southend on sea
BOROUGH COUNCIL

housing quality review
march 2011

Please note that an Addendum (March 2014) has now been published to update certain aspects of the Housing Quality Review (2011) to reflect new published evidence and documentation related to space standards.

This should be read in conjunction with the original published Review.

southend on sea borough council
local development framework

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Section 1: Introduction

Purpose of the Report

1.1 This study has been prepared as part of the evidence to inform the proposed housing policies in Southend-on-Sea Development Management DPD.

1.2 The existing planning policy trend is for high density development in urban areas at transport nodes. In recent years developers have used this policy requirement to maximise dwelling numbers. There is now a concern that the increasing pressure to increase development density has had the effect of resulting in a reduction of internal space within both family and non-family homes. There has also been pressure in Southend-on-Sea to convert existing single family dwelling houses into two or more self-contained flats. The outcome of this trend is limited internal space. Both these trends have resulted in smaller internal standards for new dwellings and have impacted upon quality life in the borough. Both are however a response to national planning policy which encourages increased dwelling provision, at higher densities on brownfield sites.

1.3 Through the Core Strategy DPD, the Council's seeks to deliver good quality housing and ensure that new developments contribute to suitable and sustainable living environment for now and future generations. The purpose of this review is to explore existing available evidence sources that explore internal space standards and consider whether there is a role of minimum internal space standards within Southend-on-Sea.

1.4 Much has been written by various Government agencies over recent years about the merits of introducing minimum space standards. The volume and scope of material available meant that the review was focused on the main objective of the study that is to consider how to deliver good quality housing and ensure that new developments contribute to suitable and sustainable living environment for now and future generations. The main focus of this report is therefore whether there is the need for the introduction of minimum space standards.

1.5 The literature review consequently involved undertaking an extensive literature review of trends in space standards and dwelling mix in the UK and abroad. The review has also sought to identify the link between dwelling space standards and health, well-being and educational attainment, as part of the cost/benefit analysis.

1.6 This review explores each relevant publication in turn, with the most recent being considered first. The full list is set out below. Each publication has been allocated a number (1-30) for easy reference.

1. Greater London Authority *London Housing Design Guide: Interim Edition* London Development Agency (2010)
2. Greater London Authority *Housing Design Standards: Evidence Summary - Summary of Evidence on Proposed Housing Design*

Standards for the Examination in Public of the Draft Replacement London Plan Mae Architects and Levitt Bernstein Architects (2010)
3. CABE *Improving the Design of New Housing: What Role for Standards?* (2010)
4. CABE *Improving the Quality of New Housing: Technical Background Paper* (2010)
5. CABE *Housing Standards: Evidence and Research - Mapping Existing Housing Standards* (2010)
6. CABE *Housing Standards: Evidence and Research – Space Standards: The Benefits* University College London (2010)
7. CABE *Housing Standards: Evidence and Research - Dwelling Size Survey* Scott Wilson (2010)
8. Gallent et al. *Internal Housing Space Standards in Italy and England: Comparing the 'Conditions' of Regulation* RICS (2010)
9. HCA *Proposed Core Housing Design and Sustainability Standards Consultation* (2010)
10. CABE Ipsos-MORI *Space in Homes: What Residents Think* (2009)
11. Building for Life: *Delivering Great Places to Live (2008)*
12. Çavusoglu, O., Gould, C., Long, P. and Riera, M. *Emerging Typologies and Density* London School of Economics and Political Science: London (2008)
13. Drury, A. *Parker Morris Holy Grail or Wholly Misguided?* Town and Country Planning, 77, 10, pp.403-405 (2008)
14. Communities and Local Government *English Housing Survey: Headline Report* (2008)
15. RIBA *Better Homes and Neighbourhoods RIBA Policy Paper* (2007)
16. Schneider, T. and Till, J. *Flexible Housing*, Architectural Press: London (2007)
17. NHBC Foundation *Modern Housing Households' Views of their New Homes* (2007)
18. HATC Ltd *Housing Space Standards: A Report by HATC Ltd for the - Greater London Authority* (2006)
19. Building for Life: *Better Neighbourhoods, Making Higher Density Work, Literature Review* (2005)
20. Ely, Alex *Double Standards:* Building Magazine (2005)
21. Evans, A. and Hartwich, O.M. *Unaffordable Housing: Fables and Myths* Policy Exchange: London (2005)
22. Office of the Deputy Prime Minister, *Sustainable Communities: Homes For All (*2005)
23. RICS: *Five Year Review of UK Housing* (2005)
24. Shelter *Crowded House: Living in England's Housing* (2004)
25. Imrie, R. *The Role of the Building Regulations in Achieving Housing Quality, in Environment and Planning* Planning and Design, 31, pp.419-437 (2004)
26. Sheridan, L., Visscher, H. & Meijer, F. *Building Regulations in Europe Part II: A Comparison of Technical Requirements in Eight European Countries* Delft University Press (2003)
27. Bartlett, Ken et al: *Consumer Choice in Housing, the Beginnings of a*

Homebuyer Revolt. JRF (2002)
28. Tunstall, Rebecca: *Housing Density, What do Residents Think?* LSE (2002)
29. Hooper, A. and Nicol, C. *The Design and Planning of Residential Development: Standard House Types in the Speculative Housebuilding Industry, Environment and Planning* Planning and Design, 26, pp. 793 -805 (1999)
30. Levitt, D *Housing Standards: Standards Past and Future?* Architects Journal 17 November (1982)

Section 2: Planning Policy Background

2.1 The Planning and Compulsory Purchase Act 2004 requires local planning authorities to embed the principles of sustainable development into their local development documents. This Act thus provides planners with the scope to implement quality of life measures such as seeking the delivery of high quality, homes and improvements to housing standards.

2.2 The section provides a summary of the national planning policy statements that provide further policy detail for housing and quality of life issues.

Planning Policy Statement 1: Delivering Sustainable Development (2005)

2.3 Paragraphs 1 to 12 of Planning Policy Statement 1 (PPS1) set out the Government's objectives for the planning system. Paragraph 1 states that good planning will ensure that the right development is delivered in the right place and at the right time. It is further stated that planning should make a positive difference to people's lives whilst poor planning can result in a legacy of dilapidated housing and crime and disorder.

2.4 Paragraph 2 states that good planning is a positive and proactive process, operating in the public interest through a system of plan preparation and control over the development and use of land. Taking this point further, paragraph 3 states that sustainable development is the core principle underpinning planning and that at the heart of sustainable development is the idea of ensuring a better quality of life for everyone, now and for future generations. It is also stated that planning has a key role to play in the creation of sustainable communities which are defined as those communities that will stand the test of time, where people want to live and which will enable people to meet their aspirations and potential.

2.5 Paragraph 13 sets out the key principles that should be applied to ensure that development plans and decisions taken on planning applications contribute to the delivery of sustainable development. Part (ii) of this paragraph states that local planning authorities should ensure that climate change measures are taken into account of the need for resource efficiency. Part (iv) states that planning policies should promote high quality inclusive design in the layout of new developments and individual buildings in terms of function and impact, not just for the short term but over the lifetime of the development. It is stated that design which fails to take the opportunities available for improving the character and quality of an area should not be accepted.

2.6 Paragraph 14 considers social cohesion and inclusion. It is stated that the Government is committed to developing strong, vibrant and sustainable communities and to promoting community cohesion in both urban and rural areas. This means 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.

2.7 With the aim of promoting socially inclusive communities, paragraph 16 states that development plans should ensure that the impact of development on the social fabric of communities is considered and taken into account and seek to reduce social inequalities. In particular there is a need to take into account the needs of all the community and deliver safe, healthy and attractive places to live that support the promotion of health and well being. This is reiterated in paragraph 27 which sets out the general approach to delivering sustainable development. This paragraph states that in preparing development plans, planning authorities should seek to promote communities which are inclusive, healthy, safe and crime free, whilst respecting the diverse needs of communities and the special needs of particular sectors of the community.

2.8 Paragraph 22 sets out the policy approach in respect the use of natural resources. It is stated that development plan policies should seek to minimise the need to consume new resources over the lifetime of the development by making more efficient use or reuse of existing resources, rather than making new demands on the environment. Local authorities are required to promote resource and energy efficient buildings.

2.9 Paragraphs 33 to 39 set out the design approach to development. Paragraph 33 states that good design ensures attractive usable, durable and adaptable places and is a key element in achieving sustainable development.

2.10 It is stated in paragraph 34 that planning authorities should plan positively for the achievement of high quality and inclusive design for all development, including individual buildings and that good design should contribute positively to making places better for people. Taking this point further paragraph 35 states that high quality and inclusive design should create well-mixed and integrated developments which avoid segregation. It means ensuring a place will function well and add to the overall character and quality of the area, not just for the short term but over the lifetime of the development.

2.11 Paragraph 36 states that design policies should be based on stated objectives for the future of the area and an understanding and evaluation of its present defining characteristics. This includes addressing the needs of all in society.

2.12 The *'By Design'* (2000) publication is cited within this section as a national design guide to be taken in consideration in the design process. The '*Adaptability*' section of this document notes that a place that can change easily is more successful in changing circumstances and avoids blight and dereliction. At a lower level it is noted that a household makes different demands on a house as children are born and grow up i.e. there is a household cycle that varies according the age and stage of life of the occupants.

Planning Policy Statement 3: Housing (amended 2010)

2.13 Planning Policy Statement 3 (PPS3) sets out the national planning policy framework for delivering the Government's housing objectives.

