inefficient designs with insufficient space in the key areas, or penalising efficient design? Does it depend on the assumption made about how much additional space is needed for bathrooms, circulation areas etc?

We believe that the answer depends upon how the MIDA is used. Is MIDA to be the only standard to be applied, or is it simply an indicator that the (more detailed) standards may not be met on a particular proposal?

If MIDA is to be the only standard applied, we would have to recommend that a very prudent viewer is taken of the extra space required for bathrooms, circulation areas etc,

perhaps assuming 40%. This would reduce the likelihood that dwellings comply with the MIDA but provide insufficient space in the "habitable" areas. However, this would have a very noticeable effect on the minimum dwelling sizes - see Table 15

**Table 15**

<b>MINIMUM INTERNAL DWELLING AREA (MIDA) m<sup>2</sup></b>		
	<b>25%/30%</b>	<b>40%</b>
<b>1p</b>	37	42
<b>2p</b>	44	49
<b>3p</b>	57	62
<b>4p</b>	67	72
<b>5p</b>	81	87
<b>6p</b>	92	99
<b>7p</b>	105	113

However, MIDA should be used as an indicator of those dwellings whose which **may** have insufficient "habitable" areas, allowing the planning officer to focus their attention on the sub-set of applications that appear most at risk of failing standards. If so the MIDA should be calculated using "normal" proportions. Based on our limited case study information this would be the 25%/30% add-on.

We therefore recommend that MIDA is used only as an indicator, not as a standard. On that basis, we would recommend that the GLA use the MIDAs in Table 14 as indicators, but that the standards are:

**THE PROPOSED BASELINE STANDARDS ARE:**

- 1) the minimum floor area for the aggregate of the cooking, eating and living areas (CEL areas) is to be<sup>16</sup>:

CEL Area (m <sup>2</sup> )	
1p	22
2p	22
3p	24
4p	27
5p	30
6p	33
7p	36

***NB: Cooking, eating and living areas exclude any utility area or space taken up on plan by staircases or hallways/corridors connecting these areas***

- 2) The minimum floor area for bedrooms to be based on:

- a) Aggregate bedroom areas to be no less than 7m<sup>2</sup> per single bedroom and 12m<sup>2</sup> per double/twin bedroom provided AND
- b) Each bedroom to have a minimum internal floor area of 6.5m<sup>2</sup> for a 1 person bedroom, and 10m<sup>2</sup> for a 2 person bedroom<sup>17</sup>.

***NB1: in larger dwellings each bedroom does not have to be at least 7m<sup>2</sup> or 12m<sup>2</sup> floor area; the designer is free to distribute the total amount of space among the bedrooms as they see fit so long as the aggregate space equates to the minimum requirements stated AND the individual rooms meet the minimum requirement of 6.5m<sup>2</sup> and 10m<sup>2</sup> noted above.***

***NB2: ensuite bathrooms or shower rooms do NOT count towards this minimum.***

***NB3: the floor space taken up by built in wardrobes in bedrooms counts towards the bedroom floor area***

- 3) Storage cupboards: 1m<sup>2</sup> floor area for 1p dwelling plus 0.25m<sup>2</sup> per additional person.

<sup>16</sup> From Table 5, rounded to the nearest m<sup>2</sup>

<sup>17</sup> From Housing Act 1985, with the 10.2m<sup>2</sup> requirement rounded down to 10m<sup>2</sup>.

**WE SUGGEST THE FOLLOWING MINIMUM INTERNAL DWELLING AREAS, TO BE USED AS AN INDICATOR:**

<b>MIDA (m<sup>2</sup>)</b>	
<b>1p</b>	<b>37</b>
<b>2p</b>	<b>44</b>
<b>3p</b>	<b>57</b>
<b>4p</b>	<b>67</b>
<b>5p</b>	<b>81</b>
<b>6p</b>	<b>92</b>
<b>7p</b>	<b>105</b>

### **6.4.3 Comment on Baseline Standards**

These Baseline Standards are simple to use and simple to assess. However, dwellings may comply with them but still provide insufficient usable space for residents if rooms are oddly shaped, or the design and location of radiators, windows and door swings significantly reduce the usable space.

The Baseline Standards do not address the important question of space for external recreation by the household members or internal play in family accommodation. These issues are becoming more significant with the increase in the proportion of flats as opposed to houses being developed.

Also, although the basis for determining the amount of space required in the bedrooms, living, dining and cooking areas is reasonably objective, deriving as it does from functional criteria, an element of the calculation is subjective. The "layout allowance" of 20% is based on a guesstimate of the amount of space that would generally be needed in a living area in addition to that simply required by furniture and access zones etc. As noted in section 6.3.3 the allowance of 20% may be a significant underestimate of the amount of space needed. However, it is questionable whether the likely error is significant. If the amount of additional space is double that which has been assumed it would only change the combined K/D/L requirement by approximately 1m<sup>2</sup>.

Finally, the proposals do not specifically address other aspects of sustainability such as ensuring that dwellings are sufficiently flexible to still be used by people with reduced mobility (the *Lifetime Homes* concept), or are able to be used by wheelchair users visiting the property or living in it.

As these important issues are not addressed in the Baseline Standards we have proposed some Additional Standards to cover them (see 6.4.4).

NB: Standards for external communal play space are proposed in a separate research report by EDAW.

### **6.4.4 Additional Standards**

We therefore offer for consideration some Additional Standards that would begin to address some of these issues, and strengthen the space standards. However, they also make the process more complex both for the designer and the planning officer and are likely to have more significant implications for developer costs or effect on land value.

These Additional Standards are offered for discussion. Augmenting the Baseline Standards with some or all of these Additional Standards will increase the probability that designs allow sufficient space for dwellings to be able to function effectively over the long term at the design occupancy. But they introduce a more complex process for both designer and planner.

The recommendations on minimum room dimensions are drawn partly from the anthropometric data in the BRE *Housing Design Handbook* and partly from the experience of the team.

The "dirty" storage requirement comes from the NHF's *Guide to Standards & Quality*.

The recommended space for play is again drawn from the BRE publication, although the specific example given of children's play in that publication is rather dated - a model railway layout. We have not specifically investigated the literature on children's play and are therefore unaware of any more up-to-date authoritative guidance on the amount of space needed within the dwelling for children's play. Our subjective view is that while the nature of some play activities for children will have moved towards computer-based games, children (particularly small children) are still likely to need floor area for some games. Looking at it another way, denying them floor area for play activities is likely to restrict their play options in an unacceptable fashion.

The external recreational space suggestion stems from the London Housing Federation's publication *High-density Housing for Families: a design and specification guide* (2005), which states that a private balcony should be large enough to accommodate a small table and chairs for all household members. This Additional Standard has been calculated to meet this requirement, but it is worth noting that a balcony may be designed for both recreational activities and "dirty" storage. If so, the balcony will need to be large enough to comply with the recreational space requirement and the storage requirement in aggregate.

Depending upon the type of construction, balcony depths can be reasonably expected to be between 1100mm – 1500mm before costs rise significantly. A person seated at a table, with space for somebody to slide past behind them, requires 900mm (BRE *Housing Design Handbook*), leaving space for a table of depth 200mm – 600mm. Occasional tables are usually approximately 400mm, and that is the assumption that has been used for a balcony table here. This is too narrow for someone to sit at the "end" of the table. The space requirement has therefore been calculated for a 400mm deep table and 900mm seating and "sliding by" zone (totalling 1300mm) multiplied by 750mm width per person. The resulting 0.975m<sup>2</sup> per person has been rounded to 1m<sup>2</sup> per person. However we would also recommend that the starting point is to assume that there should be sufficient space for at least three people, to allow for a visitor or visitors.

#### **THE PROPOSED ADDITIONAL STANDARDS ARE:**

##### **1) Minimum room dimensions (at the narrowest/shortest point)**

- a) living area: 3.2m**
- b) double/twin bedroom width: 2.6m**
- c) bedroom length: 3m**
- d) habitable rooms to be no longer than twice their width, or no wider than twice their depth (i.e. the ratio 2:1 not to be exceeded)**

##### **2) "Dirty" storage (internal to the dwelling or block, or external)**

- a) for flats without private gardens: 1m<sup>2</sup>**
- b) for houses bungalows and flats with private gardens for up to four people: 2.5m<sup>2</sup>**
- c) full houses, bungalows and flats with private gardens for five or more people: 3.0m<sup>2</sup>**

##### **3) Internal play space: nothing for the first two occupants and then 2m<sup>2</sup> for each additional person.**

**4) External recreational space (balcony): 3m<sup>2</sup> for 1 person or 2 person dwellings plus 1m<sup>2</sup> per additional person**

**5) Mobility: compliance with *Lifetime Homes* standards<sup>18</sup>.**

## **6.5 Caveats**

There are a number of caveats that we wish to highlight:

- As previously noted we do not feel sufficiently confident that the "add-on" allowance of 25%/30% is sufficiently reliable, and the figures in these proposals should be considered to be provisional until such time as a more extensive case study analysis can examine this question in greater detail. The results of such analysis may well alter the indicative MIDA's.
- The point made earlier, that designers may wish to have an MIDA to use in the early stages of design, highlights a potential danger of publishing MIDAs. Many designers have a range of preferred layouts which may have - probably will have - a different "add-on" percentage from that assumed in the standards. If, for example, the designer's layouts tend to allow the space for bathrooms, circulation areas etc to be 35% of the bedrooms and K/D/L area, but their initial designs are produced using the MIDAs included in this report, subsequent difficulties could arise. It may be preferable to avoid publishing MIDAs so that designers have to develop them themselves for their preferred dwelling layouts.
- We do not think that the uncertainty over the "layout allowance" is sufficiently material to warrant serious further investigation, but if further case study analysis is commissioned by the GLA, we would suggest that this question is looked at briefly as part of that work.
- Finally, we would wish to highlight the history of minimum space standards- in particular how they quickly become adopted as maximum space standards. It is comforting to note that the reason for this usually arises because the standards are employed as part of publicly funded housing projects. When money is tight, constraints on the public purse motivates the government to change the status of standards from minima to maxima.
- There is no reason to believe that a similar fate will befall space standards implemented through the planning system, but we would wish to emphasise that these standards are considered to be a safety net, and are absolutely not to be taken as a statement of good practice or as an upper limit of what is desirable.

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<sup>18</sup> Already a separate requirement in the London Plan.

## 7 IMPLEMENTATION ISSUES

### **7.1 Are Minimum Space Standards a Legitimate Planning Matter?**

Tetlow King's full report on the question of whether or not minimum space standards are a legitimate planning matter, establishes the legal basis for the inclusion of space standards in development plans and supplementary planning documents.

The report:

- Assesses the way in which space standards were considered in the pre-2004 planning system.
- Provides an overview of the current policy position in this sphere in the adopted London Plan and adopted or advanced UDPs and adopted SPGs across London.
- Reviews the concept of '*material planning considerations*' both historically and within the post 2004 planning system.
- Specifically explores how space standards fit within the concept of '*sustainable development*' and the framework of the new style '*development plans*' arising from the 2004 Act.
- Assesses any potential overlap with the Building Regulations system and the potential for integration with the embryonic Code for Sustainable Homes launched in December 2005.

The conclusion is that space standards can be included in development plans and supplementary planning documents. In particular:

*"The planning system has always encompassed residential amenity as a matter of fundamental concern but the application of specific space standards has largely been eschewed. Between 1980 and 2004 Government advice specifically discouraged such an approach. External standards have been applied more frequently than internal standards. Whilst some local authorities (especially London boroughs) have maintained detailed planning policies these are largely confined to advice notes/SPGs to which they have been unable to attach much weight. Our analysis of appeal decisions reflects this, providing a mixed picture of how such policies have worked on the relatively few occasions when they have been directly tested.*

*The London Plan (February 2004) and the Planning and Compulsory Purchase Act 2004 represent a watershed. There can be little doubt that space standards are now in principle capable of being considered a '**material planning consideration**' and a component of '**sustainable development**'."*

Thus, whilst we believe that a cogent and substantive argument will need to be made to support the introduction of policies and supplementary planning documents on space standards, we believe that the planning system is a vehicle that will allow such requirements to be set, implemented and enforced.

## **7.2 Are Building Regulations a Better Vehicle?**

We have noted that the emerging "Code for Sustainable Homes" includes *Lifetime Homes* as an optional requirement. The Code will form the basis for the next wave of improvements to building regulations (ODPM News Release 2006/0038, March 9th 2006).

Although *Lifetime Homes* stems from concern over accessibility within the home, the effect of the Standard is to set minimum dwelling space standards, albeit expressed in functionality terms rather than floor areas. This seems to open up the opportunity for space standards to be set through the Building Regulations in due course.

Should the GLA seek to have minimum space standards included in updated Building Regulations rather than implementing them through the planning system? Do dwelling space standards sit more naturally in the Building Regulations than in the planning system? This question requires an analysis of the underlying philosophy and purpose behind the planning system and the building control system. We believe that, philosophically, residential space standards could sit comfortably in either of these systems. The main benefit of setting minimum space standards is to:

- reduce the chance that property adversely affects the occupants' health and well-being (a typical Building Control issue)
- becomes obsolescent in an unacceptably short period of time (an environmental sustainability issue that the planning system in particular has addressed for many years, but which the Building Control system is also beginning to address)
- is suitable for the needs of the community (a classic planning system issue).

However, practical considerations also arise. It is within the GLA's powers to set minimum space standards through the planning system, but not through the Building Regulations.

In the event that Building Regulations eventually include space standards, the GLA will need to ensure that there is no conflict between their requirements through the planning system and Building Regulations. This might mean withdrawing the planning requirements or amending them.

## **7.3 Obtaining Space Standard Information**

As previously noted it is extremely difficult to set meaningful space standards if the metric is anything other than the number of people for whom the dwelling is designed to function. Assessing adequacy based on number of bedrooms would mean that the same sized dwelling would apparently be suitable for three people or for six people. This is too coarse a basis of measurement to allow meaningful standards to be set.

The information required to implement meaningful space standards is:

- \* Design occupancy of the dwellings (number of bed spaces)
- \* aggregate floor area of cooking/eating/living area of each dwelling
- \* individual bedroom floor areas of each dwelling
- \* internal storage floor area
- \* net internal dwelling floor area

We understand that 1APP does not currently require information on internal space or design occupancy. However, the Planning Portal, who are charged with the responsibility of implementing 1APP advise that they are very willing to consider suggestions for amendments to the current draft form.

Even if 1APP does not require developers to state internal floor areas and the design occupancy, London boroughs and the GLA can require this information to be provided. As was noted in the Literature Review, over two thirds of the London Boroughs currently have minimum space standards in their Supplementary Planning Guidance, and so are presumably already asking for information about space standards.

We therefore suggest the GLA encourages those councils to modify their forms to cater for these additional data requirements as a starting point with a future view to lobbying Planning Portal.

Providing this data would be only a minor inconvenience for developers, as it will be readily available and could be simply copied and pasted into application forms.

The information can be quickly and easily used by the Development Control officer (see "Using the Standards - a Risk-Based Approach" below).

## **7.4 Using the Standards – Development Control**

With the current pressures on London Borough planning teams it is important that the implementation of the standards is straightforward. As noted in Section 7.3 *Obtaining Space Standard Information*, we envisage the information needed by the planning officer being provided by the applicant as part of the application process.

The information required would be a table scheduling, for each dwelling type in the proposed development the required information. An example is provided below in Table 16:

**Table 16**

Dwelling Type	Bedspaces	Aggregate K/D/L area (m <sup>2</sup> )	Aggregate Bedroom areas (m <sup>2</sup> )	Are any bedrooms below minimum? (Y/N)	Internal storage area (m <sup>2</sup> )
Flat type A					
Flat type B					
Flat type B1					
Flat type C					
Flat type D					
Flat type E					

Completing the table will not place a significant administrative burden on the applicant, allowing the information to be made available to the planning officer in a form which enables him/her to assess compliance with the space standards quickly and easily.

If it is still felt that this is too time-consuming for a planning officer to implement, and that the MIDA should be used to highlight those dwelling types that may be at risk of non-compliance, an additional column could be added to Table 16, as in Table 17:

**Table 17**

Dwelling Type	Bedspaces	Internal Dwelling Area (m <sup>2</sup> )	Aggregate K/D/L area (m <sup>2</sup> )	Aggregate Bedroom areas (m <sup>2</sup> )	Are any bedrooms below minimum? (Y/N)	Internal storage area (m <sup>2</sup> )
Flat type A						
Flat type B						
Flat type B1						
Flat type C						
Flat type D						
Flat type E						

## **7.5 Using the Standards - Applicants**

How difficult would be for the applicant to provide this information?

Calculating the information:

Bedspaces - Developers will, in the normal course of business, be clear about how they wish each dwelling type to be described in their marketing literature i.e. whether the bedrooms are to show a single bed or a double bed. This information is therefore already available even though it may not be provided to the planning officer under current arrangements.

Floor areas - some designers will calculate the floor areas of different rooms as a matter of course and annotate plans accordingly, but some may not. However, with Computer Aided Design (CAD), calculating the floor area of the bedrooms, the K/D/L area and the internal storage areas will take approximately three minutes per dwelling type; perhaps half an hour for a typical project.

Providing the information:

Once the data is tabulated (either directly into a spreadsheet or Word document or manually, to be typed up later), the table can be copied and pasted into APP1 or, if not part of APP1 and being requested as additional information by a London borough planning team, can be provided separately. The administrative effort is minimal.

## **7.6 Pieds-a-Terre, Holiday Homes etc**

Some developers report that there is a demand in London for small accommodation for temporary use such as pieds-a-terre. Setting minimum space standards should not interfere with the development of such accommodation, which is for a different use (temporary) than mainstream residential development where it is expected that the household will be living "full-time" in the dwelling.

However, under the Greater London Council (General Powers) Acts 1973 (as amended) and 1984, the use of residential accommodation for 'temporary' accommodation occupied by the same person for less than 90 nights is a material change of use from residential requiring planning permission. We should therefore like to make it clear that our recommendations are only intended to apply to 'permanent' accommodation.

## **7.7 Effectiveness of Standards – Loopholes and Side-Effects**

Although it appears clear that the GLA could use planning powers to set minimum space standards, and refuse planning permission for applications that do not meet the standards, how easy is it to control or influence how the dwellings are subsequently used? Would the use of space standards introduced an unintended side-effects of setting a planning condition on the occupancy level? What loopholes might developers seek to exploit to minimise the impact of the standards, and how deleterious might those responses be?

What about properties described as (for example) "*the construction of 15 1-bedroom flats suitable for 2 people and 20 2-bedroom flats suitable for 4 people*"? If planning permission is granted might a breach of the planning permission arise if the dwellings are occupied by a different number of people than those indicated? Would the granting of permission create an implied condition about the level of occupancy?

We do not think that the description of the proposed of the development in these terms would constitute a planning condition nor would the occupancy of the dwellings by a different number of people from those indicated be breach of the planning permission.

Of course, as is currently the case, local planning authorities can set a condition on the level of occupancy if they wish, and if they consider that it is enforceable. We therefore think it very unlikely that setting space standards would result in unintended side-effects of this nature.

What is to stop a developer from marketing properties at a high level of occupancy than those declared on a planning application, and for which planning permission was granted? For example, in a 2-bedroom flat, the second bedroom may be 10m<sup>2</sup>, and the flat declared as suitable for three people and comply with the space standards for a three-person dwelling. Could it then be marketed as a four person dwelling?

If the level of occupancy is not an integral part of the planning permission (see the previous paragraphs), how could this be stopped? The only obvious defence is the Property Misdescriptions Acts 1991.

The Property Misdescriptions Act 1991 makes it an offence to make false or misleading statements about specified aspects of land (which includes buildings) offered for sale by those in estate agency or property development business. Department of Trade & Industry guidance on the Acts says:

- *A false statement is one which is false to a material degree. The definition adopts the wording of the Trade Descriptions Act 1968 and is intended to ensure that trivial errors or discrepancies in descriptions will not constitute an offence. What constitutes a material degree will vary with the circumstances. For example, what may be a material discrepancy between quoted and actual room sizes may be one of no consequence if it relates to the dimensions of a garden. In considering whether an offence had been committed a court would be likely to base its view on what a normal prospective purchaser would consider to be false to a material degree having regard to generally accepted standards.*
- *A misleading statement is one from which a reasonable person would be likely to make a false inference, even though the statement is not itself false.*
- *The offence under the Act is one of strict liability - it is not necessary for the prosecution to prove that there was an intention to mislead in order to secure a conviction - but only that the statement was false or misleading.*
- *A statement may be oral or written, or be in the form of a picture, model, or any other means of conveying information.*

Thus, even if the developer did not make a clear statement as to the suitable occupancy of the second bedroom, but merely showed a double bed on marketing literature, that may be considered to be a misleading statement.

But would it constitute falsity "to a material degree". In the terms described in the DTI guidance, would a court conclude that a normal prospective purchaser would consider this to be false to a material degree? We have not taken specific legal advice on this point, but believe that under current arrangements the court would not, relying on "caveat emptor". However, that is because there are currently no standards applied to classify bedrooms as suitable for one person or two people. By introducing such standards through the planning system, bedrooms would become classified, and a degree of clarity over the question of occupancy level of bedrooms is created. This may well lead prospective purchasers to consider that if a developer describes a room that fails to meet planning space standards for a double/twin bedroom as a double/twin bedroom, then that is a material issue.

The GLA may wish to consult its lawyers on this issue. Unfortunately, we think it is unlikely that definitive advice can be offered as the situation has not previously arisen in England, although it is possible that there may be some guidance from the Scottish experience where some "box" rooms may have been advertised as "apartment"<sup>19</sup> even though they do not meet the space standards for an "apartment".

However, even if the Property Misdescriptions Act would catch a misdescription of this nature, will purchasers know the level of occupancy for the dwelling for which planning permission has been granted? The answer to this is "possibly", depending upon whether or not their conveyancing solicitor draws to their attention the occupancy level described in the planning permission.

Whilst it may not be certain that such misdescriptions would be identified, and would be actionable, we think that the significant possibility of being caught out, and the potential for exposure to the Property Misdescriptions Act would be a significant deterrent to developers seeking to exploit this potential loophole.

The other major loophole that may be employed is to alter the position of doors in the dwelling to include what had been circulation area as "room" area. As can be seen in

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<sup>19</sup> The Scottish term for a habitable room

Illustration 3, the door through to the living/dining area could be pulled back to be in line with the utility room, as indicated in Illustration 4.



**Illustration 3** - developer flat currently being marketed online



**Illustration 4** – circulation space incorporated into living area.

It is inevitable that with a simple set of space standards there will be some loopholes that can be exploited by those who wish to do so. The only real defence against responses such as these is to provide a more detailed set of standards which are therefore more complicated and difficult to use and administer.

However, Criterion 6 of *Lifetime Homes* provides a defence against this particular response, as it requires (inter alia) 300mm to the side of the leading edge of doors on the entrance level. This will be a little difficult to achieve for doors within corridors,

unless they are re-hung to open outwards into the hallway. However, this is likely to be seen as an attractive by purchasers and designers.

Planning officers will have to be aware of the detail of the *Lifetime Home* standards, and examine the plans in some detail in order to pick this point up. However, as *Lifetime Homes* is already a GLA requirement, this is presumably not an issue.

## **7.8 Density Definitions**

The planning system uses a variety of measures of residential density, none of which actually address the number of people likely to be using the building.

Measures such as "habitable rooms" are clearly meant to be a proxy for the number of people likely to occupy the dwelling, but are a less well-targeted proxy than the design occupancy of the dwelling (i.e. bed spaces).

The various impacts on the community and the environment which are generated by new residential development are more closely linked to the number of people residing in the Development than the number of units or the number of habitable rooms. The level of car ownership and usage (travel movements), the effect on the local educational system, the waste and refuse produced, the level of noise generated, the level of support for local shops and facilities are all influenced by a wide variety of factors, including the intensity of occupation, the disposable incomes of the households, the age profile of the households etc. All of these impacts are more directly related to the number of people than the number of dwellings, or the number of habitable rooms.

We would therefore recommend that the GLA defines residential density in terms of number of bedspaces rather than number of dwellings or number of habitable rooms.

## **7.9 Data capture**

As demonstrated in the Literature Review it is extremely difficult to obtain data on trends in dwelling size. This significantly inhibits policy development, making it harder for local regional and central government to be able to respond to the needs of our communities. We would recommend that data on the sizes of rooms and dwellings supplied with individual planning applications are captured on a database that will allow research to identify trends, patterns and mis-matches between provision and need.

## 8 IMPACT ASSESSMENT

### 8.1 Assessment

#### 8.1.1 Assessment of Baseline Standards

The dwellings were assessed against the proposed Baseline Standards. The case study data included only two examples of 1b1p dwelling types, both very small (25m<sup>2</sup> and 31m<sup>2</sup>). The analysis of average performance across all dwelling sizes against the Baseline Standards has therefore looked at:

- all dwelling types and
- all dwelling types excluding the 1b1ps.

Table 18 shows the average variations between the case study dwellings and the Baseline Standards for the Bedrooms and the K/D/L areas. Storage was not analysed. Separate variations are shown from the Baseline Standards for the kitchen/dining/living areas, and the bedroom areas. The overall variations is also shown.

**Table 18**

	All except 1P	All
K/D/L	1%	-6%
Bedrooms	1%	-1%

This analysis indicates that the proposed Baseline Standard for bedrooms would not impede the Development of an "average" unit from the case studies. 57% of the case studies had aggregate bedroom areas that are less than the proposed Baseline Standard, but the variation was generally minor.

However, there was a significant difference between the proposed Baseline Standard for aggregate cooking, eating and living areas and those provided in the case studies. A similar proportion were smaller (63%), but the differences were much larger than for the bedrooms. In general the greatest variation was in the smallest dwellings (1p, 2p, 3p, 4p, 5p, 6p were, on average -40%, -5%, -4%, -9%, 8%, 14% respectively)

However, it should be noted that the 1p dwellings are new dwelling types, and do not necessarily reflect the sizes of dwellings that have been developed recently, or the sizes that will have been assumed in housing capacity studies or other activities.

#### 8.1.2 Assessment of Indicative Dwelling Sizes

Table 19 shows the minimum, mean and maximum sizes of dwellings in the case studies of different types, against the indicative dwelling sizes proposed in Section 6.4. The indicative dwelling sizes would seem to highlight those units which are least likely to comply with the proposed Baseline Standards.

**Table 19**

	No.	Min	Mean	Max	Baseline MIDA
1 person	2	25	28	31	37
2 person	8	31	42	48	44
3 person	9	51	60	66	57
4 person	10	62	67	81	67
5 person	7	73	92	143	81
6 person	2	101	113	125	92

### 8.1.3 Conclusions on Assessment against Case Study Information

We are very disappointed at the limited number of case studies that we have been able to obtain and analyse. Whilst we believe that this analysis provides an indication of the relationship of the proposed Baseline Standards to what is currently being developed, it is not extensive enough to allow any conclusions to be drawn on the proportion of developments currently being designed and developed that would be affected by the proposed space standards.

We would therefore recommend that the GLA commissions further case study analysis, to be undertaken over the next few months to inform the consultative draft to be issued in the autumn 2006.

### 8.1.4 Relationship to *Lifetime Homes*

The proposed space standards have not been designed in order to ensure that the *Lifetime Homes* space requirements will be met. It is already a requirements in the London Plan that new developments meet *Lifetime Homes* standards.

However, as the standards will be primarily applicable to flats (which represents 80% of the recently completed new developments), it is worth commenting on the relationship of these standards with *Lifetime Homes* in flats.

There are very few space implications in *Lifetime Homes* for flats:

- Criterion 6 sets minimum width standards for corridors and a requirement for a 300mm space to the side of the leading edge of doors
- Criterion 7 requires space for turning a wheelchair in dining areas and living rooms and adequate circulation space for wheelchair users elsewhere

Other requirements are either to do with components, relationship between the rooms, movement between floors within the dwelling (not applicable in flats) or accessibility in the bathroom/WC.

We obviously cannot confirm that designs that comply with the proposed space standards will necessarily also comply with *Lifetime Homes*, as it is dependent upon how the designer uses the space. For example, the designer may propose a separate living area which is too small to accommodate the wheelchair turning circle required by Criterion 7. However, it is equally obviously true that anything which maintains space standards will support *Lifetime Homes*.

Finally, it is worth noting that the proposed standards cannot be a barrier to designers complying with the requirements of *Lifetime Homes*, as they are minimum standards, not maximum standards.

## **8.2 Costs**

### **8.2.1 Implications for Capacity**

It is extremely difficult to calculate the possible implication of setting the proposed Baseline Standards on the numbers of dwellings that can be produced from the predicted land supply in Greater London over the next few years. The ability to achieve up to 31,000 dwellings per year is dependent upon a number of factors such as land supply, dwelling mix, whether building footprints can increase within site boundaries or not, as well as the sizes of being dwellings developed.

Capacity predictions in the London Plan are based on assumed densities which are measured in terms of numbers of habitable rooms and numbers of units. It is debatable whether the proposed Baseline Standards imply dwellings of a larger floor area than have been implicitly assumed already in housing capacity studies. We would need to discuss with the GLA in more detail the relationship between density assumptions and likely dwelling size in order to determine whether these proposals would mean that current capacity predictions should be modified if the proposals are adopted. It may be that the assumptions used in the capacity studies are effectively based on dwelling sizes that achieve the proposed Baseline Standards. In that case, there would be no need to revise downwards capacity estimates.

The effect of space standards will be to make some dwellings slightly larger. Slightly larger flats will make blocks wider or deeper, which some sites can accommodate, in which case there would be no loss. But for some sites the footprint dimensions may be critical, and if other requirements remain the same the developer may then be faced with the loss of some units. This would in turn mean that the site is less densely developed than the requirements of the Plan. The developer may therefore be able to negotiate an extra storey or reduced separation distance between blocks in order to maintain the density of the development.

Designers will have greater opportunity to overcome any potential reduction in density brought about by space standards on large sites than they will on small sites. 60% of the housing capacity identified in the 2004 London Housing Capacity Study is on large sites. It is therefore unclear whether space standards will have any effect at all on housing capacity, and if they do it is likely to be marginal only.

## 8.2.2 Affordability / Land Supply

In their letter to HATC of 17th February, the HBF raise a number of points under this heading which we address below:

**Table 20**

HBF Comment	HATC Response
<p>"Developers have to respond, as best they can, to market demand. If developers provide products that consumers do not want or cannot afford ultimately they will not be in the business of developing very long. The reason there is a predominance of relatively small (in terms of number of bedrooms) and flatted development in London is quite simply that this is what the market wants and can afford."</p>	<p>This point is primarily about dwelling mix rather than the internal space standard of dwellings. We are therefore not responding as it is not relevant to this report.</p>
<p>"The reason the market dictates that the majority of newbuild should be made up of small units is the economics of supply and demand. Namely the huge demand for residential accommodation in London and the very limited availability of development land. Restricted supply and a high demand for a product results in price increasing until it reaches an equilibrium. That equilibrium in London is at a very high level meaning both that the land and the property on which it is built is very expensive and that there is great competition amongst developers for development land in London. In order to pay the price of development land developers must maximise densities in order to achieve the return necessary to make development viable."</p>	<p>This point conflates two separate issues. The first issue relates to the imbalance of supply and demand for housing, resulting in sale prices of newly completed dwellings being higher in London than in other areas where there is less acute unmet demand. In other words, purchasers are willing to pay higher prices for the dwelling in London because London suffers a greater mis-match between supply and demand than other parts of the country. However, this point relates to the high level of sales prices of completed dwellings, not the value of the land purchased to build the dwellings upon.</p> <p>The second point relates to the level of competition between developers when bidding for land. To the extent that land is a commodity in short supply, and that there are purchasers, whose aggregate appetite is for more land than is available<sup>20</sup>, then demand outstrips supply and developers will bid up the price of land. However, long term they can only do so to the extent that they will be able to achieve their required profit after sale</p>

<sup>20</sup> For their own strategic or tactical purposes developers will influence land prices: *"There is strong anecdotal evidence from developers to suggest that following a 'feeding frenzy' by house builders to obtain urban sites which resulted in land price growth in London of as much as 36 per cent in 2000"* pg 21, Market Failure & the London Housing Market, GLA 2003.

of completed dwellings. If, for example, property prices were to fall, developers would not be able or willing to continue to bid up the price of land, and land prices would fall, as happened in the 1990s. It is therefore incorrect to claim or imply that developers "have" to continue paying more for land. They will continue paying what they believe the land to be worth, not more. That moves the question onto what factors affect land value.

Developers calculate how much they are willing to pay for land using the residual valuation method. This means that if they believe a piece of land will yield fewer dwellings than previously envisaged (because of the introduction of space standards), they will calculate that they can afford to pay less for the land. Given that the standards (and therefore the presumed reduction in numbers of dwelling on the site) applies to all developers, land owners would find that the value of their land has fallen.

The question then becomes whether land owners would choose to sell at the slightly lower value or prefer to wait. The issue then becomes one of land supply.

Of course, those developers who have already purchased land for their landbank, and now find that their density assumptions might be under threat, would suffer any loss of value which might arise from the space standards.

"The only way to achieve fewer units of accommodation on the site whilst still keeping price at anything less than astronomical level would be for land owners to accept a lower return on their land. That is simply not going to happen in view of the scarcity issue highlighted above. That being the case, competition amongst developers to secure development land will mean that a developer planning to provide fewer but larger homes on the site will never be able to bid successfully for a site as they could never expect to achieve the level of return compared to a developer proposing more small units of accommodation. Therefore the "the larger unit" developer will always be outbid for land by the developer

This point is again predicated on the assertion that land values are not subject to external influence, which we believe to be patently incorrect.

However, there is a second error in the HBF's analysis. This point would be valid if space standards were only to apply to some developers, and not to others. However, as it is intended that they are applicable to all developers, the argument does not hold.

<p>proposing a larger number of small units of accommodation"</p>	
<p>"Even if developers were able to secure sites on which to build larger units of accommodation, as well as that accommodation being extremely expensive to purchase, it would also reduce the supply of residential completions at a time when the Mayor's stated objective is to increase annual supply from 23,000 units per year (which itself is a target that has not been met until recently) to 31,000. Seeking to build fewer larger units of accommodation would be counterproductive when viewed in the context of the objective to substantially increase overall supply".</p>	<p>Again, there are two points included in this paragraph. The first point is to assert that sales prices are necessarily driven up if development costs rise. Whilst we recognise that developers will attempt to recoup additional costs, the market price of their products is set by market forces, not by the developer. Sales of newly developed properties represent only 1% (<i>HBF figure in letter; see later paragraph</i>) of the property transactions in London, and it is very difficult to see how developers can buck the trend of the market. Indeed, it is rare to hear them claim to be able to do so. As noted on page 31 of <i>Market Failure &amp; the London Housing Market, GLA 2003</i> "...house prices are largely determined by demand..."</p> <p>The main point in this paragraph relates to the possibility that introducing space standards might reduce the number of dwellings produced, a point which is acknowledged in the previous section, although it is unclear whether the space standards would mean that the Mayor's targets are not met.</p>
<p>"Consumers will buy the most space they can afford to purchase when looking at newbuild accommodation. The oft-inferred link between household size and size of accommodation is a tenuous one to say the least, if not nonexistent particularly in London which operates at the extreme end (in terms of variations in property price, income and ability to pay) of the UK housing market. If consumers cannot, in the main, afford to purchase larger units of accommodation there is little point requiring developers to provide them."</p>	<p>This point assumes that the introduction of space standards will increase the value of properties making them marginally less affordable to purchasers. As the intention of these space standards is to only inhibit designs that are so "tight" as to raise issues of sustainability, we do not think that they will have a noticeable effect on property values, or, therefore, on affordability.</p>
<p>"It is worth bearing in mind that purchasers of newbuild accommodation account for only approximately 1% of all residential property transactions in any given year. The overwhelming majority of purchasers are made from within the existing second-hand stock. In view of the above economic considerations those</p>	<p>True, but the usefulness of this point is predicated on the assumption that people only choose small dwellings because they want them, not because they are constrained in their choice. The evidence is to the contrary, namely that purchasers would prefer to avoid very "tight" dwellings, but will put up with a lack of</p>

<p>consumers seeking to purchase a larger unit of accommodation have the existing stock from which to choose."</p>	<p>space if there is little or no alternative.</p> <p>This point also seems to imply that because new developments account for only a small part of the total housing stock, it really doesn't matter what is built, as the prospective purchaser can buy from the existing housing supply if they don't like the newly developed property. An extension of this argument is to say that some (or all) of the Building Regulations do not need to apply to new developments, as they represent only 1% of the property transactions in any year. This seems to be an entirely unsustainable argument.</p>
<p>"Since the over-arching policy objective is to create mixed, balanced and sustainable communities and given the preponderance of larger units of accommodation within the existing stock, this suggests that it is necessary for newbuild to comprise largely flats and smaller units of accommodation in order to achieve that objective and to produce choice and variety in the housing market."</p>	<p>Again, this point refers to unit mix rather than unit size and is therefore irrelevant.</p>
<p>"All developments bespoke to their sites and locations. Developers are seeking to build homes that people want and which best reflects the nature of the specific local market in which the development is located. What will work in one part of London will not be appropriate in another. On the same basis, there is a very real concern that the application of the prescriptive set of standard space requirements across the whole of London will result in homogenised and standardised form of development across London rather than reflecting the variety of character that exists and which should be respected."</p>	<p>This letter was written before the HBF have had sight of our proposals, or any indication about the form that the proposals might take. Their conclusion is therefore, perhaps, somewhat premature.</p> <p>We think it very unlikely that these proposals will result in "homogenised and standardised form of development across London". The HBF will, of course, form their view once they have had an opportunity to examine these proposals.</p>

On the question of land supply, in Market Failure & the London Housing Market, GLA 2003 the likely effect of the planning system on land supply is summarised thus:

*"There is evidence to suggest that housing supply is not significantly constrained by the planning system in London. The (information available) indicates that there is strongly conflicting evidence as to whether the planning system is contributing to price increases and restricting supply. The recent research carried out for the GLA and the House*

*Builders Federation by the University of Westminster et al. (2002), suggested that planning issues are very much a secondary constraint on development.*

*It is highly likely that the UK planning system does create some constraint on the supply of residential land in the short term. In turn, it is predicted that this will have some impact on increasing land prices. The magnitude of this effect, however, is likely to be relatively small."*

Whilst this is comforting, we would prefer to form our conclusion on this question after obtaining enough case study information to be able to undertake a more thorough impact assessment.

## **8.3 Benefits**

The benefits that setting minimum space standards offer come under two headings, that of the mental health and well-being of the occupants, and that of the sustainability of the environment.

### **8.3.1 Mental Health And Well-Being**

As noted in Section 4 there does appear to be a link between crowding and children's educational attainment, occupants' stress levels and household dysfunction. Drawing a line on space standards to stop or reduce the production of dwellings that are most likely to engender crowding offers the benefits of reducing these disadvantages. It is extremely difficult to put a monetary figure on the benefits to the health service, the educational system and (through greater educational attainment) productivity. However, benefits are likely to accrue over the century or so that the dwellings are used by occupants.

We have been unable to identify a cost/benefit analysis undertaken by any other countries who have set minimum space standards for housing. As was noted in Grey (2001), minimum standards are generally set as a matter of public policy, reflecting cultural norms of what constitutes minimum acceptable standards. This has also been the case in the UK; the Scottish Building Standards Agency is currently undertaking an Impact Assessment on changes to its minimum space standards, rather than a Cost/Benefit Analysis.

### **8.3.2 Sustainability**

The environmental argument for setting minimum space standards hinges on the assumption that what is currently marketable may not be readily marketable in a few decades. It is unrealistic to expect all new developments to last for as long as they are arithmetically required to do so at the current rate of replacement (over 1000 years), but it is generally assumed that new housing will last for over 100 years before it needs significant remodelling or complete redevelopment.

Housebuilders will supply whatever will sell in the market towards the end of the construction period; they therefore mostly have a time horizon of 18 months - 3 years, modifying their products to respond to changes in the market over that time frame. They have no interest in whether their product will hold its value over the long-term or not - that is a risk faced by future purchasers.

There are no factors or pressures in the transaction between housebuilder and initial purchaser that require either of them (or their funders) to assess the long-term viability of the product.

However, over the long-term peoples' expectations about the quality of their housing has steadily increased. Whilst relatively short-term pressures may make London homebuyers (especially first-time homebuyers) revise their expectations downwards, it is unlikely that the long-term upward trend will change. Indeed, with the predicted increase in working from home, there may well be a significantly greater demand for additional space than has been the case over previous decades.

Does early redevelopment matter? It is not matter to the original constructor, nor to the original purchaser. It may not matter to the owner at the time that the property is being redeveloped assuming they purchased it at the right price. However, unnecessary redevelopment involves greater waste of energy and natural resources, and therefore makes it harder to achieve sustainability targets.

Environmental sustainability is best served by providing buildings that have a reasonably long life, which requires them to have sufficient in-built flexibility for them to adapt to changing needs over their lifetime. The main factor which provides flexibility and adaptability in dwellings is space.

Again, it is extremely difficult to price the environmental benefits that may accrue from setting minimum space standards that reduce the probability that dwellings have a short life. However, although unquantified, the public policy benefit is clear.

## **8.4 Related Issues**

In the course of undertaking research for this project we have noted that there are a number of significant factors which influence density of development and therefore the capacity of available land. Although space standards may be one, we believe that car parking requirements and minimum overlooking distances are much more significant.

We also note that the requirements that dwellings shall be generally at least 20m apart seems to stem from the Garden City Movement, but we have not come across a clear rationale for this.

There are some indications that in densely developed areas occupants may prefer larger internal space standards and private external spaces than maintaining a 20m separation distance.

We would recommend that the GLA consider undertaking further research in this area.

## 9 RECOMMENDATIONS

- 1) That the GLA considers options for implementing the standards and adopt the Baseline Standards and the Additional Standards set out in pages 13 and 14, and publish the Minimum Internal Dwelling Areas (Table 2 on page 15) as indicators of whether the Baseline and Additional Standards are likely to be achieved.
- 2) That the GLA commissions further case study analysis to test these proposed standards against current practice and to assess implications on cost and value.
- 3) That the GLA encourages London Boroughs to modify their planning application forms to require the following additional data requirements as a starting point with a future view to seeking an alteration to 1APP (the standard national planning application form):
  - (i) Design occupancy of the dwellings (number of bed spaces)
  - (ii) aggregate floor area of cooking/eating/living area of each dwelling
  - (iii) individual bedroom floor areas of each dwelling
  - (iv) floor area of built in storage cupboards
  - (v) net internal dwelling floor area.

## **10 APPENDICES**

## **APPENDIX 1 - Literature Review Bibliography**

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## **APPENDIX 2 - Literature Review: Summaries**

### **1 International comparisons**

#### **1.1 *Space Standards in Dwellings, George Wren et al for the Scottish Executive Central Research Unit. (no publication date, but definitely post-2000)***

Main findings:

- In the public sector, space standards have been maintained by Scottish Homes as the basis for grant aid/funding, though there is some flexibility which has been used to redistribute the space within similar overall areas, increasing living, kitchen and some bedroom areas, but reducing storage space.
- The private sector has used the removal of space standards to decrease the size of some single bedrooms and reduce the amount of general storage that is provided. The space saved has been used to increase the size of living and kitchen areas and also to provide larger double bedrooms with en suite. Basically the amount of space provided has remained unchanged.
- In both sectors living and kitchen space has increased at the expense of storage space, which in many cases is well below the benchmark figure or even absent altogether.
- There is a greater variation of space standards in the private sector than the public sector for dwellings of the same intended occupancy.
- The greater variety and variance of house types in the private sector compared to the public sector suggests that private developers provide house types in a variety of different forms to suit buyer's different financial circumstances and lifestyles. However some private developers now choose to build some dwellings that are below any documented space standards.
- Analysis of the pre-1987 private sector plans shows that it was possible for developers to design houses in such a way that they were marketable for a higher occupancy that would be presumed by the Building Regs and the public sector.

The report makes the following recommendations:

- Minimum standards should be introduced for storage provision
- A mandatory requirement giving a minimum size for any dwelling would ensure one person dwellings were of adequate size. Space standards in one or two person dwellings can be increased by under occupancy.
- The overall area of a house or flat should be required to be stated by developers, sellers or landlords.
- Any new standards would first require research into how people now use their homes and what future trends may be.

#### **1.2 *Bigger, Better, Faster, More: Why Some Countries Plan Better than Others. Alan W. Evans and Oliver Marc Hartwich, Policy Exchange 2005.***

A study of the housing and planning systems in Germany, Switzerland, Ireland and Australia - all four considered to have similar demand side issues to Britain. The authors considered how some countries are able to combine upward demand pressure with stable house prices and spacious homes, whilst others are not.

*Germany - a Localised Planning System*

The planning system is heavily incentivised. Central government grants are linked to population and tax revenues, so local politicians compete to make their cities attractive,

both in the sense being pleasant places to live and also places that draw more inhabitants.

The main responsibility for planning lies with local planners and politicians, so plans are responsive to local needs and the environment.

#### *Switzerland - devolved taxation and planning system*

The authors find that the devolved tax system, where cantonal and sub-cantonal tiers of government determine their local tax rates, means competition between councils and cantons. If they provide inadequate land for housing development, then they risk losing inhabitants. On the other hand, council areas which attract new inhabitants are able to reduce taxes or improve standards.

There has been no real house inflation in Switzerland for more than three decades, but at the same time Swiss houses have become bigger and better. The last census shows there is a trend towards more rooms and more floor space - between 1990 and 2000 the number of dwellings with more than 4 rooms increased by 12.6%, there were 22.7% more dwellings with 5 rooms or more and 9.6% more with 6 rooms +. The census does not provide data for average sizes, but two facts stand out: 61.9% of first homes had a floor space of 80 sqm or more (the average size for all UK new-build houses), whilst the number of first homes with a floor space of more than 160 sqm went up by 38.7% within that decade.

Interestingly, Swiss consumers demonstrate different preferences and priorities for their homes than is shown in surveys of UK, and specifically London, customers. Priorities are "light and sun" and "low rent or mortgage payments", whereas being close to work and leisure activities rank very low down. In other words - the emphasis which the UK customers and planners and politicians propagate, of high-density settlements close to transport, work and social activities do not seem to apply in Switzerland.