2.14 Paragraph 9 sets out the strategic housing policy objectives. It is stated that the Government's key housing policy goal is to ensure that everyone has the opportunity of living in a decent home, which they can afford, in a community where they want to live. To achieve this, it is stated that the Government is seeking:

- To achieve a wide choice of high quality homes, both affordable and market housing, to address the requirements of the community;
- To widen opportunities for home ownership and ensure high quality housing for those who cannot afford market housing;
- To improve affordability across the housing market; and
- To create sustainable, inclusive, mixed communities in all areas.

2.15 Paragraph 10 sets out the specific housing policy outcomes that the planning system should deliver. These are cited as including:

- High quality housing that is well-designed and built to a high standard;
- A mix of housing, both market and affordable to support a wide variety of households in all areas; and
- A sufficient quantity of housing taking into account need and demand and seeking to improve choice.

2.16 Paragraphs 12 to 19 set out the requirements for achieving high quality housing. This section states that good design is fundamental to the development of high quality new housing, which contributes to the creation of sustainable, mixed communities. The principles of design in PPS1 are reiterated where it states that good design should contribute positively to making places better for people. It is stated that design which fails to take the opportunities available for improving the character and quality of an area and the way it functions, should not be accepted.

2.17 Paragraph 14 states that Local Planning Authorities should set out the quality of development that will be expected for the local area with the aim of creating places, streets and spaces which meet the needs of people, are visually attractive, safe, accessible, functional, inclusive, have their own distinctive identity and maintain and improve local character. It is therefore necessary to promote designs and layouts which make efficient and effective use of land, including encouraging innovative approaches to help deliver high quality outcomes.

2.18 Paragraph 17 states that where family housing is proposed, it will be important to ensure that the needs of children are taken into account and that there is good provision of recreational areas, including private gardens, play areas and informal play space.

Housing Corporation (April 2007)

2.19 The Housing Corporation (April 2007) set out minimum and maximum space standards for publically funded housing. These standards were derived from the Scheme Development standards (SDS) and linked to their Housing Quality Index

(HQI). The range of acceptable area sizes was defined in order to ensure public money was being used to deliver the optimum number of units, which were neither too small to be liveable nor too big enough to reduce the number of units that could be delivered on site.

Southend-on-Sea Core Strategy (Adopted 2007)

2.20 The Core Strategy forms part of the Southend on Sea Local Development Framework and provides the vision, objectives and planning strategy for the spatial development of the whole Borough of Southend-on-Sea until 2021, including the distribution of growth and the policy context for a 10 year housing supply.

2.21 Strategic Objective 7 of the Core Strategy seeks to target future dwelling provision to meet the needs of local people.

2.22 Policy KP1 sets out the spatial strategy for the borough. This policy states that the primary focus of regeneration and growth within Southend will be in:

- Southend Town Centre and Central Area – to regenerate the existing town centre, as a fully competitive regional centre;
- Seafront – to enhance the Seafront's role as a successful leisure and tourist attraction and place to live, and make the best use of the River Thames;
- Shoeburyness – to promote the role of Shoeburyness as a place to live and work, led by the successful redevelopment at Shoebury Garrison;
- Priority Urban Areas – these comprise the District Centres, the main Industrial/employment areas and the Cluny Square Renewal Area.

2.23 Policy KP2 sets out the development principles for the borough. This policy states that all new development should contribute to economic, social, physical and environmental regeneration in a sustainable way throughout the Thames Gateway Area, and to the regeneration of Southend's primary role within Thames Gateway as a cultural and intellectual hub and a higher education centre of excellence. It is stated that this must be achieved in ways which include:

- Making the best use of previously developed land, ensuring that sites and buildings are put to best use; secure improvements to the urban environment through quality design; and
- Respect the character and scale of the existing neighbourhood where appropriate.

2.24 Policy KP3 considers the implementation and resources required to deliver development. This policy requires other Development Plan and Supplementary Planning Documents to elaborate upon the policies and proposals in the Core Strategy to achieve design excellence in all new development.

2.25 Policy CP4 addressed the environment and urban renaissance. This policy states that development proposals will be expected to contribute to the creation of a high

quality, sustainable urban environment which enhances and complements the natural and built assets of Southend. It is stated that this will be achieved by:

- Promoting sustainable development of the highest quality and encouraging innovation and excellence in design to create places of distinction and a sense of place;
- Maximising the use of previously developed land, whilst recognising potential biodiversity value and promoting good, well-designed, quality mixed use developments; and
- Maintaining and enhancing the amenities, appeal and character of residential areas, securing good relationships with existing development, and respecting the scale and nature of that development.

2.26 All development will be required to have regard to the Council's Design and Townscape Guide SPD.

2.27 Policy CP8 sets out the dwelling provision requirements for the borough. This policy states that provision is made for 3,350 net additional dwellings between 2001 and 2011 and for 3,150 net additional dwellings between 2011 and 2021. This policy states that residential development proposals will be expected to contribute to local housing needs, including affordable and special needs provision, and the sustainable use of land and resources. This policy also seeks to resist the loss of valuable residential resources, safeguard an adequate stock of single family dwellings and protect the character of residential areas.

Design and Townscape Guide SPD (adopted 2009)

2.28 The Design and Townscape Guide SPD seeks to inspire and positively encourage high quality design for development proposals, to provide a practical basis for achieving this and to assist us in resisting poor quality design.

2.29 Section 4.5 of this document considers the layout of buildings and spaces in new developments. Paragraph 133 states that achieving an efficient and effective building layout is essential to a successful development.

2.30 Section 4.5.1 provides further detail in regard to internal arrangements and space standards. It is stated in paragraph 135 that residential units should be self contained with their own kitchen, bathroom and WC behind their own secure private entrance. All habitable rooms must have natural ventilation and daylight and be of an adequate size for their function.

2.31 Paragraph 136 states that all new residential will be expected to meet Lifetime Homes Standards. This means that occupiers can, if they choose, stay in the same home longer and adapt it for their changing circumstances. This increased room space also helps parents with small children, people with bikes or bags of shopping. It is stated within this paragraph that accessibility is for everyone, not just people who use wheelchairs. Conversions of existing houses or other buildings will also normally be expected to meet Lifetime Homes Standards.

2.32 Paragraph 137 states that all residential units should have the potential for open plan living and to use rooms in a variety of ways (e.g. as a living area, workplace, study or bedroom).

2.33 Section 8.4 considers building flexibility. Paragraph 242 states that it is essential that new buildings are able to adapt to the changing needs and trends of society otherwise they may become obsolete and impractical well within their life span. It is further stated that flexible buildings allow the occupiers to personalise the buildings to suit their working and living requirements, and increase the variety of available uses.

2.34 Section 8.5 considers the site layout and orientation of new buildings. Paragraph 244 states that the site layout and orientation of buildings can play an important role in creating a more sustainable building. For example buildings orientated within 30 degrees of south and well spaced benefit most from passive solar gain and have maximum daylight.

Section 3: Residential Space: Literature Review

3.1 This section provides a summary of the main points of each identified publication and study which is considered relevant to the residential space standard issue.

1. Greater London Authority *London Housing Design Guide: Interim Edition* London Development Agency (2010)

3.2 This interim edition of the Mayor's *'London Housing Design Guide'* (LHDG) was revised following public consultation on the draft LHDG in 2009 and the findings of a cost and delivery impact analysis. It has been published to show the direction of travel of the final guide, to shape the design of London Development Agency (LDA) supported developments and to encourage all involved in the design of new housing to embrace the Mayor's aspirations.

3.3 A fundamental aim of this guidance is to ensure that London's housing is flexible and accessible in use and adaptable over the life of a building. Housing should support family life, both in the flexibility and adaptability of homes and in the provision of larger homes. The minimum space standards in LHDG aim to ensure that homes have the long-term adaptability to suit growing families or new owners and tenants.

3.4 The LHDG states that the priority is providing adequate space and amenity for all tenures and is necessary for dwellings to be 'fit for all'. The new London standards and guidance are intended to encourage provision of enough space in dwellings to ensure homes can be flexibly used by a range of residents during the lifetime of the house. It also aims to ensure that space can be sensibly allocated to different functions, with adequate room sizes and storage integrated into the design.

3.5 With regard to climate change the LHDG states that there is a need to use water, fuel and other limited resources in the most efficient way possible, to reduce carbon emissions and minimise the environmental impact of new development.

3.6 It does recognise that standards alone are no guarantee of quality but they are an important element of the design process. The development of the guide focused on identifying new requirements that would make a difference to the quality of housing.

3.7 The London Plan seeks to ensure that residential developments provide an appropriate mix of housing types, sizes and tenures that can meet the full range of housing needs in neighbourhoods. However, the LHDG notes that the last decade has been characterised by high-rise, high-density housing providing predominantly one and two bedroom flats often marketed towards young professionals. It is further stated that it can not be assumed that people will follow a pattern of starting out in a flat, moving to a house when they have children and moving back into a smaller dwelling in old age. As such, it is stated that new housing needs to be designed with a range of people of different ages and backgrounds in mind who may occupy the home over its lifetime.

3.8 The LHDG states that "*No amount of sensitive design can compensate for houses and flats that are too small. The new minimum space standards at the heart of this guidance will improve residents' quality of life and ensure that our homes are accessible and able to accommodate changing personal circumstances and growing families. Extra space will enable homes to be more than mere dormitories, encouraging sociable rooms within homes, and giving individual family members private space when they need it*".

3.9 The LHDG gives consideration to the function of the 'Internal Floor Area'. It is stated that homes need sociable rooms in which people can gather with friends and family and private spaces which can be enjoyed alone. Play, work and study are as much a part of daily life as cooking, eating and sleeping, while storage and circulation areas support, and provide essential buffers between, these varied and conflicting activities.