#### *Ireland - a short-sighted housing boom*

The authors find that Ireland's housing boom has led to impressive increases in house-building but that it came too late to stall rampant housing inflation. The unresponsive centrally planned system of development failed to react quickly enough to the demand pressures of the economic boom. This later resulted in a "quick fix", with large numbers of small, often low-quality homes added to the bottom segment of the housing market. As first-time buyers seek to trade up, the lack of additional housing at the top end of the market leaves them unable to afford a better home.

Some interesting facts and figures:

- The average newly build dwelling in Ireland has a floor area of 88.4 sqm
- More than 45% of all Irish dwellings have been built since 1980, more than twice the share in the UK
- Ireland has a very low dwelling stock per capita - 341 dwellings per 1000 inhabitants, compared to 430 in the UK
- The share of owner-occupied dwellings, at 78% is even higher than in the UK.

The report criticises the Irish government for thinking in numbers and units rather than in quality, size and future needs. Fast development was important, whilst quality does not appear anywhere in the Irish statistics.

### **1.3 Comparative Study of the Control and Promotion of Quality in Housing in Europe, ODPM**

A study of measures to control or promote the quality of new-build general needs housing in Europe.

Key findings:

- The form and extent of controls reflect the general tenor of government policies - deregulation is a common feature
- There has been a decline in the state subsidisation of housing
- Regulation and incentives systems are frequently revised or extended so that any description of current practice is an attempt to arrest a moving target
- Although specifications offer tighter controls than performance requirements, they may only demand minimal standards
- Advisory guidance is available on a remarkable number of quality issues, but considerably fewer are actively controlled
- Generally, financial incentives set higher standards than statutory mechanisms
- Overall there is considerable variation in standards.
- It is difficult to discern the highest standard for the minimum size of dwellings, but the lowest standard is Great Britain, with neither statutory requirements nor conditions of subsidy.
- The most common concerns for the size of rooms are ceiling height, the area of living rooms and bedrooms and the space in kitchens. Although the Netherlands has the greatest number of requirements for the size of rooms, the standards are not particularly high.
- Few of the possible issues for the internal layout of dwellings are addressed. The most common concern is for the separation of toilets and kitchens.
- Overall there are very few requirements for storage, with limited opportunities for comparison
- Overall the highest standards are the performance requirements in Sweden
- Where there are minimum standards for circulation space but no accessibility specifications for the size of rooms, the usability of rooms depends on general space standards and careful design.

### **1.4 L. Sheridan, H.J. Visscher, F. M. Meijer, *Building Regulations in Europe, Part II: A comparison of the technical requirements in eight European countries*: University of Delft, 2003**

An international research project into the systems of building regulations, implementation and control and the systems of technical requirements in eight countries - the Netherlands, England, France, Germany, Sweden, Norway, Belgium, and Denmark.

There are considerable variations in the technical building requirements of the countries studied and the countries also use a broad variation of systems and formulations of the requirements, including: -

- Generalised "functional" requirements in combination with "deemed-to-satisfy" practical design solutions
- Generalised "functional" requirements with design guidance or reference to external sources of design guidance
- "prescriptive" requirements with reference to solutions: and
- Quantitative "performance" requirements without reference to practical design solutions

Planning and building control are separated in England and Wales, and Sweden, but are combined in Belgium, Denmark, France, Germany, the Netherlands and Norway.

Dimensions of habitable space and habitable rooms are shown in Table 21

**Table 21**

Country	Criterion	Calculations	Requirements
<b>Belgium</b>	Floor space per occupant	Gross habitable area	Habitable area (sqm) no. occupants 1 2 3 4 5 ...10 20 28 33 38 43 68
<b>France</b>	Floor space per occupant	Net habitable area	Habitable area (sqm) no. occupants 1 2 3 4 5 6 7 14 28 42 56 66 76 86
<b>NL*</b>	Habitable space, living function	Floor area	Habitable area (sqm) 24 (new building) 14 (min. total floor area of habitable rooms, existing building) Size of one habitable room 3.3 x 3.3m
<b>Sweden</b>			Dwellings shall be sized with regard to their long term use and to the number of persons for which they are intended

\* Standards are based on research about the smallest possible space needed for the performance of characteristic activities by one person and for minimal seating for two persons

#### Habitable rooms

Each country except England has some requirements for the size of habitable rooms, and in some countries there are further accessibility requirements that have implications for the size of rooms. None of the requirements explicitly refers to the functions of bedrooms or living room but these are usually implied.

Size of habitable rooms (living rooms, bedrooms) are shown in Table 22

**Table 22**

	Area, width, length	Ceiling height
Belgium	One room with min. habitable area 6.5sqm (1person), 9sqm (2p), 12sqm (3p): definitions for occupancy of bedrooms. Characteristics for habitable rooms: min area 4sqm, overall width >1.5m	2.4m (new build)
Denmark	Size and design of rooms suitable for intended use. Min area 3.5sqm	2.5m - apartment buildings 2.3m - houses

France	Average habitable area of principle rooms 9sqm. No room <7sqm.	2.3m
Germany	Net area, habitable rooms, 10sqm. Where there are several bedrooms and living rooms, one room may be 6sqm.	2.4m
Netherlands	At least one habitable room 11sqm. Min dimensions of habitable rooms, area 5sqm, width 2.4m	2.6m
Norway	Net cubic capacity 15cum (calculated net area 6.5sqm)	2.4m
Sweden	Dwellings shall be sized with regard to their long term use and to the number of persons for which they are intended	2.4m

### Conclusions

Floor area is a key determinant of amenity and accessibility, but also influences construction costs, prices and rents. The use of minimum space standards as a condition of financing or subsidy has declined in tandem with reductions in public spending on housing.

Flexibility afforded by higher space standards might help contribute to the sustainability of housing development, since larger houses are more likely to be suitable for a range of households and a range of abilities.

### **1.5 Housing for Varying Needs Scottish Homes 1997**

This contains no space standards as such, but it does have design criteria which are similar to the *Lifetime Homes and Standards & Quality*:

- wide circulation
- living room and dining space allow for notional furniture and circulation path
- bedrooms allow for notional furniture and circulation path
- double bedrooms allow for twin beds
- at least one bed space can be accessed from both sides and in a wheelchair
- provision is made for adequate and accessible general storage
- kitchen must have sufficient area to turn a wheelchair

## **2 England**

### **2.1 Housing Manual MHLG 1949**

The Manual was prepared by a sub-committee of the Central Housing Advisory Committee and a panel of architects appointed by the Association of Local Authorities.

It recognised the necessity for a much wider variety of house sizes and types, which aimed to provide for the post-war family housing need. This Manual illustrates accommodation for small and large families, single persons and aged couples. Local housing authorities are acknowledged within the Manual as being the appropriate bodies to determine size and type of dwellings suited to their particular communities.

The Manual emphasises the fact that standards applied since 1944 resulted in improvements in the quality of the housing produced compared to the pre-war period. It further stresses that local authority housing schemes should set an example in terms of accommodation and construction, in siting and grouping. The Manual recognises the value of professional expertise and recommends the appointment of an architect to plan and develop new schemes.

The Manual sets out detailed guidance for all aspects of development from site selection, from planning and standards of accommodation to heating and other services. It provides illustrations of exemplars, including high density housing, rural housing, regional characteristics and local materials.

### **2.2 Flats and houses: design and economy MHLG 1958**

This study reflected the priorities of the government at the time, to increase output and reduce unit costs of council housing. It represented a significant reduction in space standards compared with the 1949 Housing Manual, and a move to increased density by the prioritisation of flats as opposed to 2 storey terraced housing.

### **2.3 Homes for Today and Tomorrow (the report of the Parker Morris Committee) MHLG 1961**

This seminal publication set out to define a list of design standards which were to be applicable to private enterprise and public authority housing alike.

It recognises the social and economic revolution and the changing lifestyles of the nation since 1945. The report asserts that:

- 1 in 3 households have a car
- 1 in 3 have a washing machine
- 2 out of 3 have a TV
- 2 out of 3 have a vacuum cleaner
- 1 in five have a fridge.

The report suggests that two major changes were necessary in terms of new housing - space and heating: "*new homes are being built at the present time which not only are too small to provide adequately for family life but also are too small to hold the possessions in which so much of the new affluence is expressed*".

The Committee's view was that prescribing minimum room sizes would inhibit flexibility in design and new development by assuming a conventional (i.e. 1920s - 1950s) arrangement of dwellings and use of rooms: *"the right approach to the design of a room is, first to define what activities are likely to take place in it, then to assess the furniture and equipment necessary for those activities, and then to design around these needs, plus others no less important, such as aspect, prospect and communication with other parts of the home"*

The report stresses several times that the minimum floor areas mentioned should not be taken as maxima.

Summary of recommendations:

- Standards of floor space to be expressed as sizes for the whole house
- The Parker Morris minima are in no sense intended as maxima, rather they were intended solely to safeguard the general level of useful space per person in the various types of building. Larger floor areas would be called for and should be encouraged
- In the Parker Morris standards a 5 person terrace house has a minimum area of 910 sq ft (84.5m<sup>2</sup>) plus 50 sq ft (4.6m<sup>2</sup>) storage - the existing average (from 1949 housing manual and 1944 revisions) at that time was 900 sq ft including general store.

#### **2.4 Design Bulletin 6 MHLG 1963 and metric version DoE 1968**

This publication developed the principles of Parker Morris by defining the spaces which were required adequately to furnish and use the individual rooms in the dwelling for normal activities. It was the first attempt to adopt the functional approach to use of rooms by assessing the furniture, fittings and equipment required, and the space to use them. The Bulletin was designed to:

- Illustrate some of the main family and personal activities for which a house has to cater;
- To set out space and furniture requirements simply and quickly ;
- To provide a specimen analysis of a house plan to illustrate the approach and standards recommended by Parker Morris.

Design Bulletin No. 6 is essentially an illustrative reiteration of the social and economic trends and emerging demands upon household space that Parker Morris outlined - the actual space standards recommended are the same.

#### **2.5 Homes for the Future: Standards for New Housing Development, The Institute of Housing and RIBA 1983**

This was a jointly published report aiming to update Parker Morris, where necessary and appropriate. The report stresses that future housing standards should be concerned not just with internal space requirements but also with the type of development, layout and external environment to avoid the errors of the previous decades. Many houses built to Parker Morris standards had been demolished because of issues with poor design and layout. The report recognised that publicly provided housing required, if anything, higher standards than private housing, as tenants were more likely to fully occupy the property and less likely to have the means to make alterations.

The recommended standards for internal space were:

- Overall storage space, as recommended by Parker Morris should be retained for all public sector development
- Floor plans should indicate furniture layout, radiator and socket positions etc
- An enclosed lobby or entrance hall should be provided
- Minimum corridor width of 900mm
- 2<sup>nd</sup> WC in all 5 person+ dwellings
- Linen storage of 0.5 m<sup>3</sup> to be provided in all dwellings.

This report believed firmly that the principles embodied in Parker Morris still applied and should remain the minimum for public sector housing. It emphasised the need for greater flexibility in the design of housing for the future to accommodate increases in aids to living and leisure. For example, it recommended increased floor space and a reduction in the number of built-in cupboards for kitchens. Interestingly it also recommended a separate utility room to ease problems of condensation.

## **2.6 BRE Housing Design Handbook: Energy and Internal Layout (Department of Environment 1993)**

This handbook:

- Covers the main criteria upon which design decisions such as space requirements depend.
- Summarises the essential dimensional and performance information on dwelling design from official publications (including Parker Morris and DB6) and places them in the context of the (then) relatively new "green issues"
- Gives a basis of choice to designers and developers rather than a set of hard and fast rules.

Some key recommendations include:

- Increase the number of rooms by adding more divisions in the house plan in order to improve privacy. (This is of course at odds with other studies, which show that too many rooms in the same amount of space is what makes new houses poorer in terms of space standards, flexibility and meeting the needs of modern life)
- Provide two living rooms rather than one
- Provide extra smaller rooms rather than fewer larger rooms in family houses
- Provide one bedroom for each child
- Provide an area for receiving guests before they enter the more private areas of the home.

No minimum space standards are given, rather the dimensions are provided for household activities to be carried out in stated spaces. Furniture and equipment sizes are provided, along with the circulation space around those areas.

## **2.7 Guide to Standards and Quality NHF 1998**

This was commissioned by the National Housing Federation, and funded by Joseph Rowntree Foundation. Its objective was to improve both the process and product of housing association development, and contained sections dealing with:

- The development process
- External environment
- Internal environment
- Cost in use

- Accessibility.

The design guidance contained within the *Internal Environment* section adopted a functional approach based on living patterns, furniture and equipment, which developed the approach taken in DB6. This generated recommendations on the space to use them and minimum sizes for:

- Essential items and dimensions of furniture and fittings
- Space generated by their use
- Areas needed for storage
- Circulation and access zones
- Service provision.

The functional approach offered flexibility to the designer to achieve optimum planning solutions. It deliberately did not set minimum or recommended space standards to achieve the functional criteria. Testing by a number of architectural practices during the study ensured that the standards were realistic and comparable with existing Housing Corporation requirements and housing association custom and practice (which at the time were below Parker Morris).

## **2.8 Sustainable Communities: Homes For All ODPM 2005**

This sets out the criteria for sustainable communities, including a section entitled *Well Designed and Built - featuring quality built and natural environment*

Sustainable communities offer:

- Sense of place - a place with a positive 'feeling' for people and local distinctiveness
- User-friendly public and green spaces with facilities for everyone including children and older people
- Sufficient range, diversity, affordability and accessibility of housing within a balanced housing market
- Appropriate size, scale, density, design and layout, including mixed-use development, that complement the distinctive local character of the community
- High quality, mixed-use, durable, flexible and adaptable buildings, using materials which minimise negative environmental impacts
- Buildings and public spaces which promote health and are designed to reduce crime and make people feel safe
- Accessibility of jobs, key services and facilities by public transport, walking and cycling.

## **2.9 Housing Corporation Scheme Development Standards**

SDS sets out minimum design standards that new build projects must achieve in order for RSLs to obtain SHG. HC tests whether SDS is met, after completion, by audit.

The requirements of SDS are often phrased in a general manner, such as the requirement for "*adequate space for sensible furniture arrangements for all room activities*". The current edition of SDS states that:

*"Internal Environments should be comfortable, convenient, capable of sensibly accommodating the necessary furniture and equipment associated with specific room activities and be suitable for the particular needs of intended user groups.*

*In assessing spatial and other features associated with achieving comfort and convenience, including necessary provisions for furniture, fittings, equipment, services and controls, the HC will have regard to the internal environment section of S&Q.*

### *Tests of compliance – essential items*

- *Sensible circulation space*
- *Adequate space for sensible furniture arrangements*
- *Space for whole family and occasional visitors to gather*
- *Space for a small worktop or similar in single bedrooms*
- *Space for an occasional cot in main bedrooms*
- *Space for a pram or pushchair*
- *Two separate living areas are possible*
- *A bath, WC and basin*
- *Enclosed storage*
- *Space and connections for cooker, fridge/freezer and washing machine*
- *Adequate and sensibly situated electrical outlets, switching and controls*
- *Aerial point with conduit and draw wire provision”*

## **2.10 Housing Corporation Total Cost Indicators**

Total Cost Indicators form the basis of the HC funding system, which aims to achieve value for money in return for grant, and to ensure the correct level of grant is paid.

TCIs are divided into unit type and cost group area categories.

For self-contained units the base TCI is determined by its total floor area and the cost group in which it is located. TCI tables provide a probable occupancy figure, but this is a guideline only. The actual number of occupants will be derived from the number of bedspaces provided.

TCI guidelines for occupancy against floor area (m<sup>2</sup>) are shown in Table 23:

**Table 23**

Occupancy (persons)	Dwelling Area m <sup>2</sup>
1	25 – 40
2	30 – 60
3	50 – 80
4	60 – 90
5	70 – 100
6	80 – 120
7	100 – 120
8	110 – 120

The occupancy levels assumed in the TCI tables cover very broad ranges, and are of little help in plotting trends in space standards within RSL developments.

## **2.11 Joseph Rowntree Foundation Lifetime Homes**

The *Lifetime Homes* concept was developed in the early 1990s. They have 16 design features that ensure a new home will meet the needs of most households. These are:

- Where there is car parking adjacent to the home it should be capable of enlargement to attain 3300mm width.
- The distance from the car parking space to the home should be kept to a minimum and should be level or gently sloping.
- The approaches to all entrances should be level or gently sloping.
- All entrances should be illuminated, have level access over the threshold and have a covered main entrance.
- Communal stairs should provide easy access and where homes are reached by a lift

- it should be fully wheelchair accessible.
- The width of the doorways and hallways confirm to clear specifications, with doors at least 750mm wide and hallways from 900mm when approach is head-on.
  - There should be space for turning a wheelchair in dining areas and living rooms and adequate circulation space for wheelchair users elsewhere.
  - The living room should be at entrance level.
  - In houses of two or more storeys there should be space on the entrance level that could be used as a convenient bed-space.
  - There should be a wheelchair accessible entrance level WC with drainage provision enabling a shower to be fitted in the future.
  - Walls in bathrooms and toilets should be capable of taking adaptations such as handrails.
  - The design should incorporate provision for a future stair lift and a suitable identified space for a through the floor lift.
  - The design should provide for a reasonable hoist from a main bedroom to the bathroom.
  - The bathroom should be designed to incorporate ease of access to the bath, wc and wash basin.
  - Living room window glazing should begin at 800mm or lower and windows should be easy to open/operate.
  - Switches, sockets, ventilation and service controls should be at a height useable by all.

No minimum space standards for the dwelling as a whole are set within *Lifetime Homes*, nor are furniture provision or sizes defined.

### **2.12 *Housing Standards: Standards Past – and Future? David Levitt (1982)***

This article coincided with the ending of Parker Morris requirements for publicly funded housing in England. It offers a thorough analysis of housing standards and legislation/regulations from 1774 to 1981. It expresses views on likely consequences of the policy change at that time. It illustrates links between the introduction of standards to improve housing quality, and quality of life of residents, particularly in relation to reduced mortality rates. It also illustrates that standards on their own cannot deliver good quality housing. Poor design, which fails to reflect human needs of scale and place, will frustrate the achievement of the objectives of higher standards.

### **2.13 *New Homes in the 1990s: A study of design, space and amenity in housing association and private sector housing JRF Valerie Karn & Linda Sheridan (1994)***

This is an important reference which compares public and private sector space standards, which is quoted at length in the body of our report. It is a snap shot based on analysis of plans from house builders and RSLs, effectively all compared back to Parker Morris; there is very limited trend analysis. Their conclusion, at that time, was that storage space was the main casualty of pressures on dwelling size.

### **2.14 *Housing Density: What do residents think? LSE Rebecca Tunstall (commissioned by East Thames)***

Rebecca Tunstall was commissioned by East Thames Housing Group to investigate resident attitudes to housing density, to help policy makers and developers make informed decisions. The study finds that resident attitudes to high density are complex.

There is little evidence that residents positively prefer higher density housing when it comes to their own aspirations, although they do tend to be supportive of it when it is described in terms of protecting the greenbelt and countryside areas. However, home buying and moving behaviour suggests many people accept living in higher density housing. The survey found that higher density housing can be acceptable under certain conditions, depending upon the satisfaction of residents' requirements in relation to location, design, resident characteristics, services, management and resident involvement. This supports the view of trade offs between location and density.

### **2.15 Why Increase Housing Density? NHF 2005**

High housing density need not mean high rise - the important point is that the mistakes of the past are not repeated in new development. *Capital Gains* takes a holistic view of high density housing and looks at 8 successful London RSL schemes built to high density (81 - 455 dph).

Key findings are:

- Occupancy is crucial i.e. who lives there, what space they enjoy, time spent in the home
- Success comes from a number of factors:
  - Accessible locations with good transport links
  - Comparatively low occupancy and child density levels
  - Effective management
- Quality of design is important, with residents rating the following:
  - Security
  - Sound insulation
  - Dwelling size
  - Quality open spaces
  - Privacy.

Good design does cost money, and the good design of high density housing costs more owing to the need for higher specifications.

### **2.16 BCIS Five Year Review of UK Housing (RICS, 2005)**

This study finds that British homes are becoming more condensed, with more rooms in the same space. Reduction in available living space is due to the inclusion of extra rooms, especially en-suite bathrooms and utility rooms. Meanwhile, developers are using the growing popularity of town houses and mews houses to re-brand smaller terraced houses as such. BCIS advocates referencing dwellings' floor areas as opposed to number of bedrooms.

Other findings include:

- More three storey dwellings
- Growing use of rooms in the roof
- Increasing use of bay windows
- More garages.

### **2.17 Unaffordable Housing, Fables and Myths, Alan W. Evans and Oliver Marc Hartwich, Policy Exchange 2005.**

The authors highlight that Britain has amongst the oldest and pokiest houses in Europe and blame the misguided logic of our planning policy, which has both ignored the role of

supply in determining house prices and at the same time has encouraged the delivery of the wrong kind of housing. The report finds that we are living in crowded and dense cities, not a crowded and urbanised country, and that the North West, rather than the South East is actually the most urbanised region in England. The impression of over-urbanisation in the South East stems from development being focussed close to major transport links.

The authors argue that there is a danger that the constraints on the growth of the major cities ignores the effects of higher costs on their ability to compete with other cities in other countries. They envisage a scenario for the British economy where a tipping point is reached and the financial services industry of the City decamps to cheaper cities elsewhere in Europe.

What is built now, i.e. smaller, high density homes with a preponderance of flats and apartments is not desired - it is bought simply because it is all that is made available. The authors challenge the "myth" that we need agricultural land to be self-sufficient (citing evidence that we already rely on imports for almost everything) and that cities are bad for the environment (claiming that low rise, low density housing is far better for bio-diversity than mono-cultural farmland).

### **2.18 *Building for Life: (I) a speech by Sir Terry Farrell CBE at Carpenters Hall, City of London, 2001 (ii) Delivering Great Places to Live, (iii) Building for Life (iv) Building for Life, Literature Review***

An initiative led by CABI and the Home Builders Federation, supported by the Civic Trust, Design for Homes, EP and the HC, this has developed the Building for Life standard, to assess design quality in new housing schemes.

The Standard asks twenty questions, based around Character, Roads, Parking and Pedestrianisation, Design and Construction, and Environment and Community. In terms of internal space standards the question is: *Do internal space and layout allow for adaptation, conversion and extension?*

The Standard suggests that a well-designed home needs to take account of changing demand and lifestyles of the future by providing flexible internal layouts and allowing for cost-effective alterations.

The main consideration should be adaptability:

- Downstairs toilet
- Wider doorways
- Level entrance
- Allow for lift or stair lift to be fitted
- Potential to extend back or upwards
- Potential to open up between rooms
- Garden space
- Space for a conservatory
- Rooms big enough to be used in a variety of ways.

The Literature Review looked at 27 aspects of urban high density living and came to the following key conclusions:

- The key to improvement in the quality of new homes delivered at high density is likely to lie with the development process - including the housing market structure, planning system, motivations of those involved in delivery and the perceptions of the new product
- Each site must be treated on its own merits - and minimum density policies are felt

- to be a blunt instrument.
- Successful development is heavily dependant upon process, and a key element of that process will be consultation and discussion with all stakeholders, including customers, to avoid government or architectural determinism
- Density in itself does not appear to be an issue: what is important is the density of a specific site, in relation to design, facilities and general standards and behaviours in the neighbourhood
- London boroughs should identify specific areas for intensification in their UDPs.

**2.19 Visions of Housing Futures: Incipient Obsolescence? Paper to the Housing Studies Association conference 2005, Keith Kintrea, University of Glasgow**

This paper looks at the UK as a whole, and asserts that obsolescence in housing is not only an issue in low demand areas, owing to a combination of societal, housing demand and technological factors. Obsolescence is defined as "a loss in the utility or value of a property that results over time from intrinsic limitations (as outmoded facilities) or external circumstances". However, obsolescence in housing has not driven policy since the end of the slum clearance era, 35 years ago.

Until very recently experience suggested that most housing could be repaired, modernised and adapted for new or altered demands and needs. The author sees the future view of housing as made up of two broad and opposing alternatives, crudely summarized as:

- Firstly, guided by the oft-expressed consumer preference - a geared-up version of common norms, traditional two storey, 30 dwellings per hectare, car dominant
- Secondly, Richard Rogers' urban thrust - denser, more urban, high tech.

BUT - since 85% of the housing available in 2021 is already standing now, whatever standards are set for new building will be only a small effect on the future. Where housing is in short supply, virtually all housing, regardless of quality, continues to attract a demand and consumers are willing to spend money on keeping the dwellings habitable and improving them.

Obsolescence of the housing stock has not been investigated systematically, even by this author, though the question is asked here as to whether housing and planning policy has a role in accelerating obsolescence through the encouragement of better standards - i.e. making existing satisfactory stock unattractive therefore in less demand.

Factors in obsolescence:

- Rise of consumer culture which is articulated as increasing demand for housing which reflects preferred lifestyle and identities
- Individualisation and the retreat from the community (this supports CABE's findings that residents like cul-de-sacs and dislike through roads, and like detached car-dependant homes so they don't have to deal with their neighbours)
- Changes in demand which mean demand is becoming increasingly complex
- Demand has moved up market as a result of increased affluence and the fascination with our homes
- Affluent consumers now demand different living spaces - fewer rooms in the same floor space
- Conversely, larger and extended families mean demand for bigger homes with more rooms
- Concertina households - expanding and shrinking throughout a lifetime

- Short termism
- Demand for more internal space
- Demand for space outside the dwelling.

The author points out that the typical package offered by house builders until relatively recently, and the space available (three or so bedrooms and attached living areas), is similar to that offered a century ago. However newly developed homes, and buyers, are changing quickly:

- Multiple en-suites
- Utility rooms
- Parking
- Cul-de-sac layouts
- Open plan living.

The conclusion is that, whilst we can assume that older housing types with a high cultural value will continue to be in demand, increased standards may mean reduced demand for housing at the lower end of the market.

### **2.20 Consumer Choice in Housing, the beginnings of a home buyer revolt: Ken Barlett et al, JRF 2002**

This study aims, amongst other things, to identify the essential elements within a house. It remarks upon the peculiar feature of the UK housing market, that so much of our building stock comprises older properties that are continually renewed and enjoyed well past their projected life span. The report aims to identify the special qualities that explain the enduring attraction of older properties - the *experiential* qualities.

One element of the character of older houses is that their spaces are suggestive of use without necessarily being prescriptive. Modern space standards, however, imply major assumptions about lifestyle - we know the furniture requirements of a master bedroom and plan a room that can be used in this way, but often only in this way. Modern houses then, become an assemblage of distinct rooms, each to be used in a prescribed manner - this makes them less able to accommodate changing lifestyles or demographic realities and so they do not contribute to a sustainable housing stock.

Old houses that are still lived in today have survived because they facilitate adaptation to lifestyle and family changes. A terraced row exhibits an orderly façade, but at the rear will provide a picture of the individuality of each of its occupants. The clear territorial division of the party wall, and the uniformity of the façade suggest that upwards, backwards or downwards is the way the house should expand - as suggested by *Building for Life*.

### **2.21 Preferences, quality and choice in new-build housing: Leishman, C et al for JRF 2004.**

A study of private house builders new customers, with the aim of defining household preferences, trade-offs and choices. Focused upon the Glasgow and Edinburgh markets, but representative of most new housing markets. The report asserts the importance of the need to know whether land use planning and building control systems reflect consumer preference. However, understanding of the key factors which drive buyers' housing choice is relatively poor, whilst even less is known about the processes by which consumers trade off factors to arrive at a final housing choice.

The key thread running through the entire report is that house building outcomes are very different from new-build house buyers' needs and preferences. There is a clear trend, involving buyers getting an increasing number of smaller bedrooms as time goes on, and a significant level of dissatisfaction about this amongst buyers. Yet the number of bedrooms is an important driver in purchasing decisions, as it is linked to price and long-term investment return aims. This can be likened to the prisoner's dilemma where people are forced to make sub-optimal decisions.

The study aims to provide:

- A detailed examination of new-build housing buyers' needs and preferences
- Analysis of the physical, locational and quality characteristics of the housing which is actually constructed by house builders.
- An examination of the relative importance of property, location, neighbourhood and price factors to consumers in the housing choice process.

General findings

- A preference for suburban and low-density housing
- Homogeneity on housing estates is more noticeable at the lower end of the market
- Parking provision continues to be a significant issue, and having a garage is seen as part of the identity of living detached
- Property prices are higher in estates that contain more variety in terms of design and house type.

Space standards

Scottish Building Regulations stipulate 9m<sup>2</sup> minimum recommended size for a double bedroom – so bedrooms measuring less than 9m<sup>2</sup> are identified as one bed-space and those measuring more as two bed-spaces.

Karn and Sheridan in 1994 found that the increasing number of 2 bedroom 4 bedspaces properties represented a worrying trend – they argue that these properties will be very cramped unless occupied by 2 adults and one child.

This current study shows a continuing increase in 2 bedroom 4 bed-space properties, but worryingly, 58.1% of their sample two bedroom properties have only 3 bed spaces – this suggests a significant reduction in space standards.

In the majority of all properties in the sample, only the first bedroom exceeds 9m<sup>2</sup>. 58.9% of 3 bedroom properties had only 4 bed spaces, and only 26.3% of 4 bedrooms have more than 6 bed spaces. 26% of third bedrooms measure less than 6m<sup>2</sup>.

Findings – space and bedrooms

- Trade-off – customers almost always prefer more, rather than bigger, bedrooms
- Many customers are using additional bedrooms as storage, office or public space
- The most dissatisfaction with bedroom space was expressed amongst customers who “fully occupy” their homes
- The number of bedrooms is a key driver of house prices,
- But, consumers are not particularly responsive to different bedroom configurations and sizes
- These mixed messages lead the authors to suggest that floorspace may be the underlying driver (?)

Other Preferences

Public room configuration is a very important choice factor in purchasing decisions, and dining rooms are popular.

En suite bathrooms tend to add value universally.

But, it is difficult to predict or explain the preferences of different groups of buyers with respect to room layout and configuration. This might be partially explained by the fact that most respondents felt that house builders uniformly provide standardised bedroom options, normally involving a relatively large number of small bedrooms– therefore limiting choice and the expression of preferences.

The report suggests that part of the success of the Sustainable Communities Agenda might hinge on promoting the development of larger properties, but at higher densities (chimes with the next report).

### **2.22 *Housing Audit: Assessing the Design Quality of New Homes, London, the South East and East of England. CABE 2004***

This is an audit of 100 recent housing developments, which uses the 16 criteria which make up the *Building for Life* Standard as a benchmark for quality. The key finding is that the design quality of the majority (61%) of new housing supply is average.

Design standards do however appear to be gradually rising, and the report finds that some very attractive new environments are being created. This finding is particularly true where there is a strong tradition of high quality design guidance from the local authority (e.g. Essex) or where exemplars (e.g. Poundbury) create a point of reference or a benchmark.

The report contends that when volume house builders are given clear design briefs which provide appropriate policies and guidance, then good schemes are often the result. With the appropriate policies, processes and skills in place house builders, local authorities and highway authorities can produce well-designed and sustainable environments.

The report does not consider space standards as such, but makes recommendations for action in four key areas:

- Skills
- Car parking and highways
- Architectural design
- Policy, guidance and implementation.

### **2.23 *What it's like to live there: the views of residents on the design of new housing. CABE 2005***

CABE's report which accompanies the design audit attempts to clarify whether residents' views concur with the design experts. Generally there is a consensus, and very few occasions where the views differ.

Key findings:

- The importance of creating a sense of place, with local facilities, and opportunities for creating a sense of community.
- The most controversial aspect was the design of streets and the provision of car parking spaces, with a clear message from residents that cul de sacs are good (contrary to the designers view) and that many people prefer developments without through traffic

- Dissatisfaction with PPG3 levels of parking for several reasons. The cause being that there is insufficient parking on streets and drives for the number of cars per household plus visitors, and the view that car ownership is unlikely to reduce. But also, interestingly, designers still view garages as a place to store a car. However, that the lack of internal storage space in the house often means that garages have to be used for the storage of household goods, resulting in more pressure on street parking.
- There is low use of public transport
- There is little or no social interaction between residents
- 73% of new residents are quite or very satisfied with the interior of their home.

A similar report was published for Housing in the North in late 2005, which drew broadly similar conclusions but commented that the design quality of Northern housing was worse than London and the South.

### **2.24 What Homebuyers Want: Attitudes and Decision-making among consumers. CABE 2005**

A study bringing together:

- An evidence based review of 25 consumer surveys undertaken in the last decade
- Qualitative research via focus groups of customer preferences
- Quantitative survey of decisions and choices amongst house buyers.

The study acknowledges that consumer choice in the housing market is limited by affordability, regulation and geography. However, there are locations where supply of homes should change to accommodate changing demands, whilst in others there is a leadership role for policy makers in defining appropriate products.

The research found that that there are significant pragmatic differences between London and the rest of the country. In particular, Londoners are prepared to accept higher densities and are more willing to rely on public transport. As might be expected, car parking is not such a contentious issue for London residents.

Key findings:

- Importance of a sense of place, particularly in terms of local amenities, safety and security
- Good streets - once again the reduced parking standards of PPG3 produce a high level of consensual frustration across all parts of the evidence studied.

Dwelling type preferences:

- Families and older couples prefer detached homes
- First time buyers still prefer detached or semi-detached, but are prepared, mostly on the grounds of affordability, to live in terraces or flats
- 3 storey homes (popular with housebuilders to meet the density requirements of PPG3), are the least popular type of housing after flats (although there is some appreciation of the lifestyle choices they offer - see later)
- A useable roof space is popular - reflects the tendency for a desire for larger spaces which are capable of being used in different ways
- The delivery of flats which are too small and the in the wrong places could be biasing people against a type of living which is acceptable, indeed the norm, elsewhere
- Provision of outside space and particularly a garden is a crucial factor common to all life stage groups and dwelling types
- External appearance rates low on the list of priorities
- A key drawback of new homes is the lack of space - new homes are perceived as having smaller rooms and a lack of storage space

- The emerging preference is for rooms that are capable of being used for a number of functions and this is where three storey homes may have an advantage as they provide living space on two floors.

The author acknowledges that consumer preferences are complex and cannot be treated superficially. Important also to remember that they are expressed within the context of the possible - few of us can afford to live in a detached period house in a village context whatever our preferences!!

### **2.25 Design Reviewed: Urban Housing CABE 2005**

CABE's expert design panel have reviewed a range of recent urban developments to identify what works and what signifies sustainability. There is little here in terms of internal space standards, but a couple of relevant findings which concur with others:

- what is required in urban developments in terms of dwelling types is a variety of dwelling size and type, and tenure, as well as a range of community facilities
- CABE's view is that there should be a clear distinction in urban developments between what is private or communal space and the public realm. An appropriate spatial hierarchy will help achieve a proper balance between uses of space, pedestrian and vehicle routes and where they meet.

### **2.26 City People: City Centre Living in the UK IPPR 2006**

This study suggests that inner suburbs should become priority areas for regeneration because they are able to provide the type of facilities and accommodation that people look for when starting families. UK city centre residents are mostly young single people and such areas cannot be made family friendly. Many city centres such as Manchester and Liverpool have experienced a population surge over the past 15 years and feature large numbers of flats aimed at the buy to let market. Whereas 20% of households live in flats nationally, the percentage is 62% in Liverpool, 78% in Manchester and 95% in Dundee city centres. These house mainly young professionals, students and low-qualified adults. This in turn causes a "conveyor belt effect" whereby most people stay only a few years before moving to outer areas, and which militates against the sustainability of facilities desired by families.

### **2.27 A good place for children? Attracting and retaining families in inner urban mixed income communities Emily Silverman, Ruth Lupton and Alex Fenton, Joseph Rowntree Foundation, 2006**

Mixed Income New Communities (MINCs), are new housing developments incorporating both market rate and affordable housing. This study looks at 4 MINCs (2 in London) where market rate families were envisaged as part of the mix.

#### *Findings*

- At least 50% of families in MINCs intend to move within the next 5 years
- One key concern was the lack of affordable and/or well-designed family-size homes
- Developers lack confidence in the market for inner urban homes – they think that families will not live in flats and are averse to the risks of inner urban living
- It is possible to persuade families to choose inner urban MINCs – and they will work best where homes are designed with families in mind: i.e. adequate storage, ample kitchens, family bathrooms and accessible outdoor space

The report considers the potential for changing the incentives for developers to build family homes – house building and density targets could specify habitable rooms, overall space or bedspaces rather than units per hectare.

### ***2.28 Understanding Planning Gain: What Works? Watson/Joseph Rowntree Foundation***

This studied a small sample of schemes procured by RSLs through Section 106 Planning Gain deals in Leeds and York. It found that most RSL staff and tenants reported high levels of satisfaction with their new homes, although the conclusion was that this could be masking longer term problems. Concerns were expressed about the quality of some of the housing produced, in terms of space standards, poor standards of design, detailing and workmanship, all of which may well lead to problems with sustainability in the future. It concluded that “doing the deal” seemed more important than longer term sustainability of the housing produced by this method.

### 3 London Specific Literature

#### 3.1 The London Plan

The key spatial strategy for London, The London Plan, sets out an integrated social, economic and environmental framework for the development of London, looking forward 15 - 20 years. It is the responsibility of the Mayor of London and was published in 2004.

The plan sets out strategies and policies to accommodate the growth of London in a sustainable way, within its own boundaries and without encroaching on green space.

Two chapters of the plan have direct relevance to this study of space standards - Chapter Three looks at thematic policies, including housing, whilst Chapter Four looks at cross-cutting policies, including urban design.

The Plan sets a target of 23,000 new dwellings to be completed each year, of which 11,000 must be affordable. The Plan encourages an increase in the density of housing development, specifically where it is built close to a transport hub, and proposes that tall buildings, exceeding six storeys, be used where appropriate.

New housing developments must offer a range of choices in terms of size and type, and all new houses must be built to *Lifetime Homes* standards, with 10% designed to be wheelchair accessible.

The Plan recognises that changing lifestyles such as working from home and different leisure activities are making new demands upon the way residents use homes, with greater demands for internal space. The Plan also stresses that the growth in single person households does not translate into demand for one bed flats or bedsits.

In terms of space standards, the plan does not make recommendations for provision of external amenity space, and stresses that car parking provision is to be moderate (1.5 - 1 space per unit) to low (less than 1 space per unit).

In terms of density and space, the Plan suggests the following in terms of habitable rooms per unit:

**Table 24**

		<b>Detached and linked houses</b>	<b>Terraced houses and flats</b>	<b>Flats</b>
10 minutes from town centre	central			2.7 hr/u
10 minutes from town centre	urban		3.1 hr/u	3.0 hr/u
10 minutes from town centre	suburban		3.7 hr/u	3.0 hr/u
Transport corridors, close to town centre	central			
Transport corridors, close to town centre	urban		3.7 hr/u	3.0 hr/u
Transport corridors, close to town centre	suburban	4.4 hr/u	3.8 hr/u	
Remote sites	suburban	4.6 hr/u		

### **3.2 The London Housing Strategy 2005 - 2016**

Recognises that there is a risk of compromised quality of new dwellings in the achievement of the density targets. The Strategy promotes high quality in design and construction as well as environmental sustainability in the supply of new homes.

The Strategy identifies a range of means to ensure high quality is achieved, such as:

- Strengthening the design capacity and expertise within local authorities, by, for example the appointment of design champions or the use of Urban Design Codes.
- Developing grant eligibility criteria - the Regional Housing Board (RHB) will seek to change grant criteria where necessary to ensure quality standards are met
- Establishing the use of Modern Methods of Construction.

### **3.3 GLA 1999 Housing Capacity Study**

Estimates the housing capacity for London 1997 - 2016 to be 381,000 net additional dwellings, or 19,000 per year. Total capacity is 458,000 or 23,000 per year, with the inclusion of allowances for reduced vacancies and non-self-contained accommodation.

Affordable housing estimated to be 20% of the total capacity.

The study demonstrates that the distribution of housing capacity shows potential within the Thames Gateway and along the River Thames. There are some large sites in outer London - notably ex-hospital sites.

Densities will be highest in inner-London and in Metropolitan centres in Outer London.

Brownfield development rate of 97% on largest identified sites.

### **3.4 Thinking Big, the need for larger, affordable homes in London, London Housing Federation, 2005**

Argues that, with an estimated 195,000 families living in overcrowded conditions in the capital, there is a great need to build more homes for large or extended families.

In terms of affordable housing, only 25% is currently built with three bedrooms or more, with the increased supply of intermediate housing consisting overwhelmingly of one or two bedroom units.

The GLA's 2004 Housing Requirements study estimated that 8,600 new social rented homes with four or more bedrooms would be needed every year for 10 years - in fact the current supply of such homes is in the very low hundreds, reflecting the pattern of recent years bidding to the Housing Corporation for Social Housing Grant.

Why the low supply of larger homes?

- The rise in land values has outstripped grant availability, leaving RSLs increasingly dependant on private sector developers for access to land through S106 agreements. Developers prefer a higher number of smaller RSL homes to maximise site values.
- Higher densities are generally less suitable for family housing
- Grant levels for larger homes are not high enough to compensate for the relatively low rent cap.

### **3.5 Density and Urban Neighbourhoods in London: Richard Burdett et al, LSE 2005**

Recently published study which looks at 5 wards in inner and outer London in Brixton, Hammersmith, Hackney, Croydon and Newham.

Key findings:

- Density does not, of itself, account for positive or negative attributes of particular urban areas: other factors are crucial in determining how such places are judged
- Higher levels of satisfaction are determined by access to public transport, proximity to large and safe open spaces, and good access to shops and social facilities
- Greater dissatisfaction is found in relatively densely populated wards where high levels of deprivation coincide with concentrations of ethnic minority groups and relatively crowded living conditions within properties
- Lack of car parking is identified as a major problem, especially in more affluent areas
- The presence of large clusters of social housing that do not link to local surroundings exacerbate negative connotations of higher density
- Most residents are ambivalent or have mixed opinions about density
- The vibrancy, social mix and other social attributes are amongst the most valued characteristics of densely populated areas
- Higher density areas are capable of sustaining very different social and community dynamics - places with significantly different demographic features can operate effectively.

### **3.6 London's Place in the UK Economy 2003 LSE**

Academic report aiming to establish London's economic role in UK prosperity, and changes in that role over the past two decades.

Key findings relevant to this study:

- The long boom of the 1990s is over for London
- The decline in the rate of growth of London is associated with many predictable cyclical outcomes
- London is increasingly an international and diverse city
- The introduction of the congestion charge is viewed in this report as evidence that the GLA is able to implement significant policy change!
- Although standards of living have increased and Londoners are better off than their counterparts elsewhere in the UK, the position of new entrants to the housing market and the disproportionate number of London unemployed is worse than elsewhere
- Population and social change - London's population has grown faster than the rest of the UK and in both absolute and relative terms London has become significantly younger, with more smaller, non-couple households and has become more ethnically diverse
- There has been less growth in dwellings than in household numbers since 1991, with a substantial reduction in the social rented housing stock and particularly volatile house prices

The London economy is integrated in increasingly complex ways with a wider metropolitan economy extending across the South East.

### **APPENDIX 3 - Methodology**

- 1 Research trends in dwelling sizes & type in England, London and internationally through a literature survey
- 2 Establish current practitioner and academic views (stakeholders) on dwelling type and size and user space standards through structured interviews.
- 3 Assess operation of existing & historic space standards through a literature review and discussion with contacts.
- 4 Collate case studies to form the basis for impact assessment.
- 5 Consider the legal basis for inclusion of space standards in planning documents.
- 6 Undertake impact assessment of introducing minimum space standards.
- 7** Report, making recommendations for space standards and further work, if needed.

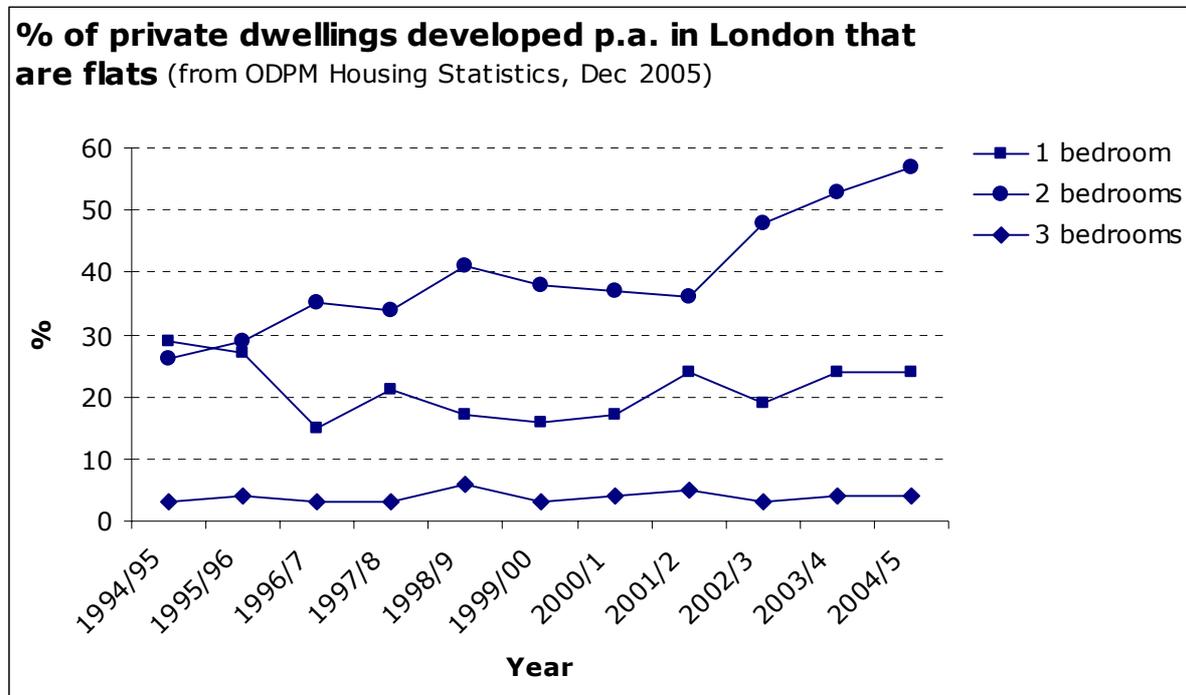
Unfortunately, when seeking the views of stakeholders we were not able to obtain the views of representatives of housebuilders, as the Home Builders Federation elected not to cooperate in the study.