3.10 By defining overall space standards for a range of occupancy levels and breaking these down into suggested standards for individual rooms, the LHDG aims to ensure that new homes will meet the long-term needs of a household.

3.11 The LHDG states that although it is best practice to meet the desirable standards for room areas and dimensions, where these standards cannot be met the priority should be to accommodate the furniture and activity space required for the intended number of occupants while not falling below the minimum gross internal floor area (GIA).

3.12 The LHDG states that the minimum amount of space needed per person is not felt to vary by tenure, though it is accepted that levels of occupancy do tend to be tenure related. To ensure that all future homes will be comfortable when occupied to their full potential under any tenure, four principles apply:

- Each home for two or more people should contain at least one double/twin bedroom;
- Each single bedroom should provide one adequate bed space (a floor area of 8 sq m is considered the desirable minimum);
- Each double/twin room should provide two adequate bedspaces (a floor area of 12 sq m is considered the desirable minimum); and
- All bed spaces should be counted when declaring the potential occupancy level of the dwelling.

3.13 It is stated people do not always want, nor are they always able, to move home as their circumstances change. Therefore every home should be flexible enough to accommodate a range of possible changes in circumstances. Flexibility is the potential for rooms in a home to be used in a variety of ways without altering the building fabric. In practice, this means making individual rooms large enough to accommodate different types and arrangements of furniture, carefully considering the location of doors, windows and built-in furniture and building in the potential

for spaces to be linked or separated without moving walls or changing the position of openings.

3.14 At the planning application stage, the LHDG encourages designers to indicate on the submitted plans how dwelling types facilitate flexible use. This can be achieved by showing that alternative seating arrangements can be accommodated in the main living space or that double bedrooms can accommodate double or twin beds.

3.15 With regard to circulation spaces, the LHDG requires all parts of the home to be designed for ease of access according to the Lifetime Homes principles with hallways being wider in larger family homes, where they are used more intensively. It is stated that natural light significantly improves the quality of circulation areas and that these spaces can also provide a thermal buffer between outdoors and the habitable rooms of a dwelling and can help with regulating temperatures and passive solar heating.

3.16 The LHDG states that the combined area of the living room, dining room and kitchen is an important measure of the quality of space within a home. The minimum combined living areas in this guide allow the designer the freedom to organise and combine these spaces in different ways while safeguarding the overall living space within a dwelling. Dwellings with three or more bedrooms should have two social spaces, for example a living room and a kitchen-dining room, both with external windows.

3.17 The LHDG states that bedrooms are not just used for sleeping. It is noted that people often use bedrooms for work and study, or to relax away from the social spaces of the home. Children and young people need space in bedrooms for homework, play and hobbies, storing their belongings, entertaining friends, and spending time alone. The preferred standards for the minimum floor areas of bedrooms are 8 sq m for single bedrooms and 12 sq m for double and twin bedrooms. These minimum areas have been established by considering the activity and furniture requirements of the Homes and Communities Agency's legacy HQI standards and the Lifetime Homes requirement for basic circulation space for wheelchair users within bedrooms.

3.18 Additional rooms, including utility rooms, studies and en-suite bathrooms, are encouraged, but will require additional floor area above the minimum GIA to avoid compromising the space and functionality of other parts of the home. The minimum GIA required for any given dwelling type relates to the following variables:

- The number of people for whom the home has been designed (equivalent to the number of bedspaces it provides;
- The number of bedrooms it provides; and
- The number of storeys it contains.

3.19 The LHDG highlights that the lack of storage is a major problem in new homes. Everyday household items including cleaning equipment need to be readily

accessible. Other belongings are only in seasonal use or occasional use, (for example, suitcases or decorating equipment) and things like baby equipment may need to be stored away for some time. Without adequate storage space, people's belongings will take space away from the rooms of the home and limit enjoyment of them. This guide sets out essential minimum areas for dedicated built-in storage cupboards of 1.5 sq m for 2 person dwellings and 0.5 sq m for each additional occupant.

3.20 People also need suitable spaces outside habitable rooms for waste and recycling bins, washing machines and for drying clothes. The Code for Sustainable Homes recommends that recycling bins are located in a dedicated non-obstructive position in a kitchen cupboard, in a utility room next to the kitchen or in a connected garage.

3.21 The LHDG notes that work and study are a regular part of home life for many people, across all age groups. Flexible working patterns and wider access to the internet are making it possible for more people to work from home. Sufficient space is defined as the minimum area to allow a desk, chair and filing cabinet or bookshelf to be installed, with space to move around the furniture.

3.22 The LHDG requires that all dwellings should be provided with adequate private open space in the form of a garden, terrace, balcony or glazed wintergarden. A minimum of 5 sq m of private outdoor space is required for all 2 person dwellings and an extra 1 sq m should be provided for each additional occupant. Where possible, rear gardens should have separate direct access, so that bicycles and garden equipment may be taken into the garden without passing through the home. Private outdoor spaces will also be used for drying clothes.

2. Greater London Authority Housing Design Standards: Evidence Summary - Summary of Evidence on Proposed Housing Design Standards for the Examination in Public of the Draft Replacement London Plan Mae Architects and Levitt Bernstein Architects (2010)

3.23 This report was commissioned by the GLA to inform the Examination in Public into the *'Draft Replacement London Plan'* (DRLP) by bringing together and summarising the evidence that supports the need for the Mayor's proposed housing design standards.

3.24 The draft Housing SPG standards have been informed by the standards set out in the *'draft London Housing Design Guide'*, first published by the Mayor for consultation in July 2009. The '*London Housing Strategy'* states that the Mayor will work with the HCA to apply the standards in the Guide to all affordable homes developed with public funding in London. The Mayor's ultimate aim is convergence of the design guidance to create a consistent, all-embracing package of standards for all housing in London.

3.25 The report states that the strength of the Mayor's space standards requirements is three-fold. Firstly, that it consolidates existing standards about place-making,

sustainability, security and accessibility – secondly, that it deals with internal space and shared circulation spaces in blocks of flats as the missing link to ensure design quality at higher densities and thirdly, and as a result of the first two, it looks to the future and not just the present.

3.26 As part of the evidence, this report cites a 2008 survey by *'Building Design Magazine'* conducted with the British Council. This survey found that 75 per cent of respondents felt that the Government shows 'no genuine commitment' to raising housing design quality and when asked what would help 37.6 per cent favoured introducing new space standards (the highest response rate).

3.27 This report cites the stakeholder interviews in the '*Housing Space Standards'* report by HATC for the GLA (2006), which identified the lack of privacy arising from open-plan designs as a major issue, as it means that bedrooms in particular need to be multifunctional (e.g. places for privacy, study and recreation, not just sleeping and dressing). The HATC report also suggests that 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 designed for one use such as a bedroom. Research by CABE was also cited, which points to an emerging preference for rooms that are capable of being used for a number of functions rather than a large number of bedrooms.

3.28 In 2008, the Government published *'Lifetime Homes, Lifetime Neighbourhoods: A National Strategy for Housing in an Ageing Society'*, which set out the need to build more flexible and inclusive housing in order to meet the future requirements of the UK's ageing population. Space is important in allowing greater flexibility in the home. People's lifestyles change such as starting a family, working from home and ageing and in this regard people would like more flexibility in the use of space. Higher space standards allow for more possibilities in terms of alternative room layouts and relationships, as very small flats tend to only have one workable generic layout.

3.29 This report states that size alone does not guarantee quality homes however, space standards are one of the means of achieving a level of housing quality that will ensure that homes offer basic utility for different households.

3.30 This report cites evidence from the study commissioned by the Housing Corporation titled *'Life in Affordable Housing'* (2008). This study compared the preferences of affordable housing residents with owner occupiers and found that, while there were differences, the desire for more indoor and outdoor space seems to be a strong theme across all tenure groups and household types and to be especially crucial for families. The research found that more space was sought to accommodate non-resident children coming to visit, for other visitors, or in order to work from home. Kitchens were often seen as too small and a lack of storage space was also highlighted, especially in flats. Several focus groups also felt that the lack of space would be felt more acutely in the future as people increased the amount of material possessions in their homes such as computers and fitness equipment.

3.31 This report also cites the Joseph Rowntree Foundation (JRF) study titled *'Preferences, quality and choice in newbuild housing'* (2004). This study concluded that in regard to space and space standards, the various analyses in the report 'contain strong suggestions that house-building outcomes are very different from new-build house buyers needs and preferences. The size of the property was of great importance to participants in focus group and interview work undertaken during the study, particularly in regards to the number of bedrooms and room sizes. However, the study points to a clear trend involving buyers getting an increasing number of smaller bedrooms as time goes on. Some focus group participants in the study, especially those from lower-priced estates, even felt that they were misled about room sizes, pointing out that the show home used smaller furniture than normal to give the impression of more space, which in some cases led to furniture needing to be replaced as this was only noticed once people moved in.

3.32 The results of the HATC / Ipsos MORI survey for CABE were cited in this publication. These results are considered in more detail Part 10 of this section of the literature review.

3.33 The report *'Perceptions of Privacy and Density in Housing'* (2003) was also cited. This report involved research including focus groups and in-depth interviews with residents living in 10 schemes across England in order to assess views on space, security, noise and privacy across a range of house types. The report found that there was an almost universal demand for spacious, light and airy rooms, and the most successful examples of higher density accommodation from the case study schemes all had plenty of internal space, both in terms of room size and ceiling height. These were sustainable homes in the sense that they were big enough to accommodate the changing needs of the household over time. The report also notes that in households with children, it was important that the adults and children could have well demarcated, private space in which to get on with their own activities and that open plan designs in the smaller homes reviewed in the study did not give enough privacy between adults and children. Lack of storage space compounded these problems, as there was not enough space to store everything that babies and children need as well as space for adults to keep their possessions private.

3.34 A report by the NHBC Foundation *'Modern Housing: Households' views of their new homes'* (2007) was summarised within the report. A summary of this publication is set out in more detail in Part 17 of this literature review.

3. CABE *Improving the Design of New Housing: What Role for Standards?* (2010)

3.35 This publication sets out CABE's emerging position on housing standards. It argues that that the current regime of building regulations, planning policy and funding has created a framework for housing quality that is confused, overlapping and sometimes contradictory.

3.36 This document notes that the housing industry does produce good quality housing and there has been real progress in recent years. It notes that more developers recognise the value of better design quality and are taking measures to achieve it. This document notes that well-designed housing also has many benefits which include:

- Improvements to social well being, quality of life and a community's sense of pride in the neighbourhood, as well as people's willingness to accept new development;
- It can bring public health benefits. Research shows the costs to society of poor housing may be greater than £1.5 billion per year;
- It increases property values. Case studies show that exemplar schemes can achieve higher residual values than conventional schemes, whereas poor design can reduce future sales values;
- It reduces crime. Research shows that residential developments designed to Secured by Design (SBD) standards showed lower reported crime rates and less fear of crime than those without. Conversely the average cost of building in SBD measures was just £440 per new dwelling, compared with average losses of £1,670 per dwelling from burglary.

3.37 It is however stated that housing quality is not getting better quickly enough. CABE's housing audits revealed that almost one in three homes (29 per cent) were so poor that they should not have been given planning permission. Only one in five schemes were rated as 'good' or 'very good', revealing a disappointing picture of housing quality, and demonstrating that many consumers still get a raw deal when it comes to new homes and neighbourhoods.

3.38 This document references the need for standards that are simple and lead to consistently better housing. CABE state that it believes that a simpler, consistently applied set of standards could help all those involved in the decision making process, particularly communities, to be proactive and positive about new housing. CABE advocate a national framework of standards that should be shaped according to the following aims:

- Avoid duplication and overlap – Standards that overlap mean aspects of performance are measured in several places for different purposes;
- Clarify what elements belong in planning and what should be included within building regulations. For example the requirements in Lifetime Homes for size of parking spaces should be included in planning policy, whereas the detailed requirements for switch heights should be included in Building Regulations;
- Demonstrate clear linkage to an enforcement process. Standards need to be linked with the process that will enforce them;
- Prevent unnecessary compliance, for example by requiring information at planning stage showing compliance on detailed items when fundamental issues may be wrong;
- Ensure that standards are driven by the public interest. Standards should not be owned by the private sector or single interest groups, however, certification and enforcement may be led by private sector organisations such as NHBC.

3.39 CABE suggests that a national framework for housing standards should achieve the following:

- Create a single set of measures by which developments can be designed, judged and developed through the planning system, under the oversight of elected local representatives.
- Specify the standards, to be delivered through the planning system, into two areas, addressing:
  - Housing layouts and the wider development; and
  - The design of individual homes.
- Identify those that should be delivered through Building Regulations or included in them in the future.

3.40 From this framework, a basic minimum requirement could be drawn, which addresses the policy principles required to meet environmental commitments and the basic needs of communities and residents.

4. CABE Improving the Quality of New Housing: Technical Background Paper (2010)

3.41 This publication provides further technical information to assist in clarifying CABE's emerging position on housing standards. It argues that that the current regime of Building Regulations, planning policy and funding has created a framework for housing quality that is confused, overlapping and sometimes contradictory.

3.42 The evidence drawn from a new historical review of standards and contemporary research illustrates the benefits of space standards which includes:

- Improved health and wellbeing from living in a well-designed home that provides sufficient space to function well and support privacy and social activity;
- Opportunity for children to study in private and therefore increase educational attainment;
- Opportunity to work from home;
- The flexibility of space within the home and adaptability to changing needs;
- The ability to respond to an occupants changing physical requirements over their lifetimes;
- The benefits to society from reduced overcrowding, which can result in anti-social behaviour;
- Contribution to a more stable housing market underpinned by an understanding of long-term need and the usability of homes, rather than short-term investment.

3.43 This paper provides a review of customer satisfaction surveys that relate specifically to new homes. It is stated that the customer satisfaction surveys provide insights into the quality of new homes being delivered and should be taken seriously. '*What*

Home Buyers Want: Attitudes and Decision-Making among Consumers' is referenced as it brings together information about home buyers' attitudes to new housing. This independent research concluded that:

- A key drawback of new homes was considered to be an overall shortage of space;
- 40% of second-hand home buyers were put off buying a new home by the lack of space;
- 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 age groups as 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. This would mean providing more living space.

3.44 The results of the Home Builders Federation annual customer satisfaction survey were cited. In contrast to above this survey showed that nearly 9 out of 10 buyers (88%) were very or fairly satisfied with the overall quality of their new home (up from 77% on the previous survey).

3.45 These results cover only one element of an assessment of quality. It is suggested this evidence may result from what 'behavioural economists' call the endowment affect. When we own something, we value it much more highly. This will apply especially to an investment as big as a new home.

3.46 *'Space in New Homes'* was also cited. This study addresses space standards in new private sector housing and sought to establish whether residents have enough space to allow them to go about their everyday lives in comfort. It concluded that occupants of housing built since 2002 have varying degrees of satisfaction with the design and layout of their homes, but would prefer to have rooms that can be used for multiple purposes. The research highlighted a preference for:

- More space for accommodating furniture and storage cupboards;
- More space for circulation and movement of furniture;
- More space in the kitchen for food preparation and for supervision of children at play by adults; and
- Adequate space for waste bins and efficient waste removal.

3.47 These studies suggest that while, initial levels of satisfaction with their purchase of a new home remain high, the longer term expectations for space and adaptability may not be met. Housing needs to be more durable and flexible so that people have the opportunity to adapt internal spaces to their own needs. Some of the older typologies provide examples of housing that allow for this.

3.48 This paper then discusses what space is currently provided in new homes. It states that the amount and quality of internal space in housing has an important impact on the design quality of homes. The above satisfaction survey showed that residents tend to want more space in the home. However it notes that wanting more space is a common reaction in many homes, large or small and it need not imply any quality deficit. However the study states that the approach to space needs to start from the detail of furniture layouts, accessibility requirements (such as those in Lifetime Homes) and anticipated occupancy levels. This type of approach forms part of the evidence upon which both the HCA and the Mayor of London/Greater London Authority (GLA) proposed minimum space standards have separately and independently been derived.

3.49 The evidence in this document suggests that the market has being delivering units that fall below the proposed minimum thresholds of the HCA and GLA. The introduction of space standards would increase the space provided and ensure a minimum space standard is delivered across all developments. The results suggest that the biggest effect of introducing space standards would be to increase the space provided in flats and apartments of one or two bedrooms and would address the issue of the space provided in some three bedroom houses.

5. CABE Housing Standards: Evidence and Research - Mapping Existing Housing Standards (2010)

3.50 *'Mapping Existing Housing Standards'* describes the standards currently applied to housing. This report reviews the Code for Sustainable Homes, Lifetime Homes, Secure by Design, Building for Life and the Building Regulations Approved Documents. It gives their history and development. It contains a table showing the extent and overlap of the standards. This report was commissioned by CABE and carried out by Richard Partington Architects. A summary of each of the standards and table is set out below:

- *Homes and Communities Agency (2010):* Space standards proposed by the Homes and Communities Agency and was out for consultation in the summer 2010.
- *GLA Housing Design Standards (2010):* These dimensions are derived from an inventory of required furniture as well as space needed for activities, access around furniture and Lifetime Homes Standards. Although applicable only to publically funded housing at this point, the intention is for these standards to become requirements for private housing also.
- *English Partnerships (2007):* These standards were set for all housing delivered on English Partnerships land. They were intended to produce units that appealed to all segments of the population, from single individuals to large families. The standards were also to ensure that the units were adaptable to changes in both residents' needs and the housing market in the long run.
- *Housing Corporation (2007):* Derived from the Scheme Development standards (SDS) and linked to the Housing Quality Index (HQI), these standards set out minimum and maximum space requirements for publicly funded housing. The range of acceptable area sizes was defined in order to ensure public money

was being used to deliver the optimum number of units, which were neither too small to be liveable nor too big enough to reduce the number of units that could be delivered on site. These demonstrate a tight band between minimum and maximum (an average difference of 8 sq m).

- *Irish Standards (2007):* These are the standards put forward in the Irish Government's Quality Housing for Sustainable Communities published by the Department of Environment, Heritage and Local Government. They set out the minimum floor areas for living, bedroom and storage areas likely to be required to satisfy the requirements of normal living. The standards apply to both public and private housing.
- *Sunderland Housing Group Report - Room to swing a cat website (2007):* Housing standards derived from the GLA standards and published on the http://www.swingacat.info/index.php website as advisory guidance to the general public. These demonstrate an extremely wide band between minimum and maximum (an average difference of 26 sq m).
- *GLA Safety Net standards (2006):* These standards were intended to be an absolute minimum for habitable developments rather than a best practice benchmark. They were intended to apply to private and public housing.
- *Parker Morris (1961):* These standards were developed in response to a need to improve social housing in the UK. They were based on an assessment of the amount of space required for normal household activities, as well as what types of furniture, and the space needed in each room to move around it. They also include minimum internal storage space standards. Note figures for this standard are often reported to include the requirement for external storage space also (1.9m^2).
- *1949 Housing Standards:* Mean dwelling area including storage, however occupancy categories vary from current usage (e.g. 1b1p and other occupancy levels expected from different living conditions). This standard provided guidance to local authorities on housing and called for a greater variety of dwelling types.