At the start of the project we hoped to be able to review approximately 20 schemes and a range of developer standard dwelling types as part of the case study work. Unfortunately, it proved extremely difficult to obtain suitable plans of developments recently approved, or information from housebuilders on their standard dwelling types. Some case study data was assembled with the co-operation of two London boroughs, assistance from the GLA, two housebuilders and by sending off for marketing information from others. The time that we had hoped to spend analysing case study data was actually spent in trying to obtain data, with the result that the case study information has proved to be very disappointingly thin.

## APPENDIX 4 – London Dwelling Mix: Graphs

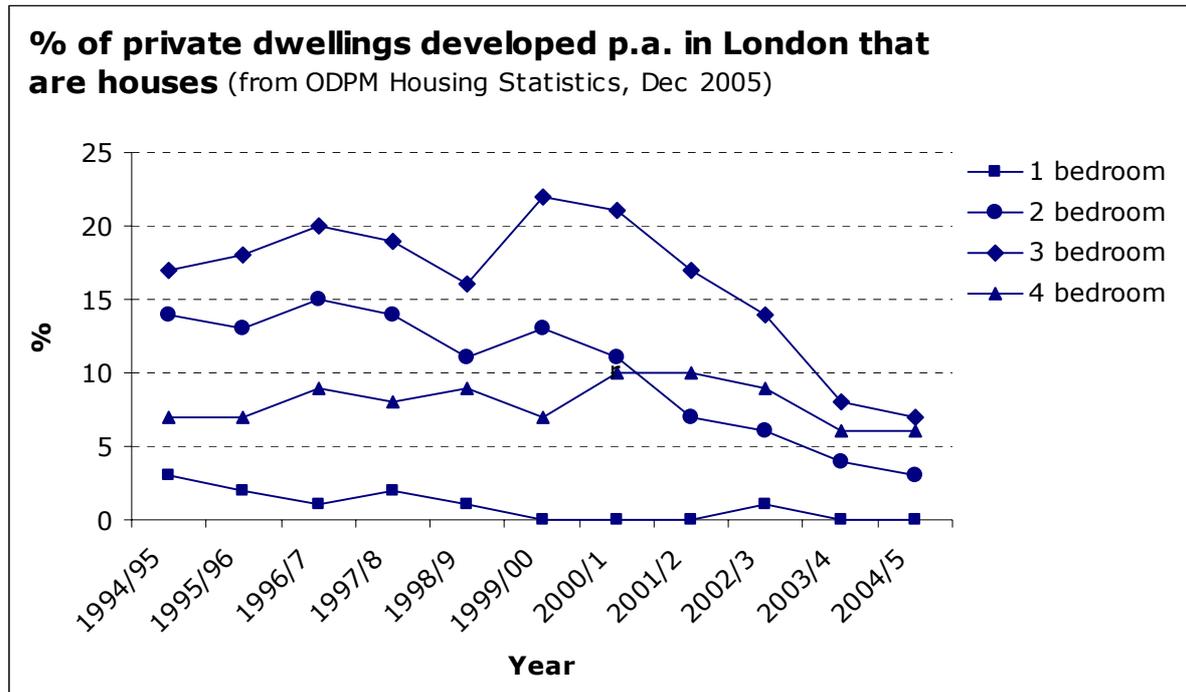
Figure 6 shows how few of the private sector flats are three bedrooms, and the rise of the two bedroom flat in the private sector. The provision of one-bedroom flats is fairly constant.

**Figure 6**



The previous graph demonstrates that very few of the private dwellings developed in London are houses (about 15% currently), and Figure 7 highlights the reduction in the "core" form of 2 bed and 3 bed houses.

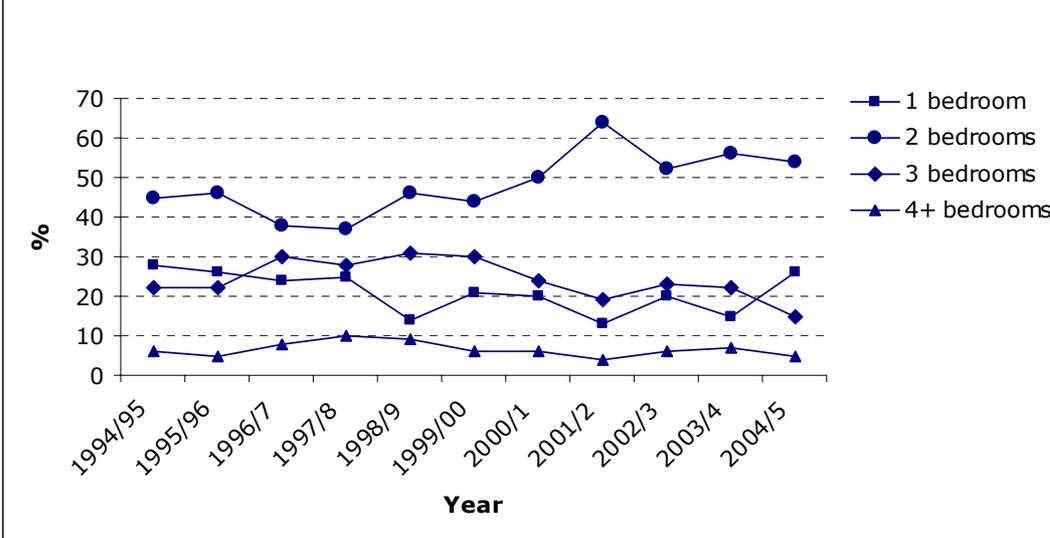
**Figure 7**



The next two graphs show the level of provision of accommodation with different numbers of bedrooms, whether houses or flats. Figure 8 shows provision by housing associations and Figure 9 shows provision by the private sector. It is clear that for both sectors the provision of one-bedroom and four-bedroom accommodation is reasonably static, and that for both sectors three-bedroom accommodation has declined as the provision of two bedroomed accommodation has risen. There is an interesting blip for both housing associations and the private sector in 2001/2; this probably reflects the introduction of a Challenge Funding programme for key workers which prompted housing associations to purchase schemes that were partway through the construction process, and had been designed by the private sector.

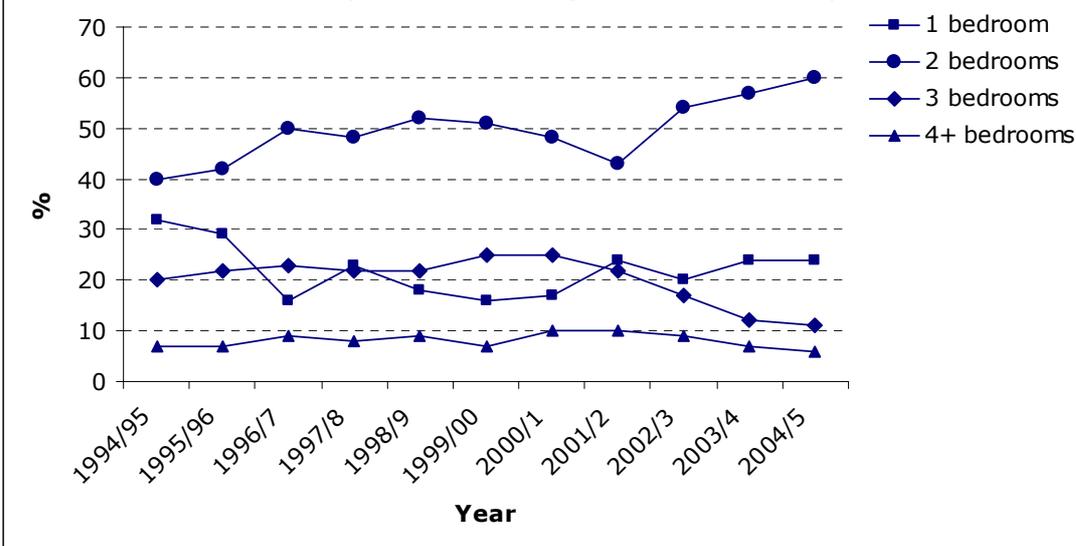
**Figure 8**

**% of HA dwellings developed p.a. in London by numbers of bedrooms** (from ODPM Housing Statistics, Dec 2005)



**Figure 9**

**% of private dwellings developed p.a. in London by number of bedrooms** (from ODPM Housing Statistics, Dec 2005)



**APPENDIX 5 - UDP / SPG space standards**  
**January 2006**

Borough	Min Floor Area (person / room / bedroom)				Ceiling height	Min Room Area (m <sup>2</sup> )					Amenity space	Comments		
	1	2	3	4+		Living	Kitchen	Bedroom 1	Double Bedroom	Single Bedroom				
GLA SPG													Lifetime homes standards 1 - 1.5 parking spaces	
<b>CENTRAL</b>														
Camden	32 (1p)	48 (2p)	61 (3p)	75 (4p) 79 (5p) 87 (6p)	2.3m			11.0	10.5	6.5				
Islington														No space standards found UDP under review
Kensington and Chelsea	30 (1r)	44.5 (3r)	57 (3r)	66-74.5 (4r) 75.5-94 (5r) 84-98 (6r)		13	5.5	11	10	6.5		Yes for family housing		Space standards apply to flats and maisonettes. Also set space standards for wheelchair accomm and HMOs Density reqs refer back to min floor space standards

Borough	Min Floor Area (person / room / bedroom)				Ceiling height	Min Room Area (m <sup>2</sup> )					Amenity space	Comments
	1	2	3	4+		Living	Kitchen	1 Bedroom	Double Bedroom	Single Bedroom		
Lambeth					2.3	11 - 16.7	5.6 - 7.4	11.2	10.2	6.5	50 m <sup>2</sup> per new dwelling	Bedsitters may be allowed as new development provided floor space exceeds 29.8 sqm
Southwark	45 (1b)	57 - 70 (2b)	70 - 86.5 (3b)	79 - 105 (4b)		13 - 18.5	5.5 - 8.5	11	10	6.5		12m between windows at front, 21m at rear
Wandsworth	30 (1b)	45 (2b)	57 (3b)	60 (4) 79 (5) 86 (6)		11.2 - 15.8	5.6 - 7.4	8.4 - 11.2	10.2	6.5	40 m <sup>2</sup> per family unit 20 m <sup>2</sup> per unit others	Other standards for dining kt and LR with no KT 20m between facing dwellings One parking space per dwelling
Westminster												Web-site not available

Borough	Min Floor Area (person / room / bedroom)				Ceiling height	Min Room Area (m <sup>2</sup> )					Amenity space	Comments	
	1	2	3	4+		Living	Kitchen	1 Bedroom	Double Bedroom	Single Bedroom			
EAST													
City													Housing only 5% of floor space in the city. No standards found
Barking and Dagenham	28.5 (1b)	45 (2b)	49 (3b)									40 - 75 m <sup>2</sup> houses 20 - 40 other	UDP seems quite out of date - some targets refer to period to 2001. Under review to be replaced by Local Development Framework
Bexley													Newly adopted UDP - 2004 Design Guide consultation Sep 2005 - no space standards

Borough	Min Floor Area (person / room / bedroom)				Ceiling height	Min Room Area (m <sup>2</sup> )					Amenity space	Comments
	1	2	3	4+		Living	Kitchen	Bedroom 1	Double Bedroom	Single Bedroom		
Greenwich											50 m <sup>2</sup> family housing	Draft UDP 2004 New development expected to achieve ECO homes, and all to be built to Lifetime standards. No SPG for space standards
Hackney												New SPGs out for evidence gathering and consultation. Housing targets in UDP relate to 1997-2001
Havering											100 m <sup>2</sup> family houses	No quantitative info in UPD No SPG for space standards
Lewisham	30	45	57	70 - 95		13 (1pers) - 20 (7+pers)	5.5 (1 pers) - 9 (7+ pers)	8.0 - 11.0	10.0	6.5	Gardens min 9m depth	UDP under review, housing options and plans out for consultation. Have to purchase hard copy UDP. Standards as reported here are part of consultation.

Borough	Min Floor Area (person / room / bedroom)				Ceiling height	Min Room Area (m <sup>2</sup> )					Amenity space	Comments
	1	2	3	4+		Living	Kitchen	1 Bedroom	Double Bedroom	Single Bedroom		
Newham												21m gap for overlooking windows. No space standards in UDP or SPG
Redbridge												Figures from Borough wide Primary Policies Doc, out for consultation as part of UDP review and LDF development
Tower Hamlets	30 (1p)	44.5 (2p)	57	67 - 74.5 (4p) 74 - 95 (5p) 84 - 98 (6p)		11 - 18	5.5- 9.5	11	10.5	6.5	50 m <sup>2</sup> family houses	
WEST												
Brent												New UDP adopted 2004 - no density/space targets

Borough	Min Floor Area (person / room / bedroom)				Ceiling height	Min Room Area (m <sup>2</sup> )					Amenity space	Comments
	1	2	3	4+		Living	Kitchen	Bedroom 1	Double Bedroom	Single Bedroom		
Ealing	32.5 (1p)	44.5	56.6	66.8 - 71.5 (4) 75.2 - 93.8 (5) 83.6 - 97.5 (6)							50 - 75 m <sup>2</sup> family houses	21m between habitable rooms
H'smith and Fulham	30 (1r)	44.5	57	66 - 74.5 (4) 75.5 - 94 (5) 84 -98 (6)							36m <sup>2</sup> family dwelling 14sm other	
Harrow												
Hillingdon												Design guide for amenity space and car parking. No SPG for space standards
Hounslow												Encourages developers to have regard to space standards "guidelines" though do not publish their own.

Borough	Min Floor Area (person / room / bedroom)				Ceiling height	Min Room Area (m <sup>2</sup> )					Amenity space	Comments			
	1	2	3	4+		Living	Kitchen	Bedroom 1	Double Bedroom	Single Bedroom					
<b>NORTH</b>															
Barnet												40 - 85 m <sup>2</sup> family housing 5m <sup>2</sup> per habitable room flats	20% of new provision to be <i>Lifetime Homes</i> . 21m between facing windows		
Enfield												60m <sup>2</sup>	22m minimum facing distance		
Haringey					2.3				11 (1p) - 17 (7p)	5.5 - 9.0	8.0 - 11.0	10.0	6.5	50m <sup>2</sup> family accom	All habitable rooms min width of 2.13m All new homes to meet space standards and <i>Lifetime Homes</i> . Storage space 7.5% of min floor space
Waltham Forest									13 (1p) - 18.6 (6p)	5.5 - 8.5	8.0 - 11.0	10.0	6.5	15 m <sup>2</sup> per habitable room	
<b>SOUTH</b>															

Borough	Min Floor Area (person / room / bedroom)				Ceiling height	Min Room Area (m <sup>2</sup> )					Amenity space	Comments
	1	2	3	4+		Living	Kitchen	1 Bedroom	Double Bedroom	Single Bedroom		
Bromley												UDP must be purchased £31.50
Croydon												No guidance re space standards
Kingston upon Thames												"respect prevailing density standards" Some low density standards for conservation areas
Merton						11-18	5.5 - 9.5	8.5 - 11	10.5	6.5	50sm houses, 10m per habitable room - flats	All new developments to be <i>Lifetime Homes</i> . Prefer design led approach rather than rigid density and space guidelines
Richmond												Focus on character and infill developments. No space standards or density reqs found.
Sutton						12.1 - 17.2	5.6 - 7.2	11	11	6.5		Ancient SPG - still shows imperial as well as metric

<b>Borough</b>	<b>Min Floor Area</b> (person / room / bedroom)				<b>Ceiling height</b>	<b>Min Room Area (m<sup>2</sup>)</b>					<b>Amenity space</b>	<b>Comments</b>	
	1	2	3	4+		Living	Kitchen	1 Bedroom	Double Bedroom	Single Bedroom			
													BM 4sm

## **APPENDIX 6 - Stakeholders Responses**

### **Interviewees:**

Linda Sheridan, ex Liverpool University now Scottish Building Standards Agency.

David Birkbeck, Design for Homes

Clive Clowes & Lawrence Chee, Housing Corporation

Janet Sutherland, LB Camden

Nick Powell & Dino Patel, National Housing Federation / London Housing Federation

Steve Clarke, LB Merton & Association for London Government

Roger Chapman, Government Office for London

### **Notes:**

- ★ Linda Sheridan - Although Linda Sheridan now works for Scottish Building Standards Agency, and has been very helpful in providing us with information in relation to the Scottish regulatory environment, she wished to make it clear that she was responding as a visiting Research Fellow at the University of Delft, and former Research Fellow at the Universities of Manchester and Liverpool.
- ★ Housing Corporation - The Housing Corporation had not been able to interrogate their HQI database as all of their internal programming capability was being utilised producing the draft National Affordable Housing Programme. The responses are therefore based on the personal views and experience of Clive Clowes and Lawrence Chee at the Housing Corporation over many years.
- ★ LB Camden - The views expressed in this interview are restricted to Janet Sutherland's experience in facilitating the provision of affordable rented housing in LB Camden (LBC).
- ★ Home Builders Federation: declined to be interviewed.

**1. What is your perception of the changes over the last 15 years / last 5 years / next 5 years / next 15 years<sup>21</sup> in:**

a) Dwelling mix being developed (*if you are a housebuilder, how has your programme mix changed over that time? A quantified response preferred e.g 15 yrs ago / 5 yrs ago / now our programme mix was/is: 1bFlats-10%/20%/17%, 2bFlats-23%/31%/54%, 2bHouses.....etc*)

Linda Sheridan -The housing markets are very different between: City centres v rest of the country

Introduction of accessibility requirements into Building Regulations and funding requirements are likely to have been at the expense of storage and habitable rooms

David Birkbeck - Changes have been cyclical in response to market conditions, rather than a straight line trend:

- From around 1997, housebuilders focused on developments where they could sell up front to investors, so block developments came to the fore whereas before it had been individual houses (to minimise work in progress).
- Flats market is now cooling sharply, and response is to focus on “first foot on the ladder” households: this may be flats or houses, and tend to be studios, one bed flats or two bed houses/flats.
- It is difficult to forecast what is likely to happen, because the housing market continues to “defy gravity”

Housing Corporation - quick review of the HQI over the last 2-3 years. There is no obvious trend on unit size.

- Over the last 15 years associations seemed to have developed lots of flats not houses. More recently there seems to have been a move back to houses although they are expensive.
- At the moment housing association development is apparently biased towards flats in London.
- Future - because of costs and grants there is likely to be pressure to continue to develop flats.

LB Camden - overcrowding is getting worse (statistics supplied): “we can’t build ourselves out of this”. Increasingly high density schemes (particularly Section 106) are generating built forms which are inappropriate for families, and so density/built form pressures are increasing the preponderance of smaller dwellings.

NHF/LHF - The NHF do not have statistics; the Housing Corporation may have this information.

ALG (Steve Clarke LB Merton) - Consistent trend over the last 15 years has seen:

- Reducing numbers of houses and increasing numbers of flats
- Redevelopment of single house plots with smaller flats.

No data on exact number, but this is a very noticeable trend.

<sup>21</sup> For the future-gazing part of these questions ask what the housebuilder would LIKE to happen, rather than what they think might be forced upon them by some other agency such as planners, Code for Sustainable Housing etc

However, there is a contrary trend in one area of the Borough (Wimbledon). LB Merton are receiving 2-3 applications per *week* to redevelop existing suburban houses on larger sites with much bigger houses with gyms, snooker rooms, dressing rooms and en suite bathrooms with all bedrooms, etc. This is a function of the particular in that part of the district.

Over the next 15 years sees pressure for intensification continuing, and thus the trend continuing.

GOL (Roger Chapman) - GOL has real figures but will answer on the basis on '*perception*'.

- \* Over the last 15 years perception is increase in 1 and 2 bedroom accommodation slackening of larger accommodation. Trend more marked over last 5 years.
- \* Over the next 5/15 years current signs are that trends will continue. Permissions are coming through but reality is that market is becoming saturated. Market may dictate that trends do not continue at least at the same rate.
- \* In any event stronger London Plan / LDF policies may have an influence. Robust housing market/housing needs assessments will be important to support such policies.

b) Internal floor area of dwellings designed for a given occupancy e.g. changes in floor area of two bed flats, or three bed houses (*if you are a housebuilder, how have your standard dwelling types changed over that time? Again, a quantified response preferred providing floor areas of (say), largest, smallest & most used 1bFlats, 2bFlats, 3bFlats, 2bHouses, 3bHouses all at 15 yrs ago, 5 yrs ago & now*)

Linda Sheridan:-see Karn/Sheridan study in 1994. Generally, house-builders were building significantly smaller than RSLs, and at the same time were creating more rooms i.e. en suites, utility rooms, etc. main casualty was living room.

Scottish Building Regulations set out minimum room sizes, which counteracts room cramming: typically, house-builders call bedrooms in English house-types box rooms in Scottish.

David Birkbeck - Development for the investor market over the last 6-7 years has, if anything, led to more generous space standards, particularly as much of the rental market is aimed at two single people sharing. Some examples in city centres (particularly outside London) illustrate very generous space standards over the last few years.

If the emphasis is now moving to minimum price rather than maximum rental value, this is likely to generate a very big issue re space standards. DB sees a resurgence of very small dwellings, aimed at people who are desperate to get on to the property ladder, irrespective of standards.

DB expects a substantial challenge from housebuilders to imposition of space standards, and (particularly) *Lifetime Homes*: if they are building starter homes, they are aiming at a market which is relatively small households, no kids, who will move on in the next 3-4 years once established on the housing ladder. Increased space standards would "raise the bar".

Housing Corporation - perception is that over the last 15 years dwellings have been getting smaller. Now, with the minimum HQI requirement of 41% for dwelling size, this has stabilised. For many years the average unit size for all dwellings was 72.5m<sup>2</sup>. 05/06 figures were 69m<sup>2</sup>; the 06/07 figures are back to 71m<sup>2</sup>; NB this is influenced by unit mix.

LB Camden - Constraints on "grant per unit" squeezing floor space amongst RSLs.

Housing Corporation "numbers game" is a real issue here, despite HC recent change to numbers of people housed as opposed to units. LBC's UDP/SPG set Affordable Housing percentage at 50% of floor space (as opposed to dwelling numbers). The problem is far more intense in other boroughs because of their use of units rather than floor space.

NHF/LHF – perception that the floor areas of units and rooms are getting smaller as is the provision of external space. In the future he believes that we will need more space as more appliances, computers etc will be used in the home.

ALG (Steve Clarke LB Merton) feeling is that dwellings are getting smaller.

LB Merton previous draft UDP contained minimum sizes for flat conversions, but were instructed to remove those by the Inspector at EiP

GOL (Roger Chapman) Over past 15 years perception is that floor areas have decreased. Not sure if this has become more marked over past 5 years.