Categories		HCA	GLA (Housing Design Guide): 2010	English Partnerships	Housing Corporation Standards (HQI)		Irish Standards	Sunderland Housing Group: Swing a Cat		Parker Morris	1949 standard
		Gross Internal Area (GIA) m²									
					Min	Max		Min	Max		Mean
Date		**Mar-10**	**2010**	**Nov-07**	**Apr-07**		**2007**	**2007**		**1961**	**1949**
Flats	**1b1p**										27.9
	1b2p	48	50	51	30	35	45	40	57	43	
	2b1p										32.5
	2b2p										46.5
	2b3p	61	61	66	45	50	63	57	80	58	
	2b4p	70	70	77	45	50	73	57	80	71	
	3b4p		74		57	67	76	65	90		
	3b5p	86	86	93	57	67	86	65	90	80	
	3b6p		95		57	67	94	65	90		
	4b5p		90		67	75		72	102		79
	4b6p	99	99	106	67	75		72	102	87	83.6
2-Storey House	**2b3p**	71		66	45	50	70	57	80		
	2b4p	80	83	77	45	50	80	57	80	77	72
	3b4p		87		57	67	83	65	90		
	3b5p	96	96	93	57	67	92	65	90		85.6
	4b5p		100		67	75		72	102		
	4b6p	109	107	106	67	75		72	102	95	97.1
3-Storey House	**3b5p**	101	102	93			102	65	90	96	95.3
	4b5p		106					72	102		
	4b6p	114	113	106				72	102	100	106.4

6. CABE Housing Standards: Evidence and Research – Space Standards: The Benefits University College London (2010)

3.51 *'Space Standards: The Benefits'* is a literature review of the evidence of the benefits of minimum floor space standards for new homes. It traces the evolution of housing space standards. It explores the impact of dwelling space on health and wellbeing, family life, educational attainment and housing market stability. The main purpose

of this paper is to review evidence on the benefits of minimum floor space standards for new homes.

3.52 The historical experience in the UK had been that private enterprise was seen to be incapable of delivering decent quality homes to working class households. Quality therefore came to be seen as something requiring subsidy and a council house building programme was brought on line that promised to deliver a good standard basic product for the vast majority of working households.

3.53 For everyone else it was believed that the private sector would be self-regulating in terms of floorspace. In contrast to other countries, the need to extend legal minimums to all housing was never seriously considered in England and the UK has come to build the smallest home sizes in Europe as a result.

3.54 Since the deletion of the 'Parker Morris Standard' as a benchmark for the public funding of council housing in 1980, there has been growing concern over the decline of space in new homes and the potential problems this creates for households. Evidence drawn from a historical review of the evolution of standards and from contemporary research studies suggests that the following benefits are critically important:

- The general health and wellbeing benefits that accrue from living in a well-designed home that offers both privacy and sociability and that in all respects provides adequate space to function well;
- The contribution that adequate space makes to family life and the opportunity it affords children to engage in uninterrupted private study and therefore achieve against their potential;
- The opportunity that space provides to work from home or to address the life-work balance;
- The flexibility of homes that have adequate space, meaning that they are easier to adapt to changing needs and lifestyles and to future living styles and habits;
- The inclusivity provided by homes that have space to respond to occupiers changing physical requirements over their life-times and the knock-on impact this has on creating more balanced and stable neighbourhoods;
- The societal benefits stemming from reduced overcrowding and the consequential reduction in aggressive and anti-social behaviour; and
- Creating a potentially more stable housing market, driven by a more complete understanding of long-term need and utility rather than by short-term investment decisions.

3.55 Over a longer period, the increased dominance of private over public provision has been a cause of concern in relation to internal space standards. The expansion of private sector provision which mirrored the contraction of public provision, combined with difficulties associated with planning procedures for bringing land forward for development and policy driving up densities, mean that sites are often 'worked hard'. It was found within this paper that investment, as much as owner occupation, determines standards and ultimately private enterprise may not be delivering a liveable level of space for all households.

3.56 Discussions around the benefits of having minimum floor space standards for new homes make no distinction based on tenure arrangement. The benefits are equal between the public and private sectors, suggesting the need for common standards of the type found elsewhere in Europe may now be the way to go.

7. CABE Housing Standards: Evidence and Research - Dwelling Size Survey Scott Wilson (2010)

3.57 Scott Wilson was appointed by CABE to carry out analysis on the provision and type of space being proposed in a range of standard or typical house and flat typologies in England. *'Dwelling Size Survey'* is a study of the space provided in 200 typical houses and flats. This study reveals that there is a particular problem with two-bedroom flats and houses designed to accommodate four people, with well over 80 per cent of them falling below the proposed standards. This study measures the Gross Internal Area and Net Internal Area, the provision of utility and storage space and additional measures such as notional corridor space.

3.58 As a general observation it was found that 1-bedroom flats and 1-bedroom houses share similar areas for net internal areas and habitable area but the houses have substantially larger gross internal area. This trend carried through to 2-bedroom and 3-bedroom houses which also had a larger gross internal area when compared with the equivalent bedroom sized flat.

3.59 The report found that affordable house types have a higher percentage of net internal area relative to gross internal area than private houses.

3.60 The following table sets out the mean and median gross internal floor areas of the typologies researched.

Typology	Mean	Median
Studio	32.1	31.9
1-bedroom Flat	46.6	46.3
2-bedroom Flat	60.7	59.1
3-bedroom Flat	86.5	89.6
1-bedroom house	64.3	69.1
2-bedroom house	71.2	69.2
3-bedroom house	95.6	92.1
4-bedroom house	120.6	117.0
5-bedroom house	163.5	158.7

8. Gallent et al. Internal Housing Space Standards in Italy and England: Comparing the Conditions of Regulation RICS (2010)

3.61 This research paper prepared by Gallent et al seeks to provide a comparative study that examines the impacts of residential space standards. Despite differences in the way people live and the building industries of these countries, it was considered by the authors that there are two reasons why Italy might hold lessons for England.

First, there are outward similarities in the two countries: housing stock of a similar size, dominated by private home ownership; a recent decline in the average floor space of new homes in Italy that appears to mirror the trend observed in England; and comparable concentrations of recent apartment developments within the cities. Secondly, in Italy, concerns over the quality of public and private housing, in many ways similar to concerns in England today, reached boiling point in the 1960s and combined with the right evidence and co-ordinated lobbying, resulted in fixed space standards that have arguably improved the quality of Italian homes.

3.62 The internal space standards that have applied across Italy since 1975 resulted from two forces: a slow, evolutionary transformation of 19th Century concerns over public and private health into a clear set of standards adaptable to different living arrangements; and public concern over bad housing in all sectors in the late-1960s. This sparked protest, a critical rethinking of delivery arrangements and a new emphasis on enforcing, basic standards.

3.61 The situation in England is very different. Standards have long been seen exclusively as the price of accepting public support for housing development and in terms of private provision, as a potential threat to housing affordability, rather than a benchmark against which to judge the basic qualities and utility of homes.

3.62 The researchers wanted to explore three issues: first, the political context in which space standards operate and whether, as in England, the case for standards is linked to the needs of families. Second, how standards sit with other 'planning priorities'. And third, how amenable the private sector is to standards and what impact they are thought to have on prices. Five key points emerged from the discussions.

i. Increases in internal space are a threat to higher densities only when these densities are measured in terms of 'dwellings per hectare'. If, instead, density becomes a question of habitable rooms or residential floor space, there is no tension between space and the intensification of urban development. However, the efficiency of land use then becomes an issue of occupancy rates. 'Dwellings per hectare' is not a meaningful measure of density if the aim of planning policy is to deliver liveable, decent homes.

ii. There is continued faith in local negotiation as a basis for delivering private-sector housing outcomes. But a question mark hangs over what local negotiation and 'flexibility' has delivered in terms of the quality of new homes. One important line of argument in Manchester was that the flexibility inherent in a negotiated approach serves an investment market, delivering profitability in instances where speculators have taken undue risks.

iii. Space standards are commonly viewed as the enemy of higher densities and of the UK Government's urban renaissance, whereas in fact, it is the way density is conceived and measured that is problematic and drives down space standards, especially during boom periods. Two key tensions were identified. The first concerns the Government's density directives, articulated in terms of 'dwellings

per hectare'. These encourage developers to squeeze ever more units onto the same parcel of land. Attempts by planning authorities to encourage a mix of dwelling sizes (defined by number of rooms) compound the problem, resulting in the development of homes with 'half rooms' or unusable 'box rooms'. Minimum standards, coupled with design quality, could remedy this problem. However, the absence of innovation and design quality in many urban schemes underscores the second key tension: the fact that many English volume builders have limited experience of high-density urban housing schemes. Like the planners who regulate such development, they are more familiar with building in the suburbs. A combination of experience and minimum standards might increase the quality of urban housing in the future.

iv. Standards are seen as a threat to housing affordability. But the experience of planning gain arrangements shows that minimum standards can fit quite easily into the English planning system. Factoring 'planning costs' into land transactions causes a suppression of land values. Thus, for example, the cost of affordable housing secured through Section 106 agreements is borne by land-owners. Arguably, the current system of procuring such housing (through planning) is too vulnerable to economic shocks and might be rethought, but this experience has at least demonstrated that private development can absorb planning costs.

v. Finally, moves to establish internal housing standards are weakened by the lack of comprehensive data on existing standards in England and across the UK. Because of a lack of any requirement to gather, record and report data, the issue is not a focus for planning officers and the effects of existing standards on different households cannot be accurately gauged. Such data is readily available in Italy.

9. HCA Proposed Core Housing Design and Sustainability Standards Consultation (2010)

3.63 In 2010 the Homes and Communities Agency (HCA) consulted on potential future design and sustainability core standards. In justifying the need for core standards, the HCA states that they are required as a vital part of delivering their commitment to be at the forefront of good design quality and sustainability in housing. The consultation sought the views of stakeholders on options for core standards, their level, and how, if adopted, they should be applied and phased in to operation.

3.64 The HCA was created in July 2008 and was given four statutory objectives that are:

- To improve the supply and quality of housing in England;
- To secure the regeneration or development of land or infrastructure in England;
- To support in other ways the creation, regeneration or development of communities in England or their continued well being; and
- To contribute to the achievement of sustainable development and good design in England, with a view to meeting the needs of people living in England.

3.65 These objectives are supported by the HCA goals which include to ensure high standards of design and to embed sustainability. The delivery of good quality, well designed homes in places where people want to live, work or visit, relies upon a number of key drivers and desirable features being present. Importantly:

- Homes should be sensibly planned and functional that is designed to meet the demands of everyday life, providing enough space and facilities, such as privacy and storage, to enable residents to live comfortably and conveniently;
- Homes should aim to be adaptable enough to accommodate residents changing needs and circumstances, such as mobility and the likely needs of diverse households over the life of the dwelling;
- Schemes should be constructed to make use of products and processes that reduce their environmental impact, better adapt to climate change, benefit from lower running costs and incorporate features that enhance the health and well-being of constructors, residents and the wider community. They should promote the wider definition of sustainability encompassing environmental, social and economic considerations.

3.66 The approach proposed for the core housing standards follows the principle of minimum performance measures covering internal environment, sustainability and external environment, proposed as follows:

Internal environment

- Minimum dwelling space (sq m) criteria incorporating minimum storage (%) provision;
- Dwelling functionality criteria assessed against a range of internal room size benchmarks. The sum of the proposed room sizes must be equal to or greater than the sum of the benchmark sizes;

Sustainability

- Minimum of Code for Sustainable Homes Level 4, with a requirement that maximum credits for Security are included. (Covering - physical security of the dwelling elements of Secured by Design);

External environment

- Minimum of 14 out of the 20 Building for Life criteria achievable.

3.67 The HCA has developed a Housing Quality Calculator which provides a tool to allow housing providers, consultants, local authorities and other key stakeholders to gain an insight into the extent to which their planned proposals compare with the HCA's proposed core housing standards. The calculator has been designed and developed by the HCA as a way of measuring housing quality, but will also identify areas that fall short of a set of proposed HCA benchmarks. It uses the information provided to generate a numerical interpretation of space and functionality factors which can be used as markers for relative comparison across a range of schemes.

3.68 Appendix C of this report sets out further detail regarding potential implementation scenarios and associated cost impacts of imposing the standards. It has been estimated that if the potential core standards were accepted as proposed, the costs of the new core standards would add on average £8,000 per unit compared to the

cost of meeting current National Affordable Housing Programme (NAHP) standards. This figure can be broken down into £3,900 for the increase from Code for Sustainable Homes moving from Level 3 to 4, £2,350 for additional space requirements and £1,750 for private open space.

3.69 Appendix D provides further detail regarding proposed dwelling space criteria. This appendix notes that unlike most of Europe and the USA, England and Wales have no national minimum dwelling space standards applicable to private housing. The UK, almost uniquely, uses the number of bedrooms to define the size of a home rather than the overall size. This appendix cites data supplied by the Gentoo group's "swing-a-cat" website that indicates overall UK dwellings have a relatively low floor space in sq m together with a high number of rooms, resulting in comparatively small room sizes.

3.70 The HCA stated that dwellings should be developed with an anticipated life of at least 60 years, preferably well over 100 years. It is stated that it is impossible to predict with accuracy:

- The range of households who will live in the dwelling over the next century;
- For how long the households will occupy the property;
- Whether they will occupy as owners or renters;
- Whether those households will be relatively rich or poor; and
- For how long the property will be fully occupied, under-occupied or overcrowded.

3.71 As such the HCA stated that space standards should be set at a level which allows the property to cater for a reasonably wide variety of diverse household needs over the century. As well as addressing the direct question of household liveability, accessibility and comfort, this is a very significant environmental sustainability issue. The demolition of 30 year old dwellings that are functionally obsolescent or unsuitable for anyone except a narrow range of households is very expensive in terms of both money and carbon.

3.72 The HCA commissioned architects Levitt Bernstein Associates (LBA) to produce a range of archetypal house plans to cover a range of home size options with potential to be funded by the HCA. In addition, LBA also developed a dwelling size calculator which calculates an overall size for various unit types dependant on proposed occupation, storeys and number and type of rooms.

3.73 The HCA, in liaison with LBA and assisted by individual members of the Advisory Panel, used the conclusions on space standards to produce a new Housing Quality Calculator. This is driven by occupancy, dwelling storey height and bathroom / WC data to provide an immediate mandatory minimum space requirement. In order to assist with understanding the size and design of homes which would meet the HCA's proposed core standards for space, a table of common unit types and the sizes provided by the Calculator is set out below. These form the proposed HCA minimum standards that were consulted on 2010.

Unit Type	1B2P (Flat)	2B3P (Flat or Bungalo	2B3P (House)	2B4P (Flat or Bungalo	2B4P (House)	3B5P (Flat or Bungalo	3B5P (House)	3B5P (House)	4B6P (Flat or Bungalo	4B6P (House)	4B6P (House)
No of people	2	3	3	4	4	5	5	5	6	6	6
No of bedrooms	1	2	2	2	2	3	3	3	4	4	4
No of bathrooms	1	1	1	1	1	1	1	1	1	1	1
No of additional WCs / shower rooms to bathroom	0	0	0	0	0	1	1	1	1	1	1
No of storeys	14	1	2	1	1	1	2	3	2	2	3
Mandatory minimum GIA (Floor area) m2	48	61	71	70	80	86	96	101	99	109	114

10. CABE Ipsos-MORI (2009) Space in Homes: What Residents Think

3.74 The CABE Ipsos-MORI survey *'Space in Homes: What Residents Think'* addresses space standards in new private sector housing and seeks to establish whether residents have enough space to allow them to go about their everyday lives in comfort.

3.75 This survey sought to investigate the satisfaction of the residents of newly built homes in London and the South East. The research conducted an initial survey which was sent to 9,562 residents in the South East of England (with a quota of 40% in Greater London). The sample included only residential properties that had been built since 2002. This survey yielded 2,249 responses at a response rate of 23%.

3.76 The survey methodology sought to control risks in regards to 'aspiration' where most people would say 'yes' if asked whether they would like more space in their home. Questions were therefore designed to avoid responses being a reflection of unfulfilled ambition, potentially leading to overly critical responses. The survey also sought to avoid a potential 'honeymoon effect', where buying a home is an emotional experience as well as the biggest investment of most people's lives and few would wish to admit that their chosen home was less than ideal. To counteract this, the sample was drawn from buyers over a three-year period between 2003 and 2006, so respondents would have been living in their properties for between two and five years when the survey was carried out in 2008.

3.77 The results of the survey found that recent occupiers do indeed appear to be the most satisfied, whilst those who have lived in the home for more than 2 years are significantly less satisfied. Overall, the survey found that 54% of respondents said the amount of space in the home was very important and 39% said it was fairly important to them (totalling 93%) when choosing where to live. However, the findings indicate that many residents in new private homes do not have sufficient space for basic daily activities and needs. Key findings include:

- 72% of all respondents state that there is not enough space in their kitchen for recycling bins;
- 47% of all respondents and 58% of those in fully occupied homes do not have enough space for all the furniture they own or would like to have;
- 51% of all respondents and 65% of those in fully occupied homes state that the amount of space in their homes limits the choice of furniture layout in rooms;
- 57% of all respondents and 69% of fully occupied households do not have sufficient storage to accommodate everything they need to store;
- There is often inadequate space for children and adults to socialise and many people cannot find a quiet or private place to relax particularly in more fully occupied homes;
- 90% of new homes surveyed had spare bedroom space, which CABE argues 'adds extra weight to the problems uncovered by this research stating that even a spare room does not guarantee enough space to meet household needs.

3.78 It was found that the overall dwelling size is generally seen as less important than the size of rooms, their airiness and their layout. This suggests that residents want spaces in the home that function well and are pleasant to live in. This concept of 'functionality' is addressed in this CABE research document.

11. Building for Life: Delivering Great Places to Live (2008)

3.79 In '*Building for Life: Delivering Great Places to Live'* (BFL) it was investigated whether the accommodation mix reflects the needs and aspirations of the local community. It was found that neighbourhoods are more successful when they avoid large concentrations of housing of the same type. Indeed it was suggested that even comparatively small developments can have a wide mix of types of property and that a mix of housing types and uses can create more attractive residential environments with greater diversity in building forms and scales. It was stated that a well-designed neighbourhood will provide accommodation that meets the needs of single person households, small and large families as well as offering live-work possibilities.