- \* This trend is more marked with new build than conversions. Space standards in UDPs/SPGs concentrate more on conversions.
- \* Definite perception that trend more marked for houses.
- \* Over next 5 years may continue but likely to fall off within 15 years. Readjustment of market.

c) Floor area and shapes of rooms *(for the dwelling types referred to previously, the size (in m<sup>2</sup>) of kitchen (area), dining room/area, living room/area , typical master double bedroom (excluding ensuite but separately stating floor area of built in wardrobe) & typical single bedroom(excluding ensuite but separately stating floor area of built in wardrobe)*

Linda Sheridan - Study in 1994 identified some pretty poor arrangements and very small rooms; she is sure it's not got any better since then, but they were probably at the limit in terms of marketability at that stage, so questionable whether they have got worse.

David Birkbeck - notable trend of smaller floor area linked to larger volumes i.e exposed roofs, double height spaces, etc to give an impression of space even in very small floor areas. In family housing, there seems to be an increasing desire for visual privacy, albeit in the same room i.e. use L-shaped rooms so kids can do homework in one part whilst parents watch TV in another part, but all in the same space.

Housing Corporation - a trend towards more open (multifunctional) rooms

LB Camden - The impact of S&Q/SDS requirement for furniture and activity spaces on plan "prevents the complete no-no's" that they saw in the past. Although recently a perception of a less rigorous approach by RSL development teams in terms of what they will accept

NHF/LHF - a tendency for shower rooms to be provided rather than bathrooms. In higher density developments it is often rooms in the roof structure which are compromised by having unusual shapes.

ALG (Steve Clarke LB Merton) - An increasing proportion of residential development in the Borough is small in-fill sites, these tend to be heavily constrained, as a result of which compromises are made in internal planning, e.g. greater use of non-rectangular rooms, and plans which are less "liveable".

GOL (Roger Chapman) - No comment.

d) How space is used in the home (*what their market research says about current and future use*)

Linda Sheridan - Report in 1994 identified a number of trends, which have undoubtedly continued/accelerated:

- Increasing use of electronic entertainment equipment in bedrooms leading to problems of noise between and within dwellings.
- Pressure on overall space in the dwelling is likely to be having a disproportionate effect on the living room, which has huge social consequences in terms of family cohesion.
- Increased "grazing" and microwaving food has probably reduced pressure in kitchens/dining room: significant number of households no longer bother with a dining table or at least a kitchen table.

Impact of integral garages is important here: ground floor often wasted to accommodate garage, with little useful habitable space at entrance level, and cramped/dangerous stairways in narrower frontage dwellings.

David Birkbeck - Concept of open-plan living has two main impacts:

- Positive: feeling of space
- Negative: lack of privacy.

Therefore, use of L-shaped rooms and increased importance of bedrooms. Research (Oxford Brookes University) has looked at how people use their home and in particular the importance of totally private space: bedroom and bathrooms.

Housing Corporation – perception that there continues to be a rise in informal dining (TV dinners etc). Housing Corporation highlighted a report on the usefulness of basements for utility, storage and extra living space. The report was produced by the Basement Information Service.

LB Camden –

- ★ RSLs are now more conscious of the importance of storage
- ★ Inadequate recognition that families grow: 2b3p and 3b4p flats are a recipe for overcrowding when further kids arrive and no transfers available.
- ★ open-plan living/dining/kitchen area puts more pressure on bedrooms, particularly for kids to have privacy, watch their own TV, etc.
- ★ Particular issue re ethnic diversity in Camden means there are greater pressures for multiple use of rooms, separation of sexes, etc.

NHF/LHF –

- ★ more appliances will be needed.
- ★ dining areas are often used for children to do homework because there is no room in the child's bedroom.
- ★ The inability to "get away from one another" was seen as significant.
- ★ No single "right answer": when consulted on the design of a project, members of the British Bangladeshi community gave contrasting views. Women preferred a large kitchen whilst men preferred a large living area. Who generally decides? Dwellings need to be flexible

ALG (Steve Clarke LB Merton) - Increasing emphasis on smaller flats is likely to lead to greater multi-use of rooms. Kitchen areas quite small: people eating out more or microwaving ready prepared meals.

GOL (Roger Chapman) –

- \* Changes in lifestyle and gadgets over past 15 years and likely to continue over next 15 years.
- \* Flexibility of use of different rooms required.
- \* Use of dining room not as before.
- \* Cinema approach to TV.

e) **Services & equipment** (*how the range and type of equipment in rooms have changed recently or are likely to change in the future, and similarly for the services needed. Kitchens & bedrooms in particular*)

Linda Sheridan -Main areas are:

- \* Kitchen equipment: lots more
- \* More TVs, hi-fis, PCs and telephones
- \* all of this heightens impact of noise within and between dwellings.

David Birkbeck –

- \* Big increases in amount of electrical equipment but impact mitigated by miniaturisation
- \* a huge pressure on kitchens most dwellings don't allow for (increasingly large) fridge/freezer, washing machine, tumble drier and dishwasher in the kitchen.

Housing Corporation –

- \* expected rise in the use of some space in the home for work-based activity (home/office)
- \* space will be required for more computers: one per person.
- \* kitchens do not allow enough space for appliances: Fridge / separate freezer / WM / tumble drier / dishwasher / microwave oven
- \* In the living area a separate area/space is needed for entertainment systems.
- \* In bedrooms space is needed for a television in each bedroom.
- \* Lifts should be provided in blocks of flats housing families where the dwelling entrance door is more than one flight of stairs above ground level.

LB Camden - use of bedrooms for TV, hi-fi, PCs, etc is leading to huge issues of noise within/between dwellings.

NHF/LHF - Lift should be provided on projects where the front entrance door is more than four storeys above ground level.

ALG (Steve Clarke LB Merton) - No data.

GOL (Roger Chapman) –

- \* Kitchens – Storage, dishwashers, microwave, freezer, more likely to be the eating area.
- \* Bedrooms – Flexibility for TV/internet use.
- \* MP3 players/sound systems which can be played throughout house.

f) The provision & distribution of storage space (*in particular the amount [measured in m<sup>2</sup> of shelving space provided in different dwelling types and the m<sup>3</sup> of tall storage provided]. Also, the distribution of storage space – dedicated in one place (storeroom) or in all rooms? What type of roof structure used and whether the loft is useable as storage. Also, what their market research says about residents views of the adequacy of storage.*

Linda Sheridan –

- ★ “What storage space?!”:
- ★ In houses, storage has been sacrificed primarily to the entrance level WC.
- ★ Argument in favour of putting space in rooms rather than dedicated storage, so residents can chose where/how they distribute storage, and can do that relatively economically.

David Birkbeck -

- ★ “Storage is the big Achilles heel of modern housing design”.
- ★ Over the last 30 years, storage space within a dwelling has dropped from around 10% to 3% of net internal area.
- ★ The garage has become the store.
- ★ In city locations where there are no garages, where can it go?

Housing Corporation –

- ★ "woefully inadequate" at present, exacerbated for affordable housing because there is no attached garage.
- ★ A "utility" area is becoming more important.
- ★ poor design can exacerbate storage difficulties

LB Camden - RSLs more clued up than a few years ago re the need for internal storage.

NHF/LHF –

- ★ bicycle storage is a big issue especially in flats.
- ★ general lack of storage space
- ★ lack of built in storage was coupled with a lack of space for furniture such as chest of drawers or wardrobe in the second bedroom.

ALG (Steve Clarke LB Merton) - new developments are apparently increasingly using roof space either for bedrooms or whole flats thus losing storage.

GOL (Roger Chapman) –

- ★ Perception that storage space has declined over past 15 years and distribution not always appropriate to needs.
- ★ Need for more space for refuse to cater for different recycling needs.

g) How storage space is used (*in particular whether garages are used for car storage or space to put appliances and as general storage area, from CABE's "What is it like to live there?"*)

Linda Sheridan -No comment.

David Birkbeck - Garage is the store: therefore a particular issue in central London and in RSL developments where garages are not provided.

Housing Corporation –

- ★ Garages are increasingly used for appliance space (laundry) utility room and storage cupboards.
- ★ As this renders the remaining space in the garage too small to accommodate the car the rest of the garage is used for storage of other items such as bicycles etc.

LB Camden - storage areas separate from the dwelling have tended to be a focus for anti-social behaviour, safety/vandalism concerns, etc. Therefore LBC do not favour garages, so they are not available to compensate for inadequate storage.

NHF/LHF - It was noted that there is a growing industry in providing remote storage for ordinary household goods. This was taken as clear evidence of unsatisfactory storage standards in properties being developed.

ALG (Steve Clarke LB Merton) – as above (new developments are apparently increasingly using roof space either for bedrooms or whole flats thus losing storage.)

GOL (Roger Chapman) - No comment.

h) How external space for play / recreation is provided (attached to the dwelling, such as gardens or balconies, or separate from the dwelling such as play areas / parks) (*changes in garden size and balcony size and any linkages between these changes and the extent of local play-areas or parks provided or existing in the locality; what was driven by the housebuilder and what by the planners?*)

Linda Sheridan -No comment.

David Birkbeck - Private/semi-private open space is very important: and it needs to be big enough to socialise i.e. decent sized balconies/loggias (e.g. on top of garages). As densities increase, patios/balconies are more useful than a small patch of grass which is in shadow all day and therefore just ends up as mud.

Housing Corporation – Perception that developments do not properly link the amount of space provided internally with that provided externally for play. If internal space standards are tight then their experience is that external space standards are also likely to be tight.

LB Camden –

- \* As developments get higher Camden tries to provide balconies. However, if it is a trade-off between a larger flat/larger number of bedrooms or a balcony, number of bedrooms would always win.
- \* Rarely develop houses with gardens these days in Camden.

NHF/LHF –

- \* Perception that insufficient play spaces being provided.
- \* It was noted that flats need decent sized balconies with space for storage of items such as bicycles (unless secure storage is provided elsewhere), and space to use the balcony as a recreational area.

ALG (Steve Clarke LB Merton) -

- \* A minority of flats have balconies
- \* LB Merton had a policy in their draft UDP re minimum external space to dwellings, but were instructed to remove this policy from the UDP EiP. However, they were allowed to retain the ability to address any such deficiencies by Section 106 requirements for funding for off-site provision.
- \* Public Open Space is mainly achieved by Section 106 Agreements for off-site provision for improvement of existing POS. Opposes very small play areas which are difficult to maintain, and prefer to concentrate/improve existing.

GOL (Roger Chapman) –

- \* Perception that overall external space has reduced over last 15 years.
- \* Balconies/roof gardens have however increased.
- \* Seen as a lifestyle issue driven by the market. Planners if anything opposed. Housebuilders are following customers.
- \* Not noticed any particular trend re public open space separate from the dwellings.

2. Do internal space standards & external recreational space standards affect the health or well-being of the occupants? *(If the answer is yes, very cramped accommodation will affect well-being try to draw out the point or circumstances at which the interviewee thinks it begins to occur.)*

Linda Sheridan - Evidence difficult to find: no objective view.

David Birkbeck –

- \* Yes: fundamental issue.
- \* A surprise finding of recent research was that households perceive privacy very differently from how regulation supposes they do. Members of a household are more concerned about getting away from each other through having private internal domains than they are about the spaces between them and their neighbours. Perceptions of Privacy & Density in Housing (Design for Homes)

Housing Corporation –

- \* No data but perception is that it must.
- \* Also, it can be a challenge to encourage children to get out of the house and which is of benefit to them and the parents (having a break from each other). A lack of readily available and convenient play space will make this harder.

LB Camden - Yes; issues include:

- \* Strong link between poor school attainment and over-crowding/sharing bedrooms.
- \* Children sharing bedrooms with siblings are more likely to be out on the street, leading to ASB problems.
- \* High density living works better in Europe, not just because of provision of parks, but also more organised activities: organised basketball, football, etc means that what public space is provided is more intensively used than here, where parks will tend to be focus for ASB.

NHF/LHF –

- \* Strong perception that it must, particularly in the affordable housing sector, as the dwellings are more intensively occupied (more persons in the home).
- \* It was also noted that whether in the public or private sector "tight" internal space standards are likely to affect the well-being of residents who are not out at work for any reason as they will be spending so much more time in the home.

ALG (Steve Clarke LB Merton) - No research or data: expect prima facie that this is the case.

GOL (Roger Chapman) –

- \* Accepts that there is evidence about potential damage to mental health (Regional Public Health Unit within GOL).
- \* The external space perception is that it is quality rather than quantity which is most important.
- \* For internal space it is the number and separation of spaces for different members of the household to carry out their activities which is most important.

3. What factors in dwelling (not location, build quality or neighbours) might affect resident well-being? *(Ask if these factors are independent in their effect or linked. Are these factors traded off against one another in the preferred designs, and if so, how does the interviewee determine what is the optimal (or least worst) compromise?]* space/internal partitioning/storage/accessibility)

Linda Sheridan –

- \* Noise
- \* Privacy: ability to have own space/how many rooms
- \* Inclusive design e.g. height of cupboards (LS is 5'2" tall)
- \* Ability to keep dwelling clear and tidy: need for storage to put kids' toys etc away.

David Birkbeck -

- \* Sound transmission within/between dwellings.
- \* Space: higher density large dwellings with different approach to privacy generate much higher resident satisfaction.

Housing Corporation - No suggestions made

LB Camden -

- \* Safety/feeling of safety in the home and getting to/from the home.
- \* Noise
- \* Design of the space immediately outside the dwelling i.e. common stairs, entrance halls etc.

NHF/LHF –

- \* Insufficient space.
- \* Lack of privacy.
- \* No spare room to accommodate visitors.
- \* NB single person households will not necessarily find single bedroom accommodation suitable, as they are likely to want space for family and friends to visit.

ALG (Steve Clarke LB Merton) -

- \* Issues associated with proximity: overlooking/overshadowing of habitable rooms reducing "liveability" within dwelling.
- \* Noise nuisance between flats, exacerbated by rooms not "stacked" and more recently by fashion for hardwood floors.

GOL (Roger Chapman) - Importance of adaptability of dwellings over time to changing lifestyle requirements and to different needs of people over their life i.e. *Lifetime Homes* concept.

4. What factors in estate design (not location, build quality or neighbours) might affect resident well-being? *(Ask if these factors are independent in their effect or linked. Are these factors traded off against one another in the preferred designs, and*

Linda Sheridan –

- \* Overlooking
- \* Car relationship/penetration
- \* Being able to grow something.

David Birkbeck -

- \* Car parking
- \* Sound transmission
- \* Visual privacy is a non-issue from their research: internal and usable external space is much more important. In the UK we close the curtains, in Europe, the shutters. Feedback from Greenwich Millennium Village suggested that residents had no problems re lack of privacy in bedrooms with full glazing, but did have a problem because people could see what they were storing under the bed. All of this seems to challenge the conventional wisdom of relatively small dwellings with large spaces between them in the UK, suggesting that there is merit in larger dwellings much closer together as in Europe.

Housing Corporation -

Perception that estate design was probably the most important issue out of Qus 2-4 as layout might engender antisocial behaviour leading to security fears.

LB Camden -

- \* Important to get people on to the street as soon as possible with minimal communal corridors / access.
- \* Minimise anonymity: maximise over-looking/policing of common areas

NHF/LHF –

- \* Lift access to dwellings where the entrance door is four storeys or more above ground level.
- \* Design which reduces the incidence of crime and antisocial behaviour.

ALG (Steve Clarke LB Merton) -

- \* Inadequate waste disposal provision,
- \* Car parking is *not* a great issue; commuter parking is a significant problem but residents prefer to live with that rather than have resident only parking schemes.
- \* Overlooking of gardens: very strong feelings amongst members and neighbouring consultees in planning applications.

GOL (Roger Chapman) –

- \* Pedestrian links, seating, lighting, all linked.
- \* Importance of creating defensible space, privacy, safety zone, barriers.

5. Research<sup>22</sup> indicates residents prefer to be able to use rooms for different functions. What is your response to this?

Linda Sheridan –

Traditionally the living/dining room has been the multi-use space i.e. eating, working, socialising. More recently, change of bedroom from place to sleep to private space is very important.

David Birkbeck -

Agreed: considerable opportunities for new approaches to planning the use of space within dwellings to maximise usability and flexibility.

Housing Corporation - observed that bedrooms classed as "box rooms" in terraced houses from the Thirties and Fifties that are too small to be a bedroom (although may be used as a computer room these days) is now likely to be classed as a bedroom or cot room.

LB Camden –

- ★ Open plan living/dining/kitchen makes bedrooms more important for all private activity,
- ★ Bedroom isn't just for sleeping: particularly for young people where public youth provision is unattractive to them and so greater emphasis on home or the street for socialising. If bedrooms can accommodate that socialising then that reduces problems of anti-social behaviour on the street.

NHF/LHF -

- ★ Perception that dining areas may no longer be used as such these days, but that their use is changing to study areas for children doing their homework etc.
- ★ Dwellings needs to allow enough space to permit homeworking.

ALG (Steve Clarke LB Merton) - Not really a planning issue: but it does have implications for privacy, noise, etc.?

GOL (Roger Chapman) - Agree. Some of previous responses pertinent.

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<sup>22</sup> JRF's "Consumer Choice in Housing", CABE & HBF's Building for Life research, CABE's "What Homebuyers Want"

6. There is a perception that families who are able choose are choosing to move to suburbs as that is the only place to obtain their preferred form of accommodation – houses with gardens. Do you think this is an accurate or inaccurate perception? (*what evidence do they have to support their view?*)

Linda Sheridan -Inaccurate and over-generalisation: complex interaction of affordability, quality of life and (most importantly) security.

David Birkbeck - Inaccurate: people move to suburbs for all manner of reasons e.g. schools, security, affordability. House and garden might be one of those factors, but is by no means the major determinant.

Housing Corporation - Felt to be historically true and that the current dwelling mix is likely to exacerbate this trend.

LB Camden - Space in the home is more important than a garden: LBC's "out of borough" programme suggested that a garden was not a strong factor. The "pull" of schools, community facilities, etc seemed to outweigh the "push" of house with a garden. There is likely to be a very strong ethnic dimension there i.e. staying within one's own minority community.

NHF/LHF - Felt that the quality of the local school was the single most powerful factor influencing movement within London. More important than gardens.

ALG (Steve Clarke LB Merton) - Does not accept that this is a universally applicable perception. There are many other reasons why people move out, in addition to dwelling size, such as:

- Environmental quality
- Crime
- Schools

GOL (Roger Chapman) - Partly accurate. Not just an issue of space. Quality of education important factor.

7. If the perception is accurate, what could be done (in terms of dwelling design) to stop or reverse this migration?

Linda Sheridan –

- \* Price/affordability
- \* Things that can't be controlled in dwelling design i.e. street life, security, etc.

David Birkbeck - Not applicable.

Housing Corporation - Provision of private gardens for dwellings. Can flats have dedicated private gardens?

LB Camden - More space in the dwelling! Generous space standards and high density are sustainable.

NHF/LHF - Not applicable

ALG (Steve Clarke LB Merton) - Not applicable

GOL (Roger Chapman) - Very complex. Ensuring that schemes provide a range of mix of accommodation, although this sometimes creates viability and social difficulties.

8. What do you think is the typical lifespan of the flats being developed now, before the blocks need significant remodelling or redevelopment? What is the typical lifespan of the houses?

**Linda Sheridan** – Structurally modern buildings are likely to last longer than those in the past, and will be better able to withstand alterations to layouts as a result of longer span construction. However, nervous about life span of lightweight cladding systems.

**David Birkbeck** –Modern construction techniques (larger span floors to avoid load bearing walls within the dwelling and thus reduce foundation costs) facilitate simpler remodelling.

**Housing Corporation** – One-room flats have limited capability for re-modelling which will lead to redevelopment before the anticipated life of the property is reached (i.e. shorter life than expected equals higher whole life costs). Fundamentally, adaptability comes from dwelling size.

**LB Camden** - Camden tried really hard to avoid proliferation of small units.

Despite huge shortage of housing generally in the borough, studio flats (e.g. category 2) are proving difficult to let and inflexible.

**NHF/LHF** – less than those of Victorian / Edwardian terraces! It was noted that bedsits being developed to meet current demand but that they will be very unpopular if demand falls away. Predicted life - 40 years.

**ALG (Steve Clarke LB Merton)** – Perception that modern construction techniques have led to reduced internal load bearing walls, which in turn allows greater potential to change plans to respond to changing living patterns.