3.80 It is also asked within this BFL document whether there was tenure mix that reflects the needs of the local community. It was found that new neighbourhoods should cater for various socio-economic groups by having a mix of housing tenure. A poor mix of housing tenure, if continued across a number of developments, can lead to a social imbalance and result in unsustainable communities.

3.81 This BFL document tackled the issue of internal space and layout. It was stated that a well-designed home will need to take account of changing demands and lifestyles of the future by providing flexible internal layouts and allowing for cost-effective alterations. It was also stated that housing should be able to respond to changing social, technological and economic conditions. This BFL document suggests that for houses, the design could accommodate a downstairs toilet, wider doorways, level entrances and allow for a lift or stair lift to be fitted in the future. This document highlights the need to ensure some rooms are big enough to enable flexibility, for example if they could be used as a work space, study, bedroom or playroom.

3.82 It was found that features such as generous space, good natural light, energy efficiency and good sound insulation can greatly improve the popularity of a home and the quality of life for the people who live in it. Well-designed homes will excel in some, if not all, of these areas. It notes that good space standards contribute to the long-term flexibility and future proofing (able to accommodate changing lifestyle demands) of a home.

12. Çavusoglu, O., Gould, C., Long, P. and Riera, M. Emerging Typologies and Density London School of Economics and Political Science: London (2008)

3.83 *'Emerging Typologies and Density'* provides a study of building typologies and the philosophical and ideological principles that shape the urban landscape.

3.84 This study notes that there is a current consensus in favour of intensification of existing urban sites through the development of 'brownfield' sites. The report however puts forward the argument that existing housing has not been fully utilised which could offer an alternative solution to intensification. It argues that future housing policy should not rely on creating an environment in which increased densities alone do not determine emerging typologies but equal consideration is given to social and environmental factors that affect living standards as well as their basic rights to good quality housing and urban living.

3.85 This study highlights that one area in which the drive for intensification can be seen as having a negative effect on housing typologies and quality of life of residents is in the size of new dwellings being built. Evidence suggests that new homes are being reduced in size and that 'less family sized housing is being produced.' It states that the reduction in dwelling size has long-term implications for accessibility, sustainability and for the quality of life for future residents. If new housing typologies are to be sustainable and meet the needs of future generations, they must be of an adequate size and quality.

3.86 The study stated that the lack of mandatory space standards today has resulted in increasingly small dwelling units that are significantly smaller than in other European countries. It is noted that that whilst there is an increasing number of single person households, this has not necessarily translated into a higher demand for small one bedroom flats as demand for internal space have increased from new leisure activities and an increase in home-working. Improving space conditions

within a home allows the opportunity for someone to start a home business or spend part of the working week at home, improving their life-work balance and working in a more focused way. If new housing is to meet the needs of the future in a sustainable manner, it must reflect these changes by providing a range of house types and sizes to create mixed and balanced communities.

3.87 Çavusoglu et al argues that such adaptability delivers long-term accessibility as well as long-term sustainability as adequate space in dwellings will allow residents to adapt space to their changing needs over the life course of a household. Indeed, long term 'utility' and 'functionality' is seen by many as the essential argument in favour of universal space standards and the key benefit such standards would deliver for housing occupants.

13. Drury, A. Parker Morris Holy Grail or Wholly Misguided? Town and Country Planning, 77, 10, pp.403-405 (2008)

3.88 In '*Parker Morris Holy Grail or Wholly Misguided?',* Drury examines the relevance of the Parker Morris Standards in modern society and whether there is a need to provide internal standards. Within this report the London Mayor's desire to implement space standards for both private and public sector housing is debated.

3.89 It is reiterated by Drury that unlike the rest of Europe, England has no national minimum dwelling space standards and as a result builds some of the smallest dwellings in Europe.

3.90 *'Homes for Today and Tomorrow',* which was published in 1961 states that the space needed by households is driven by usability factors. Specifically, it considers what furniture people might want to have in each room, what size and how much space is needed to use each item and how much room is required to move around the furniture. Drury states that if new housing is to be functional, then adaptable homes with a long lifespan are required that takes account of how people will use space in the home. However Drury suggests that adopting a functional approach addresses the issue of usability but does not necessarily lend itself to minimum room areas or minimum dwelling areas.

3.91 Drury references the antipathy to space standards among most housebuilders and how homebuyers in the UK assess their house value primarily in terms of the number of bedrooms and not floorspace. This approach to housing is cited as being a UK only characteristic. Even the sale and rent office, retail and industrial floorspace in the UK in considered per square foot. This approach works in the favour of housebuilders who cost the scheme per square foot but sell per bedroom. Drury describes the resulting consequences as being a less functional or adaptable property, which likely means a property with a much shorter life. This has a cost in environmental terms, particularly the carbon cost of early demolition and redevelopment.

3.92 There are two main arguments cited against space standards with these being fewer dwellings being built on a given amount of land (the density argument) and that

landowners' price expectations will not be met, resulting in less willingness to sell land for development (the land supply argument). These are actually two manifestations of just one asserted effect – that minimum space standards will reduce site capacity. Drury however states that the assertion that space standards reduce site capacity is misleading as there are a variety of design issues that constrain site capacity such as overlooking distances, parking requirements and height limitations. It is stated that a designer must optimise the site capacity within the various policy requirements and that without internal space being one of the policy requirements it will always be the area neglected.

3.93 Drury questions whether the market provides what people want. The conclusion is based the recent survey undertaken by Ipsos MORI whereby approximately half of residents in new housing built in London and the South East were dissatisfied with the space in their home. Drury suggests that this evidence demonstrates that purchasers are not getting what they want and that they are putting up with what they get. As such the market is not functioning effectively and has become a producer's market and not a consumer's market.

3.94 Drury also questions whether there is difference between the space needs of a household within an affordable house and one within a market house. It is stated that social housing tends to be fully occupied but this is not always the case for private housing over the life time of the dwelling. It is argued that dwellings built initially for private households or 'public' households will not always be occupied by such households. For example, 'public' households exercise the right to buy their home and so the dwelling 'moves' into the private sector whilst 'private' homes are often bought by public bodies such as housing associations. Drury states that it is important the future use of a house is not ignored. This refers not just to the potential tenure but also the household life cycle of a dwelling.

3.95 Drury advocates the use of space standards but states that the Parker Morris standards are not the correct ones as these standards are based the usability of a house in the 1960s and do not consider the modern needs of a household for example recommended floor spaces should take account of factors such as:

- Children and adults needing space for computers;
- The need for more space in kitchens for new appliances which were not present in the 1960s;
- More space for equipment for children at home, as well as more space to eat and watch television.

3.96 Drury also notes that despite the emphasis on floor space minimums, Parker Morris's concern for 'usability' and 'usability factors' was its real contribution to thinking on internal housing space standards and that this principle applies equally today.

14. Communities and Local Government English Housing Survey: Headline Report 2008 – 2009 (2008)

3.97 The *English Housing Survey* (EHS) is a continuous national survey commissioned by Department for Communities and Local Government (CLG) that collects information about people's housing circumstances and the condition and energy efficiency of housing in England.

3.98 The EHS has three component surveys: a household interview, followed by a physical inspection and a market value survey of a sub sample of the properties. The EHS also now forms part of the ONS Integrated Household Survey (IHS).

3.99 The survey covers all housing tenures and provides valuable information and evidence to inform the development and monitoring of the CLG's housing policies. Results from the survey are also used by a wide range of other users including: other Government departments; local authorities; housing associations; landlords; academics; construction industry professionals; consultants; and the general public. The findings of the survey can be summarised as follows:

- The number of owner occupied households fell from a peak of 14.8 million in 2005 and 2006 to 14.6 million in 2008-09;
- Couples with no dependent children were the most common type of household (36 per cent) and the most common type of owner occupiers (42 per cent) in 2008-09;
- Over half (59 per cent) of all private renters expected to eventually buy a home in the UK compared to only around a quarter (27 per cent) of social renters;
- Overcrowding was highest in the rented sectors: 6.7 per cent of social rented households and 5.4 per cent of private rented households were overcrowded as measured by the bedroom standard. In contrast, only 1.6 per cent of owner occupiers were overcrowded;
- Social sector homes were on average more energy efficient than those in the private sector (a mean SAP rating of 59 and 49 respectively) and also saw greatest improvement since 1996 with their average SAP rating increasing from 47 to 59;
- The percentage of very energy inefficient homes (rated Bands F or G through the Energy Performance Certificate) fell by five percentage points (from 22 per cent to 17 per cent of the stock) between 2006 and 2008;
- Some 89 per cent of homes had central heating in 2008 and 3.7 million (17 per cent of all) had condensing boilers - a more than threefold increase since 2005 when regulations were first introduced;
- Some 7.4 million homes (33 per cent) were non-decent in 2008 (including 4.8 million homes with potentially serious hazards under the Housing Health and Safety Rating System). Overall social sector homes were in a better condition than private sector homes with 27 per cent being non-decent compared to 34 per cent;
- In 2008, 3.1 million 'vulnerable' households' were living in the private sector of which 1.2 million (39 per cent) were living in non-decent homes, the remaining 1.9 million (61 per cent) were living in decent accommodation.

15. RIBA Better Homes and Neighbourhoods: RIBA Policy Paper (2007)

3.100 *'Better Homes and Neighbourhoods'* sets out RIBA's policy position in respect to improving the quality and design of new housing.

3.101 This RIBA report states that in many parts of the UK there is a shortage of decent affordable housing. The report notes that the reasons for this are complex, involving distortions in land supply, the workings of housing finance and high rates of household formation.