**GOL (Roger Chapman)** - No real knowledge.

## APPENDIX 7 - Case Study Data

Housing Space Standards: Case Studies Data													
Scheme / Housetype	Dwelling Type by Bedspaces	Internal Area (m <sup>2</sup> )	Living, Cooking, Eating area	Baseline K/D/L	Var	Var as % of Baseline	Total Bedrooms area	Baseline Bedrooms	Var	Var as % of Baseline	Total Unit Var	Tot Var as % of Baseline	"Add-on" % of total
1 person	Developer A type Developer B type	25 31	11.6 15	22 22	-10.4 -7.0	-47% -32%	7.6 8.3	7 7	0.6 1.3	9% 19%	-9.8 -5.7	-34% -20%	0.23 0.25
2 person	Scheme 1 Scheme 2 Scheme 2 Scheme 3	45.3 47.4 48 43.2	21.4 23.2 25.6 20.6	22 22 22 22	-0.6 1.2 3.6 -1.4	-3% 5% 16% -6%	11.1 13.4 14.3 12.3	12 12 12 12	-0.9 1.4 2.3 0.3	-8% 12% 19% 3%	-1.5 2.6 5.9 -1.1	-4% 8% 17% -3%	0.28 0.23 0.17 0.24
	Developer A type Developer A type Developer B type Developer B type	31 38 41 46	14.8 18.9 20.1 22.9	22 22 22 22	-7.2 -3.1 -1.9 0.9	-33% -14% -9% 4%	10.8 8.1 9.8 11.9	12 12 12 12	-1.2 -3.9 -2.2 -0.1	-10% -33% -18% -1%	-8.4 -7.0 -4.1 0.8	-25% -21% -12% 2%	0.17 0.29 0.27 0.24
3 person	Scheme 1 Scheme 2 Scheme 2	63.5 62.7 65	23.8 21.5 21.8	24 24 24	-0.2 -2.5 -2.2	-1% -10% -9%	21.4 21.2 21.7	19 19 19	2.4 2.2 2.7	13% 12% 14%	2.2 -0.3 0.5	5% -1% 1%	0.29 0.32 0.33
	Developer A type Developer B type Developer B type Developer B type Developer B type Developer B type Developer B type	51 57 60 57 62 62 66	25.5 22.2 22.3 22.2 22.2 24.1 24.8	24 24 24 24 24 24 24	1.5 -1.8 -1.7 -1.8 -1.8 0.8	6% -8% -7% -8% -8% 3%	16.4 17.8 17.9 19.2 22.3 23.4	19 19 19 19 19 19	-2.6 -1.2 -1.1 0.2 3.3 4.4	-14% -6% -6% 1% 17% 23%	-1.1 -3.0 -2.8 -1.6 1.5 5.2	-3% -7% -7% -4% 3% 12%	0.18 0.30 0.33 0.27 0.28 0.27
4 person	Scheme 3 Scheme 1 Developer A type Developer B type Developer B type Developer B type Developer B type Developer B type	65.5 81 62 62 65 66 68 62 67 76	23.6 27 28.2 21.8 23.8 25 25.1 18.5 24.1 28.5	27 27 27 27 27 27 27 27 27 27	-3.4 1.2 -5.2 -3.2 -2.0 -1.9 -8.5 -2.9 1.5	-13% 0% 4% -19% -12% -7% -7% -31% -11% 6%	23.7 27 22.6 22.8 21.3 20 22.2 20.5 19.2 23.7	24 24 24 24 24 24 24 24 24 24	-0.3 3.0 -1.4 -1.2 -2.7 -4.0 -1.8 -3.5 -4.8 -0.3	-1% 13% -6% -5% -11% -17% -8% -15% -20% -1%	-3.7 3.0 -0.2 -6.4 -5.9 -6.0 -3.7 -12.0 -7.7 1.2	-7% 6% 0% -13% -12% -12% -7% -24% -15% 2%	0.28 0.33 0.18 0.28 0.31 0.32 0.30 0.37 0.35 0.31
5 person	Scheme 1 Scheme 2 Scheme 3 Scheme 1 Developer B type Developer B type Developer B type	83 143 88.6 100 73 76 80	31.1 46.4 32.4 33 24.9 26.5 31.9	30 30 30 30 30 30 30	1.1 16.4 2.4 3.0 -5.1 -3.5 1.9	4% 55% 8% 10% -17% -12% 6%	32.7 35.8 32.6 31 22.9 23.5 25.1	31 31 31 31 31 31 31	1.7 4.8 1.6 -8.1 -7.5 -5.9	5% 15% 5% 3% -26% -24% -19%	2.8 21.2 4.0 3.0 -13.2 -11.0 -4.0	5% 35% 7% 5% -22% -18% -7%	0.23 0.43 0.27 0.36 0.35 0.34 0.29
6 person	Scheme 3 Scheme 3	101.2 125	32.9 42.2	33 33	-0.1 9.2	0% 28%	35.9 41.7	36 38	-0.1 3.7	0% 10%	-0.2 12.9	0% 18%	0.32 0.33

## APPENDIX 8 – Furniture etc used in Standards

### Base Areas and increments, with descriptions of basis of calculation

	1p or 2p	3p	4p	5p	6p	7p
Kitchen:	<b>6.4m<sup>2</sup></b>  from S&Q, calculated as a straight run of units/worktop with 1m clear in front, less 1m <sup>2</sup> in case there is one turn, reducing the area needed in front of the units.	<b>0.6m<sup>2</sup></b>  Wider base unit	<b>0m<sup>2</sup></b>  No change	<b>1.0m<sup>2</sup></b>  Additional appliance space	<b>1.8m<sup>2</sup></b>  Additional base units	<b>1.0m<sup>2</sup></b>  Additional appliance space
Living	<b>9.6m<sup>2</sup> + 1.9m<sup>2</sup> layout allowance</b>  Furniture and access zones from S&Q (a 2 seat sofa not 2 armchairs), plus activity zone, but <b>excluding</b> <ul style="list-style-type: none"> <li>passing zone and coffee table as both are assumed to be covered by the activity zone,</li> <li>the focal point fire.</li> </ul> The 2 visitors dining chairs are included, as while the dining table and chairs may be in the same liv/din area in an open plan arrangement (making the living area space for two visitors chairs appear unnecessary) the two may be separated in the future, so the resulting living area will need space for visitors chairs,	<b>0.6m<sup>2</sup> + 0.1m<sup>2</sup></b>  Add a 3 seat sofa, and lose a 2 seat sofa.	<b>1.5m<sup>2</sup>+ 0.3m<sup>2</sup></b>  1 armchair & a 3 seat sofa, so add an armchair. Also a larger storage unit	<b>1.2m<sup>2</sup>+0.2m<sup>2</sup></b>  2 seat sofa & 3 seat sofa, so lose an armchair and add a 2 seat sofa, and an occasional table & a larger storage unit	<b>1.0m<sup>2</sup>+0.2m<sup>2</sup></b>  1 armchair, a 2 seat sofa and a 3 seat sofa, so add an armchair	<b>1.0m<sup>2</sup>+0.2m<sup>2</sup></b>  add an armchair
Dining	<b>4.2m<sup>2</sup></b>  Assumes space needed for 3 people to sit around the smallest table (800x800), 2 people only needing sitting/rising activity zone, and one being a passing zone.	<b>0.5m<sup>2</sup></b>  extra dining chair and access zone & longer table	<b>0.7m<sup>2</sup></b>  extra dining chair and access zone & longer table & larger sideboard	<b>0.7m<sup>2</sup></b>  extra dining chair and access zone & longer table & larger sideboard	<b>0.5m<sup>2</sup></b>  extra dining chair and access zone & longer table	<b>0.5m<sup>2</sup></b>  extra dining chair and access zone & longer table

	Single	Double	Twin
Bedrooms	<b>7.2m<sup>2</sup></b>  As per S&Q, and so assumes 1350mm wide bed (as per requirement 2.2.1), and a 750mm door swing, but no passing zone or space for radiator and NO ACTIVITY ZONE (rather optimistic assumption that the design is likely to provide enough space for an activity zone of 700x1100mm ellipse anyway)	<b>11.7m<sup>2</sup></b>  As per S&Q including door swing, 2 activity zones and a passing zone along the foot of the bed, but no cot space, as a compromise for including both activity zones	<b>12.1m<sup>2</sup></b>  As per Single as adjusted in accordance with S&Q furniture requirements with passing zone along foot of beds, excluding Activity Zones again.

## **APPENDIX 9 – Tetlow King Advice on Planning Powers**

**RE: HOUSING SPACE STANDARDS STUDY:  
LEGAL BASIS FOR INCLUSION  
IN PLANNING DOCUMENTS**

**ON BEHALF OF: GREATER LONDON AUTHORITY**

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**Constructionline Approved - Registered No: 8559**

**OUR REF: C:\RSJT\JHM5\1209-01.RPT**

**DATE: MARCH 2006**

## CONTENTS

		<u>Page</u>
1.	SCOPE AND METHOD	153
2.	OPERATION OF SPACE STANDARDS WITHIN THE PRE-2004 PLANNING SYSTEM	154
3.	THE CURRENT POLICY POSITION IN LONDON	160
4.	MATERIAL PLANNING CONSIDERATIONS WITHIN THE POST 2004 PLANNING SYSTEM	162
5.	SUSTAINABLE DEVELOPMENT WITHIN THE POST 2004 PLANNING SYSTEM	164
6.	SPATIAL DEVELOPMENT PLANS WITHIN THE POST 2004 PLANNING SYSTEM	166
7.	BUILDING REGULATIONS/THE CODE FOR SUSTAINABLE HOMES	169
8.	CONCLUSIONS	172

### **APPENDICES**

APPENDIX A: EXTRACT FROM LONDON BOROUGH OF GREENWICH UNITARY DEVELOPMENT PLAN (ADOPTED 1994)

APPENDIX B: SPACE STANDARDS IN ADOPTED OR ADVANCED EMERGING LONDON UDPs OR ADOPTED SPGs

APPENDIX C: CIRCULAR LETTER TO REGIONAL AND LOCAL PLANNING AUTHORITIES FROM THE ODPM DATED 6 DECEMBER 2005

APPENDIX D: ARTICLE AND PRESS RELEASE CONCERNING THE CODE FOR SUSTAINABLE HOMES

APPENDIX E: TRENDS IN LONDON CONCERNING DENSITY AND OVERCROWDING AND COMPARISONS WITH ELSEWHERE IN ENGLAND

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## **Section 1**

### **Scope and Method**

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- 1.1 The purpose of this part of the study is to establish the legal basis for the inclusion of space standards in development plans and supplementary planning documents.
- 1.2 Taking the Planning and Compulsory Purchase Act 2004 as a watershed this report:
  - Assesses the way in which space standards were considered in the pre-2004 planning system.
  - Provides an overview of the current policy position in this sphere in the adopted London Plan and adopted or advanced UDPs and adopted SPGs across London.
  - Reviews the concept of '*material planning considerations*' both historically and within the post 2004 planning system.
  - Specifically explores how space standards fit within the concept of '*sustainable development*' and the framework of the new style '*development plans*' arising from the 2004 Act.
  - Assesses any potential overlap with the Building Regulations system and the potential for integration with the embryonic Code for Sustainable Homes launched in December 2005.
- 1.3 This report has been prepared within the parameters of the professional expertise of Tetlow King Planning as town planning and development consultants. We advise the Greater London Authority to seek corroboration from Counsel before fully relying on the contents.

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## Section 2

### **Operation of Space Standards within the Pre-2004 Planning System**

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#### **Overview**

- 2.1 Since the inception of the current planning system in 1947 it has always been a fundamental aspect of development control to seek to protect the *'amenity'* of the occupiers of buildings and land. Many planning authorities have used this to justify the production of external space standards, concerning spacing of dwellings, garden sizes et cetera. A few have gone so far as to provide internal space standards. At no time, however, have space standards been an integral part of the planning system or been applied in anything like a comprehensive fashion.
- 2.2 At no point since 1947 have Building Regulations sought to apply minimum external or internal space standards. There have at times been such controls for publicly subsidised housing via for example Parker Morris Standards (dating from 1961) but these have never been applied via the planning system.
- 2.3 Despite the attempts at various times to embrace space standards by various planning authorities, central government advice has frequently been discouraging. Indeed between 1980 and 2004 central government guidance specifically negated attempts to control such matters via the planning system. For example, PPG3 (1992) provided that *'the functional requirements within a development are for the most part a matter for the marketing judgement of developers, in the light of their assessment of their customer's requirements. Such matters would include the provision of garages, internal space standards and the size of private gardens. In considering the location of houses on plots and their relationship to each other, local planning authorities should not attempt to prescribe rigid formulae. They should regulate the mix of house types only when there are specific planning reasons for such control, and in doing so they should take account of marketing considerations'*. It also stated that *'local authorities should consider development proposals ... by reference to the character and quality of the local environment, including any adjacent buildings'*.

- 2.4 A typical policy response is included within **Appendix A**. This is an extract from the Greenwich Unitary Development Plan (adopted 1994). Policy H18 headed '*housing standards*' lists a number of criteria to which the Council '*will have particular regard*'. These include privacy; landscaping; provision of gardens and open space; parking and access; aspect and orientation; safety and security; and design. The reasoned justification is more specific in stating that '*all new house construction, rebuilding and conversions should provide a satisfactory standard of accommodation and contribute positively to their surroundings*'. There is reference to a national RIBA/Institute of Housing document, '*Homes for the Future*' (1983), which does include space standards, and mentions that '*an Advice Note will set out guidelines for housing developments containing the detail*'.
- 2.5 Development plan policies have largely focused on external issues and steered away from including specific standards. The explanatory text/reasoned justification (which is of lesser weight) sometimes goes a little further. Where advice notes or supplementary planning guidance (SPG) have been produced these can be detailed but little weight has generally been attached to the detail in the overall balance of material planning considerations, not least because of the practical difficulties of defending this on appeal.
- 2.6 Between 1980 and 2004 ministerial policy sought to draw a line between the control of problems which may be perceived to be internal to proposed developments, and those which impinged upon neighbours. However, it is evident that such a *laissez-faire* policy towards internal standards always had limits. There is always a point at which avoidance of paternalism is overridden by the public interest, the argument being that to permit a '*sub standard*' development may engender continuing conflict, either between neighbour and neighbour or between occupier and authority. An appeal example illustrates this. Flats and offices were proposed in one development. An Inspector supported the Council in its contention that the site was so overdeveloped as to provide unacceptably bad living conditions. He cited, amongst other objections, bedroom windows only 5m, from office windows and dwellings which looked out onto blank walls only a few metres away. He appreciated that these matters could be a matter of choice which government advice suggested fell outside the province of planning law, but these dwellings were so substandard that they did effectively cause demonstrable harm to interests of acknowledged importance (Hammersmith and Fulham, 18/6/91).

## Appeal Decisions: External Space Standards

2.7 By way of example local authority attempts to set minimum garden area/communal amenity space standards for residential development have been a matter of considerable contention. In practice, if contextual or other amenity criteria such as lighting and overlooking are satisfied the amount of land about a building to achieve such standards has normally been deemed sufficient to provide for the needs of residents.

2.8 The following appeal examples show varied approaches to the garden size issue.

- A dwelling was proposed in a garden area. Council standards required a minimum of 50sq.m of private garden area for a dwelling to be occupied by 3 or more persons. However most of this land was available at the front of the dwelling and it was asserted that this was not a private area. An Inspector rejected this, reasoning that the land would be private because it would not be open to the public. A suggestion that tall fences could be erected around the front garden area to give privacy was also dismissed as it was by no means certain that future occupants would want such fences (Wrexham Maelor BC, 19/7/95).
- A large housing development was proposed. An Inspector noted that the Council generally sought rear gardens of 11.5m but noted the advice in PPG3 referring to the fact that garden sizes were for the most part a matter for the marketing judgement of developers. He considered that although some gardens had short plots, the spacing and relative orientations of proposed dwellings would secure adequate levels of privacy and freedom from overlooking. The proposed gardens would all have adequate areas for normal outdoor activities (St Helens BC, 6/7/93).
- A retirement housing development was proposed. It was alleged that the 610sq.m of amenity space provided for residents was below the Council's standards which required 1210sq.m. An Inspector referred to the advice in the then extant PPG3 of 1992 and gave weight to the fact that the developers were well experienced in providing for the recreational needs of the elderly, which was mainly for passive rather than active enjoyment. There were parks nearby. He concluded that the proposed amenity area would provide a reasonable standard of recreation for the prospective occupiers of the 29 flats. However, he considered that the shortfall in amenity space provision added weight to his other conclusion that the site was being overdeveloped (Havering LB, 20.6.95).

- An Inspector observed that a flat conversion had no amenity space, and whilst he would not normally expect more than a minimal amount of such space to be provided for uses such as sitting out, storage, refuse or hanging out washing, in this case the flat had two bedrooms possibly three. It could well be occupied by a family with children (Cardiff CC, 9/7/91).
- A rare case notable for its strict application of amenity space guidelines was where two one bedroomed flats were formed from a hosse. A rear area of 50sq.m was available which was not accessible from the upper flat. An Inspector felt that there would be claustrophobic conditions for the upper flat and that, even if access to the garden could be organised, the area available as inadequate for two households (Vale of Glamorgan DC, 12/6/95).
- The role of roof gardens in satisfying garden space standards was tackled in (Redbridge LB, 1/9/88) where an Inspector felt that a roof garden on the top of a five storey warehouse conversion would be '*an unattractive place for a considerable amount of the year*'. However, in other cases such as (Wandsworth LB, 2/6/87) the creation of a roof garden had been held to satisfy amenity space needs. A further objection to roof gardens is their overlooking propensity, a matter articulated in (Hammersmith & Fulaham LB, 20/3/87).

## **Planning Appeal Decisions: Internal Space Standards**

2.9 Inspectors have largely assessed the suitability of developments having regard to the provision of suitable living conditions for future occupants.

2.10 The following examples illustrate the different approaches taken by Inspectors.

- A proposal involved the conversion and extension of an existing property to form three flats. An Inspector noted that the density within this part of the borough was 100 habitable rooms per acre (hrpa) and that the proposal would increase this to 376 hrpa. This was not in itself justification to refuse permission. However it was noted that one of the flats would fall well below the recommended minimum of 44.6sq.m and the ground floor living room would receive only a minimum amount of daylight and no direct sunlight. This level of provision was unacceptable (Wandsworth LB, 8/7/91).
- A scheme involved the conversion of two properties to create a HMO for homeless people. The existing building accommodated 9 self contained bed-sitting rooms and it was proposed to create 12

bedrooms for a total of 24 people. An Inspector noted that it would be difficult to ensure that homeless families with children would not be accommodated in the property. There was no effective external amenity space such that it would be totally unsuited to children and families. A tiny playroom of 5sq.m was inadequate such that the presence of children would increase the distress and irritation of other occupants. Thus the use as a hostel would exacerbate pressure on external passageways and stairways which would distinguish it from ordinary private dwellings (Wandsworth LB, 12/8/91).

- Two conditions were imposed upon a permission for the change of use of agricultural to rural workshops which required the installation of toilet and washing facilities and a new foul drainage scheme. An Inspector concluded that these matters did not form any part of the deliberations as to whether the premises were suitable for a particular use. It was noted that other legislation existed to ensure that the premises were properly drained and where people are employed, that sanitary accommodation is provided. The conditions were found to be ultra vires and were discharged (North Cornwall DC, 6/8/98).
- A basement of a house in multiple occupation was converted to a flat. An Inspector noted that the internal space standards within buildings were not normally a matter for planning consideration since the number of habitable rooms, layout, daylight and ventilation and fire escape, were dealt with under public health, housing and safety codes. The Inspector concluded that there was no evidence to suggest that a modified scheme could not meet these requirements and costs were awarded against the Council since an environmental health officer admitted that the difficulties had been resolved (Kerrier DC, 24/1/90).

## **Court Case: Disabled Access**

2.11 The subject of how far disabled access is a material consideration in planning was considered in *Richmond upon Thames LB v Secretary of State and Dahaga Establishment*, 28/6/94, which was prior to the introduction of Part of the Building Regulations. Here a change of use to an A1/A3 development had been refused on the grounds that the raising of the ground floor and the provision of two steps would exacerbate problems for people with restricted mobility. At appeal an Inspector had reasoned that the provision of steps was a matter to be considered under the Building Act 1984, and he used then extant PPG1 advice that planning control was not normally to be used to secure objectives achievable under other legislation. The Council argued to

the Court that disabled access was a material planning consideration as the then extant Development Control Policy Note 16 advised that planning authorities have a specific duty in this respect when determining applications. It also stated that approved local planning policies also required such consideration. The Court held that the Inspector had failed to pay heed to specific planning policies contained in the UDP, although it did not disagree with his general statement of principle.

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## Section 3

### *The Current Policy Position in London*

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#### London Plan

- 3.1 Policy 3A.4 of the London Plan (February 2004) states that UDP policies should seek to ensure that:

*'New developments offer a range of housing choices, in terms of the mix of housing sizes and types, taking account of the housing requirements of different groups...'*

Paragraph 3.17 of the reasoned justification refers to *'changing lifestyles... making new demands upon the ways residents use their homes with greater demands for internal space, including working from home and leisure activities'*.

- 3.2 The Panel Report (July 2003) following the Public Examination endorsed Policy 3A.4 *'on housing choice'* as taking *'generally the right approach'* (paragraph 4.37 and R4.9).

- 3.3 Policy 3A.4 of the London Plan further states that UDP policies should seek to ensure that all new housing be built to *'Lifetime Homes'* standards and 10% of new housing be designed to be wheelchair accessible or easily adaptable for residents who are wheelchair users.

- 3.4 This was also endorsed by the Panel Report. It is evident that the Government Office for London raised the appropriateness of the draft Plan referring to matters which were covered by Building Regulations. The Panel specifically commented on this point as follows:

*'We find this... point of note because it raises the issue of the scope of a spatial development strategy (SDS) in referring to matters which go beyond the traditional land use scope of a development plan. GOL appeared unable to give a lead on this, but we consider that there is an important role for the Plan, as a SDS, in bringing together strategic directions for a wide range of policies which have a spatial dimension. The draft Plan does this for many other issues such as biodiversity, air quality and economic development. In an era of joined up government we consider that it is appropriate to tie the Plan in to other statutory regimes, subject to two provisos: first that the Plan should not attempt to*

*set a policy framework which conflicts with other statutory processes, and second, that the issue should be of sufficient strategic significance to merit inclusion in the Plan'* (paragraph 4.38).

- 3.5 Policy 4B.3 of the London Plan requires UDPs to develop policies in accordance with Sustainable Residential Quality Principles and density ranges specified in Table 4B.1. Paragraph 6.14 of the London Plan Supplementary Planning Guidance: Housing (November 2005) elaborates that in applying these matrices the three house type categories to be used should be determined primarily by the housing requirements of the group for whom the housing is provided. The categories assume different habitable room per unit ratios, varying from 2.7 habitable rooms per unit in high density central area schemes, which are predominantly flatted, to 4.6 habitable rooms per unit in remote suburban schemes, which are predominantly detached and linked houses.

## **Unitary Development Plans/Supplementary Planning Guidance**

- 3.6 We have carried out a survey of all the London Boroughs and the findings were as follows:
- 22 boroughs currently have a UDP policy/SPG documents encompassing housing standards.
  - Of these 12 boroughs include space standards for different types of rooms based on the bed space of the dwelling.
  - Only Kensington and Chelsea include either specific minimum standards for sizes of rooms for different types of general accommodation or specific minimum overall space standards for wheelchair standard dwellings.
- 3.7 Further detail is set out in **Appendix B**.

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## Section 4

### ***Material Planning Considerations within the Post 2004 Planning System***

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- 4.1 Section 70 (2) of the Town and Country Planning Act 1990 states that planning authorities *'shall have regard to the provisions of the development plan, so far as material to the application, and to any other material considerations'*.
- 4.2 The Planning System: General Principles (ODPM, February 2005) published in conjunction with PPS1 states *'The Courts are the arbiters of what constitutes a material consideration. All the fundamental factors involved in land-use planning are included, such as the number, size, layout, siting, design and external appearance of buildings and the proposed means of access, together with landscaping, impact on the neighbourhood and the availability of infrastructure'*. The courts have generally sought to avoid prescribing a priori limitations to the statutory discretion, recognising that too narrow a construction would bring the courts too far into matters of planning policy rather than law, and run the risk of substituting bare legalism for the broad flexibility that Parliament must have intended by adopting so loose a formula.
- 4.3 In *Stringer v Minister of Housing and Local Government (1970)* the Judge stated that:
- 'In principle any consideration which relates to the use and development of land is capable of being a planning consideration. Whether a particular consideration falling within that broad class is material in any given case will depend on the circumstances'*.
- 4.4 Since the Stringer case, development plans have changed in both content and importance, not least since the passing into law in 1991 of the presumption in favour of the development plan, now enshrined in Section 38 (6) of the Town and Country Planning and Compulsory Purchase Act 2004. They are now recognised as social and economic, as well as land-use documents. Thus, not only are development plans themselves material considerations, so also are the policies within them which may relate only indirectly to the use and development of land.
- 4.5 In law there is a wide scope for material considerations. In practice their scope is heavily influenced by government policy statements. In essence a circular process arises. Government policy statements in turn

heavily influence development plan content and assessment by independent Inspectors/panels. Once development plan policies are adopted Inspectors are bound to give them primary consideration in the determination of applications; a key '*other material consideration*' which might dictate against the application of development plan policies is more recent government policy statements.

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## Section 5

### ***Sustainable Development within the Post 2004 Planning System***

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5.1 Sustainable development is central to the reformed planning system. The Planning and Compulsory Purchase Act 2004 contains a statutory requirement for local planning authorities to undertake their function with a view to contributing to the achievement of sustainable development. The World Commission on Environment and Development has drawn up a widely used definition; *'development that meets the needs of the present without compromising the ability of future generations to meet their own needs'*. For this to be achieved, planning authorities need to consider the long term social, environmental, economic and resource impacts of development.

5.2 PPS1: Delivering Sustainable Development (2005) identifies four aims of sustainable development:

- Social progress which recognises the needs of everyone;
- Effective protection of the environment;
- The prudent use of natural resources; and
- The maintenance of high and stable levels of economic growth and employment.

Paragraph 4 states that *'these aims should be pursued in an integrated way through a sustainable, innovative and productive economy that delivers high levels of employment, and a just society that promotes social inclusion, sustainable communities and personal well being, in ways that protect and enhance the physical environment and optimise resource and energy use'*.

5.3 In terms of social progress paragraph 14 of PPS1 states that this entails *'meeting the diverse needs of all people in existing and future communities, promoting personal well-being, social cohesion and inclusion and creating equal opportunity for all citizens'*. Paragraph 16 states that development plan policies should:

- *'Ensure that the impact of development on the social fabric of communities is considered and taken into account;*

- *Seek to reduce social inequalities;*
  - *Take into account the needs of all the community, including particular requirements relating to age, sex, ethnic background, religion, disability or income;*
  - *Deliver safe, healthy and attractive places to live; and*
  - *Support the promotion of health and well being by making provision for physical activity’.*
- 5.4 In terms of effective protection of the environment paragraph 18 of PPS1 states *‘the condition of our surroundings has a direct impact on the quality of life and the conservation and improvement of the natural and built environment brings social and economic benefit for local communities. Planning should seek to maintain and improve the local environment and help to mitigate the effects of declining environmental quality through positive policies on issues such as design, conservation and the provision of public space’.*
- 5.5 In terms of integrating sustainable development in development plans paragraph 26 of PPS1 encourages planning authorities to *inter alia ‘recognise the needs and broader interests of the community to secure a better quality of life for the community as a whole’* and to take account of *‘longer term impacts and the needs of communities in the future’.*
- 5.6 Draft PPS3: Housing published in December 2005 states that the government’s objective in *‘planning for housing is to ensure that everyone has the opportunity of living in a decent home, which they can afford, in a community in which they want to live’.* To achieve this objective the government is seeking *inter alia* to:
- *Ensure ‘a wide choice of house types is available... to meet the needs of all the community’.*
  - *Create developments which are ‘attractive, safe and designed and built to a high quality’ (paragraph 1).*

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## Section 6

### ***Spatial Development Plans within the Post 2004 Planning System***

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- 6.1 PPS1 articulates the principles of the new development plan system which are based on a spatial planning approach. Paragraph 30 explains *‘spatial planning goes beyond traditional land use planning to bring together and integrate policies for the development and use of land with other policies and programmes which influence the nature of places and how they can function. That will include policies which can impact on and use, for example by influencing the demands on or needs for development, but which are not capable of being delivered solely or mainly through the granting or refusal of planning permission and which may be implemented by other means. Where other means of implementation are required these should be clearly identified in the plan. Planning policies should not replicate, cut across, or detrimentally affect matters within the scope of other legislative requirements, such as those set out in Building Regulations for energy efficiency’.*
- 6.2 PPS1 identifies *‘good design’* as a key element in sustainable development which *‘ensures attractive, usable, durable and adaptable places’* (paragraph 33). Policies in development plans should include ensuring that developments *inter alia*
- *‘Are sustainable, durable and adaptable;*
  - *Optimise the potential of the site to accommodate development;*
  - *Respond to their local context;*
  - *Address the needs of all in society and are accessible (and) usable ... by them’* (paragraph 36).
- 6.3 PPS1 includes the caveat that *‘design policies should avoid unnecessary prescription or detail and should concentrate on guiding the overall scale, density, massing, height, landscape, layout and access of new development in relation to neighbouring buildings and the local area more generally. Local planning authorities should not attempt to impose architectural styles or particular tastes and they should not stifle innovation, originality or initiative through*

*unsubstantiated requirements to conform to certain development forms or styles’.*

6.4 PPS12: Local Development Frameworks and its companion guide Creating Local Development Frameworks provide further guidance but mainly of a procedural nature.

6.5 Paragraph 2.12 of PPS12 cross refers to Policies for Spatial Plans published by the Planning Officers Society (July 2005). This summarises the characteristics of spatial planning as follows:

‘Traditional land-use planning has an approach to development that focuses upon the regulation and control of land. Spatial planning has a wider, more inclusive, approach and it aims to ensure the best use of land by weighing up competing demands. It is still concerned with the physical aspects of location and land use but, by taking account of economic, social and environmental matters, it considers aspects that influence space as well as place. These aspects may include access and movement (as now), health, education, employment, crime prevention etc. By bringing together such a wide range of factors, spatial planning becomes a key delivery mechanism for achieving sustainable development. Other key principles of spatial planning include:

- *It derives from the unique features or characteristics of an area. By considering the needs and problems of communities, it can help to identify the spatial ‘drivers of change’ within an area. This in turn allows plans to express a sense of place for their area from which spatial vision and objectives can be derived;*
- *It is an inclusive approach that informs, as well as takes account of, other strategies and programmes, especially the Community Strategy (as far as possible, spatial planning should be the spatial expression of the Community Strategy). This could include regeneration, economic development, education, housing, health, waste, energy, recycling, environmental protection and culture;*
- *It facilitates new forms of partnership and engagement with a range of bodies including communities, stakeholders and business. This will assist co-ordinated action on a wide range of issues...’ (Page 13).*

6.6 Draft PPS3: Housing (December 2005) *inter alia* states that planning authorities should:

- Continue to maximise densities (paragraphs 18 and 19).
- Determine the overall balance between different household types to be provided across the plan area (paragraphs 21 and 22).
- Promote designs and layouts that are *‘inclusive, safe, take account of public health, crime prevention and community safety, ensure adequate natural surveillance...’* (paragraph 34).

- Encourage applicants *‘to apply principles of sustainable and environmental design and construction to new developments’*, in particular *‘the Code for Sustainable Homes’* (paragraph 39).

6.7 In the context of London an important point is that the London Plan only became a statutory development plan in September 2004 under the Planning and Compulsory Purchase Act 2004, after its initial adoption in February 2004 as a non statutory plan. Under the new development plan system the London Plan will entirely set the statutory strategic context for Local Development Frameworks, replacing the two part Unitary Development Plans which include both strategic and local elements. The various guidance strongly emphasises that regional spatial policies should set out coherent parameters within which Local Development Frameworks should fit.

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## **Section 7**

### ***Building Regulations/The Code For Sustainable Homes***

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7.1 The Building Act 1984 is the enabling Act under which the Building Regulations have been made. The Secretary of State, under the powers given in the Building Act 1984, may for any purposes of:

1. Securing the health, safety, welfare and convenience of persons in or about buildings and of others who may be affected by buildings or matters connected with buildings;
2. Furthering the conservation of fuel and power;
3. Preventing waste, undue consumption, misuse or contamination of water

make regulations with respect to the design and construction of buildings and the provision of services, fittings and equipment in or in connection with buildings. The current regulations governing these are the Building Regulations 2000 SI 2000/2531 (as amended).

7.2 The fourteen parts of the current Building Regulations are as follows:

**A Structure**

- B Fire safety
- C Site preparation and resistance to contaminants and moisture
- D Toxic substances
- E Resistance to the passage of sound
- F Ventilation
- G Hygiene
- H Drainage and waste disposal
- J Combustion appliances and fuel storage systems
- K Protection from falling, collision and impact
- L Conservation of fuel and power
- M Access to and use of buildings
- N Glazing – safety in relation to impact, opening and cleaning

**P Electrical safety**

7.3 In addition the government has recently consulted on Proposals for introducing a Code for Sustainable Homes (December 2005) which is

directly referred to in draft PPS3 (see 6.6 above). The draft proposals were launched as *'a fresh approach to delivering sustainable new homes by voluntary compliance'* with a view to influencing the future directions of Building Regulations.

7.4 The Code as currently proposed will have six essential elements. These are:

- Energy efficiency in the fabric of the building and appliances in the building.
- Water efficiency.
- Surface water management.
- Site waste management.
- Household waste management.
- Use of materials.

Minimum standards will be set for each essential element and all of these must be achieved if a home is to meet Code standards. Where there is a relevant building regulation, then the minimum code standard will at least equal or exceed it.

7.5 In addition, it is proposed that homes built to higher Code standards may have some of the following features:

- Lifetime Homes;
- Additional sound insulation;
- Private external space which may be a garden or balcony;
- Higher daylighting standards;
- Improved security;
- A home log book which will advise purchasers on the details of the sustainability of their home.

7.6 From the above the following conclusions can be drawn:

- Space standards could theoretically fall within the ambit of *'securing the health, safety, welfare and convenience of persons in or about buildings'* as set out in the primary legislation.
- Although there is some overlap within Part M, space standards are clearly not within the current Building Regulations.

- 7.7 The draft Code for Sustainable Homes adds a new dimension and currently includes reference to *'Lifetime Homes and private external space'*. As reinforced by the circular letter (contained in **Appendix C**) to regional and local planning authorities issued by the Planning Directorate of the ODPM on 6 December 2005, the Code is seen as one of a number of *'new tools'* to support *'the improved quality of new housing development through commitment to high quality designed at the local level'*.
- 7.8 A recent press article contained in **Appendix D** (Inside Housing, 3/2/06) reported a comment from Elliot Morley, Environment Minister, that planning permission would be used as means of ensuring developers meet the Code. Furthermore an even more recent news release from the ODPM (9/3/06), issued after the close of the consultation period, stated that the government intends to *'strengthen'* the code and carry out *'further research into future improvements'*; *'incentives in the planning system'* being mentioned as one possibility.

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## **Section 8**

### **Conclusions**

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- 8.1 The planning system has always encompassed residential amenity as a matter of fundamental concern but has only flirted with the application of specific space standards. Between 1980 and 2004 government advice specifically discouraged such an approach. External standards have been applied more frequently than internal standards. Whilst some local authorities (especially London boroughs) have maintained detailed planning policies these have largely been confined to advice notes/SPGs to which they have been unable to attach much weight. Our analysis of appeal decisions reflects this, providing a mixed picture of how such policies have worked on the relatively few occasions when they have been directly tested.
- 8.2 The London Plan (February 2004) and the Planning and Compulsory Purchase Act 2004 represent a watershed. There can be little doubt that space standards are now in principle capable of being considered a *'material planning consideration'* and a component of *'sustainable development'*.
- 8.3 PPS1, PPS12 and draft PPS3 provide helpful recent government advice within the framework of the new planning system. Space standards are capable of being a key component in delivering government aspirations regarding quality of life; ensuring decent homes for all; maximising densities; providing an appropriate mix of house types capable of meeting demonstrated strategic and local needs; providing high quality residential environments; and delivering sustainable design and construction.
- 8.4 Space standards do appear to fall within the potential scope of the Building Act 1984 but, apart from Part M, do not within the scope of the current Building Regulations.
- 8.5 The *'Code for Sustainable Homes'* provides a new opportunity for applying space standards and bridging the planning and building regulation systems.
- 8.6 Whilst the current planning system provides scope for the application of space standards in general, a substantive case still needs to be made

for their inclusion within the review of the London Plan. Amongst the particular circumstances which may prove relevant are:

- The continuing trends in densities in London over the past 20 years, including their correlation with densities elsewhere (see **Appendix E**).
- The continuing growth in households (as confirmed by the ODPM press release of 14/3/06) and pressures for further residential development within the current boundaries of London.
- The trends in '*overcrowding*' in London over the past 10 years, including their correlation with trends elsewhere (see **Appendix E**).
- Evidence of demonstrable harm to quality of life of individual, households and communities across London as a consequence of the above.

# APPENDIX A

## EXTRACT FROM LONDON BOROUGH OF GREENWICH UNITARY DEVELOPMENT PLAN (ADOPTED 1994)

### LONDON BOROUGH OF GREENWICH UDP (1994)

#### HOUSING STANDARDS

- 3.41 H18: New residential development, rebuilding or conversions by both public and private agencies should normally satisfy the Council in respect of design, form and layout. In considering proposals the Council will give particular regard to:
1. Privacy of adjoining occupiers.
  2. Landscaping the environment around the dwellings.
  3. The provision of private gardens for family housing and communal open space.
  4. Parking and access.
  5. Aspect and orientation.
  6. Safety and security of residents (see Policy D11).
  7. The design of the development is consistent with Policies D8 – D13.

#### **Reason**

- 3.42 All new house construction, rebuilding and conversions should provide a satisfactory standard of accommodation and contribute positively to their surroundings. The Council will use '*Homes for the Future*' published by RIBA and the Institute of Housing as a guideline. Houses with gardens are the most appropriate form of provision for families with children and, where physically practicable the gardens should be of a good size (e.g. 50 square metres upwards). Extensions to residential properties are considered under Design Policies D31 and D32. An Advice Note will be prepared setting out guidelines for housing developments.

# APPENDIX B

## SPACE STANDARDS IN ADOPTED OR ADVANCED EMERGING LONDON UDPs OR ADOPTED SPGs

### LONDON BOROUGHs THAT HAVE UDP POLICY/SPG INCLUDING HOUSING DESIGN/STANDARDS

Bexley  
Camden  
Ealing  
Greenwich  
Hammersmith and Fulham  
Haringey  
Harrow  
Havering  
Hillingdon  
Hounslow  
Islington  
Kensington and Chelsea  
Lambeth  
Lewisham  
Merton  
Newham  
Redbridge  
Southwark  
Sutton  
Tower Hamlets  
Waltham Forest  
Wandsworth

## DETAILED SPGs: INTERNAL SPACE STANDARDS

Only the Kensington and Chelsea SPG (see below) contains internal housing standards for different types of dwellings. However, others do contain internal space standards for different types of rooms based on the bed space of the dwelling. A summary of these standards is set out below. The figures contained in the table represent an average of the figures.

The following London Boroughs SPG contain these average internal standards:

Camden  
 Haringey  
 Hounslow  
 Lambeth  
 Lewisham  
 Southwark  
 Sutton  
 Tower Hamlets  
 Waltham Forest  
 Wandsworth

Room	Bedspace (m <sup>2</sup> )					
	1	2	3	4	5	6
Main bedroom	9.8	11	11	11.1	11	11
Other doubles	0	10.4	10.2	10.2	10.2	10.2
Single bedrooms	0	6.5	6.5	6.5	6.5	6.5
Dining/Kitchen	8.5	10.1	11.4	11.3	12.4	13.1
Living room (in dwelling with separate dining/kitchen)	11.8	12.9	14.3	15.1	15.9	16.8
Kitchen	5.5	5.6	6.5	7.3	7.3	8
Living room (in dwelling without separate dining/kitchen)	13.7	15.1	16.8	17.2	18.4	19.4

## LONDON BOROUGH OF KENSINGTON AND CHELSEA

### INTERNAL SPACE STANDARDS

The Kensington and Chelsea SPG is extremely detailed and specific. Within the other SPGs housing is not broken down and explained in terms of different use types as it is here.

#### Flats and Maisonettes: Size of Rooms

Room	m <sup>2</sup>
Living room	13
First double bedrooms	11
Other double bedrooms	10
Single bedrooms	6.5
Totally enclosed kitchens	5.5
Other kitchens	6.5

<b>Houses in Multiple Occupation (bedsits)</b>		
<b>Minimum standards for rooms used for sleeping</b>		
Persons	Cooking Facilities in Room	Shared Cooking Facilities
1	11sq.m	9.5sq.m
2 (maximum)	14sq.m	12sq.m

<b>Flats in Multiple Occupation</b>	
<b>Minimum space standards</b>	
<b>Persons</b>	<b>Minimum Space Requirement</b>
1	8.5sq.m
2 (maximum)	11sq.m

<b>Houses in Multiple Occupation (Hostel/hotel type accommodation for tourists and other visitors)</b>	
<b>Minimum space standards</b>	
<b>Persons</b>	<b>Minimum Size of Sleeping Accommodation</b>
1	6.5sq.m
2	10.2sq.m
3	14.9sq.m
4	19.6sq.m
5	24.3sq.m

<b>Houses in Multiple Occupation (Hostel and hostel type accommodation for homeless persons)</b>		
<b>Minimum space standards</b>		
<b>Persons</b>	<b>Cooking Facilities in Room</b>	<b>Cooking Facilities Separate</b>
1	10.2sq.m	6.5sq.m
2	13.9sq.m	10.2sq.m
3	18.6sq.m	14.9sq.m
4	23.3sq.m	19.6sq.m
5	26sq.m	24.3sq.m

**Houses in Multiple Occupation (Hostel and hotel type accommodation for students and other vocationally related accommodation, to include accommodation above pub or living in staff)**

**Minimum space standards**

<b>Persons</b>	<b>Cooking Facilities Room</b>	<b>in</b>	<b>Cooking Facilities Separate</b>
1	10.2sq.m		6.5sq.m
2	13.9sq.m		10.2sq.m
3	18.6sq.m		14.9sq.m
4	23.3sq.m		19.6sq.m
5	28.0sq.m		24.3sq.m

# APPENDIX C

## CIRCULAR LETTER TO REGIONAL AND LOCAL PLANNING AUTHORITIES FROM THE ODPM DATED 6 DECEMBER 2005

VEL 1377 2005



Office of the  
Deputy Prime Minister  
Creating sustainable communities

Mike Ash  
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Web Site: [www.odpm.gov.uk](http://www.odpm.gov.uk)

06 December 2005

Dear Colleague

### Government's response to the Barker Review of Housing Supply

I am writing in respect of *The Government's response to Kate Barker's Review of Housing Supply*, published yesterday, to outline the implications this has for the preparation of Regional Spatial Strategies and Local Development Documents. The response sets out the Government's objectives for housing and its ambition for a step-change in housing provision in many areas to address the serious problems of affordability that the country faces. It makes clear that if Government is to meet its aim to improve affordability, new housing supply in England will need to increase over the next decade to 200,000 net additions per year.

The Government has also published :

- a consultation paper containing a draft *Planning Policy Statement 3: Housing*;
- a consultation paper on the introduction of a *Planning Gain Supplement* which would help pay for the infrastructure needed to support growth;
- a Circular on a new Town and Country Planning (Green Belt) Direction;
- a consultation paper containing a draft *Planning Policy Statement 25: Flooding*.

A copy of the statement made to Parliament is attached. You will receive a copy of the PPS, PGS and Circular documents shortly.

Draft PPS3 introduces important changes in the approach to planning for housing. It aims to make planning more responsive to the housing market and better able to deliver the variety and choice of housing which will ensure that communities are sustainable, mixed and inclusive, in both urban and rural areas. It sets out the roles of regional planning bodies and local planning authorities (and of the proposed new National Advice Unit) in delivering the Government's housing objectives.

Draft PPS3 includes policies on the need for:

- regions to take account of the Government's overall ambition for affordability.

local and regional government • housing • planning • fire • regeneration • social exclusion • neighbourhood renewal

## APPENDIX D

### ARTICLE AND PRESS RELEASE CONCERNING THE CODE FOR SUSTAINABLE HOMES

# **Developers will adhere to code, insist ministers**

The government's housing and environment ministers have been forced to defend the introduction of a voluntary building code after MPs warned that developers would simply ignore their recommendations.

The code for sustainable homes, which is under consultation, sets out high standards for new homes but is only intended to be a set of guidelines.

Chair of the Environmental Audit select committee Tim Yeo attacked the proposal, saying it was 'inadequate'.

'The problem arises with the companies who are not complying with it,' Mr Yeo warned.

'If they are aware, as they must be, there is no system under which ODPM [Office of the Deputy Prime Minister] can monitor this in the foreseeable future, they have a free ride.'

But housing minister Yvette Cooper told the committee the voluntary code was intended to push up the standard of compulsory building regulations over time.

Developers would adhere to the code because home buyers would begin to demand it, she said.

'I think over time consumers will take this more and more seriously.'

At a later meeting, environment minister Elliot Morley said home information packs could encourage buyers to consider building quality and force developers' hands.

'I think there are a number of drivers with the voluntary code will encourage builders to build to that standard,' he said. 'We could, for example, ensure that there is a star rating in the buyer packs for the homes that people are buying.'

Councils could also ensure planning permission was only given to those developers proposing to meet the code, he added.

**Inside Housing, 3 February 2006**

## APPENDIX E

### TRENDS IN LONDON CONCERNING DENSITY AND OVERCROWDING AND COMPARISONS WITH ELSEWHERE IN ENGLAND

#### DENSITY OF NEW RESIDENTIAL DWELLINGS BUILT: LONDON, SOUTH EAST AND ENGLAND, 1985 – 2004

	Dwellings per hectare		
	London	South East	England
1985	22	11	12
1986	28	16	17
1987	44	20	21
1988	54	23	23
1989	47	24	25
1990	45	20	23
1991	45	24	26
1992	49	23	25
1993	48	22	26
1994	44	22	24
1995	48	21	24
1996	56	23	25
1997	51	23	25
1998	54	23	25
1999	56	22	25
2000	56	24	25
2001	48	24	25
2002	56	26	27
2003	80	33	34
2004	83 (provisional)	43	40

Source: Land Use Change Statistics, ODPM, July 2005. Presented by Yvette Cooper MP, Minister for Planning in House of Commons. Hansard Written Answer, 14 October 2005.



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### Vietnamese

Nếu bạn muốn có văn bản tài liệu này bằng ngôn ngữ của mình, hãy liên hệ theo số điện thoại hoặc địa chỉ dưới đây.

### Greek

Αν θέλετε να αποκτήσετε αντίγραφο του παρόντος εγγράφου στη δική σας γλώσσα, παρακαλείστε να επικοινωνήσετε τηλεφωνικά στον αριθμό αυτό ή ταχυδρομικά στην παρακάτω διεύθυνση.

### Turkish

Bu belgenin kendi dilinizde hazırlanmış bir nüshasını edinmek için, lütfen aşağıdaki telefon numarasını arayınız veya adrese başvurunuz.

### Punjabi

ਜੇ ਤੁਹਾਨੂੰ ਇਸ ਦਸਤਾਵੇਜ਼ ਦੀ ਕਾਪੀ ਤੁਹਾਡੀ ਆਪਣੀ ਭਾਸ਼ਾ ਵਿਚ ਚਾਹੀਦੀ ਹੈ, ਤਾਂ ਹੇਠ ਲਿਖੇ ਨੰਬਰ 'ਤੇ ਫ਼ੋਨ ਕਰੋ ਜਾਂ ਹੇਠ ਲਿਖੇ ਪਤੇ 'ਤੇ ਰਾਬਤਾ ਕਰੋ:

### Hindi

यदि आप इस दस्तावेज की प्रति अपनी भाषा में चाहते हैं, तो कृपया निम्नलिखित नंबर पर फोन करें अथवा नीचे दिये गये पते पर संपर्क करें

### Bengali

আপনি যদি আপনার ভাষায় এই দলিলের প্রতিলিপি (কপি) চান, তা হলে নীচের ফোন নম্বরে বা ঠিকানায় অনুগ্রহ করে যোগাযোগ করুন।

### Urdu

اگر آپ اس دستاویز کی نقل اپنی زبان میں چاہتے ہیں، تو براہ کرم نیچے دئے گئے نمبر پر فون کریں یا دیئے گئے پتے پر رابطہ کریں

### Arabic

إذا أردت نسخة من هذه الوثيقة بلغتك، يرجى الاتصال برقم الهاتف أو مراسلة العنوان أدناه

### Gujarati

જો તમને આ દસ્તાવેજની નકલ તમારી ભાષામાં જોઈતી હોય તો, કૃપા કરી આપેલ નંબર ઉપર ફોન કરો અથવા નીચેના સરનામે સંપર્ક સાધો.

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