3.102 The report states that there is a great need for an increased supply of housing but is wary of repeating the mistakes of the 1960s when quantity was pursued at the expense of quality. The alternative is to deliver decent homes and neighbourhoods, which also help to combat the simultaneous challenge posed by climate change.

3.103 This report states that high quality design adds value to homes and their surroundings. It can improve the lives of residents, achieve higher values for development sites, create better public spaces and add prestige for owners.

3.104 It is noted that design solutions and the application of improved materials and technologies will assist in reducing carbon emissions and assist in adapting to changing climate. It is also stated that well-designed homes cost less to heat, light and maintain. Well-designed, sustainable housing will last longer, be more flexible in use, improve accessibility, safety and security, and grow old more gracefully.

3.105 The RIBA believes that too much of the new housing stock built in the UK falls well short of the standards we should expect, in terms of both design and sustainability. In response RIBA set out the following recommendations:

- The promotion of local and regional design review panels where developers and design teams can engage positively with critical expertise through local planning authorities;
- The average home built today is significantly smaller than the equivalent built in 1920. There is a need for the introduction of minimum space standards;
- Homes must be designed to be adaptable to changing social and environmental needs. The challenge for architects is to support housing providers in finding new replicable solutions while recognising that modern lives and cultural and social diversity means we need homes that respond to this complexity;
- Successful communities need a balanced mix of housing type. Density should be measured using a ratio of floor space to site area. It is stated that density levels must be carefully tailored to localities and developers must not place pressure on designers and constructors to maximise density irrespective of site conditions or constraints. Such pressure in the past has led to a predominance of small units, creating 'ghettos' of 1–2 bedroom units on inner city sites, to the extent that almost half of new homes in the UK are flats or maisonettes, with too many lying empty as mere investment assets;

- Support the introduction of the Code for Sustainable Homes and commit to helping refine it to become the industry standard measure of the environmental performance of housing;
- The quality of the public realm is as important as the quality of the houses that make up a community. Government, developers, architects, planners and their building industry colleagues must explicitly encourage the provision of well-designed and well-maintained public spaces as an intrinsic part of creating decent homes.

16. Schneider, T. and Till, J. Flexible Housing, Architectural Press: London (2007)

3.106 Schneider and Till in '*Flexible Housing'* investigated ways of planning housing that can adapt to different uses and technologies over time. The research team collected over 150 historical examples that demonstrates the economic, environmental and social benefits of flexible housing.

3.107 Schneider and Till define flexible housing as housing that adapts to the changing needs of its users. It includes the possibility of choosing different housing layouts prior to occupation as well as the ability to adjust one's housing over time. It also includes the potential to incorporate new technologies over time, to adjust to changing demographics, or even to completely change the use of the building from housing to something else.

3.108 Schneider and Till stated that the arguments for flexible housing are compelling. Socially, it empowers the user to take control of their own dwelling, either by making choices prior to final construction or else over the lifetime of the home. Demographically, it enables housing providers to adjust to new living patterns and configurations of users. Economically, it avoids obsolescence and costs involved in reconfiguration or refurbishment. Technically, it should allow for the incorporation of new technologies and the upgrading of old ones, in particular servicing.

3.109 Schneider and Till argue that the regulation of floorspace can deliver 'determinate spaces' within the home that restrict use and behaviour. These are contrasted with the 'soft spaces' that people actually need over the long term. The research reviews research literature published since World War I, arguing that truly flexible housing permits different physical arrangements of space and hence can adjust to the changing needs and requirements of users. In allowing different living patterns within the same space, flexible housing tends to be more adaptable and sustainable and also cost-effective over the long term. Being adaptable, the space can be used for multiple functions rather than a single designated use. Bedrooms can become living rooms, for instance. Circulation spaces can double-up as social spaces for interaction. This, the authors argue, is not possible where circulation spaces are laid out under the guidance of minimum space standards. Soft spaces offer flexibility and choice, delivering quality of life under changing patterns of occupation.

17. NHBC Foundation Modern Housing: Households' Views of their New Homes (2007)

3.110 The NHBC Foundation research '*Modern Housing: Households' Views of their New Homes'* provides a review of the key differences in the housing stock profile between new houses and the older housing stock. This research seeks to understand how households perceive their homes and the key factors they consider important when choosing them. The research also compares how satisfied households are with their homes and identifies which types of household are most likely to be satisfied. It also considers what households like and dislike about their neighbourhoods and the improvements they would like to see made. For this study modern housing is defined as that built between 1991 and 2002. This study found that:

- Modern housing tends to be smaller in dwelling size, with two to four bedrooms, being mainly small terraced houses or detached properties;
- Modern housing is more likely to have energy efficiency measures such as double-glazing and condensing boilers, and to have much better energy efficiency. Typically, homes are 20 SAP pointers higher than in all other housing;
- House prices for modern housing are on average significantly higher than for all other housing.

3.111 With regard to household characteristics it was found that that households living in modern housing are more likely to be younger than those in all other housing, with 60% of modern housing being occupied by households under 45. Also, there are a higher percentage of households with children in modern housing compared with all other housing.

3.112 The views of households were taken about their homes and it was found that:

- A fifth of households living in modern housing would like more rooms;
- A quarter of households living in modern housing would like larger rooms;
- One third of households living in modern housing would like more storage space.

3.113 The findings of this review highlight that the design of future homes could be improved by:

- Increasing room sizes;
- Providing more storage;
- Providing more parking provision;
- Implementing measures to reduce crime and vandalism;
- Provision of better local facilities such as public transport;
- Using measures to assess the design quality of housing schemes prior to them being built (HQIs in this review highlight areas of improvement).

18. HATC Ltd Housing Space Standards: A Report by HATC Ltd for the - Greater London Authority (2006)

3.114 The HATC report was commissioned by the Greater London Authority (GLA) as part of their review of the London Plan. The GLA's brief stated that there has been growing concern that the internal space of new dwellings may be getting smaller which has implications for both accessibility and for sustainability. It is stated that 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 a revised policy. This was expanded in HATC's Project Management Plan, so that the study sought to provide:

i. 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;
ii. A review of good practice guidance on housing space standards currently available;
iii. A review of the experiences of other organisations within the UK and elsewhere who have introduced minimum space standards;
iv. A cost/benefit analysis of setting minimum standards at different levels;
v. Advice on implementation issues; and
vi. Recommended way forward.

3.115 The work 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. This study also examined how space standards have been implemented historically and in different countries and whether space standards could be set through the planning system. The literature review also sought to identify if there was a link between dwelling space standards and health, well-being and educational attainment, as part of the cost/benefit analysis.

3.116 The HATC report concluded that with reference to the Planning and Compulsory Purchase Act 2004, space standards are now capable of being considered as a "material planning consideration" and an important component of "sustainable development". The report goes on to state that 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'.

3.117 The literature review demonstrates that 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 which are set out below:

- 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" 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 constitute a consideration of '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.

3.118 The HATC report highlights that 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 floorspace. 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. The HATC report refers to this approach as "room cramming" that inevitably results in smaller rooms with a consequent reduction in each rooms usefulness and flexibility.

3.119 The HATC report states that there 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'. The report states that in a market where the main typography being developed is blocks of flats, this poses a particular challenge. This report questions whether the management of communal gardens in the long-term can achieve a sense of ownership for its residents. Balconies are suggested as an alternative approach but would need to be large enough to fulfil their recreational function as opposed to having to be used for external storage.

3.120 The HATC references the Planning and Compulsory Purchase Act 2004 noting that 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. It is stated that between 1980 and 2004, Government advice specifically discouraged such an approach and that external standards have been applied more frequently than internal standards. In respect to Planning and Compulsory Purchase Act 2004 it is stated that space standards are now in principle capable of being considered a 'material planning consideration' and a component of 'sustainable development'. PPS1, PPS3 and PPS12 are referenced as space standards are capable of being a key component in delivering government aspirations and objectives within these documents 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.

3.121 The HATC states that 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.

3.122 The HATC considers the issue of functionality of internal space. This report draws on the Stakeholders' comments and the review of literature on mental health and well-being, and previous work undertaken by the BRE and the Joseph Rowntree Foundation and National Housing Federation, it is suggested the following factors will determine whether a dwelling has sufficient internal space for the designed level of occupancy:

- Space for the furniture & equipment needed by residents (including occasional visitors);
- Space to access / use the furniture & equipment, doors and windows;
- Space to move around the home among the furniture & equipment;
- Space to undertake normal living activities that do not just use furniture, for example: washing; dressing; cooking; eating; playing; socialising.
- Space for storage of "clean and dry" items on shelves (linen, boxed up possessions, mops, hoover etc);
- Space for "dirty" storage such as bicycles;
- Space to avoid feeling "cramped"; and
- Sufficient separation of rooms to allow the required level of privacy.

3.123 The HATC states that a key consideration in respect to internal space standards is how intensively dwellings are used by the occupants.

3.124 The HATC sets out a series of minimum internal dwelling areas (MIDA) as recommendations for inclusion within the London Plan. These are set out below:

MIDA sq m	
1 person	37
2 person	44
3 person	57
4 person	67
5 person	81
6 person	92
7 person	105

3.125 It is stated that the 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.

3.126 The overcrowding provisions of the Housing Act 1985 was also taken account which sets minimum space standards (these standards apply to all housing, public and private) for the sizes of rooms dependent upon the number of people sleeping in them. These are:

- 1 person room: 6.5m^2 (70 sq ft); and
- 2 person room: 10.2m^2 (110 sq ft).

3.127 The HATC report sets a number of the benefits that arise from having minimum space standards. These are that of the mental health and well-being of the occupants and that of the sustainability of the environment.

3.128 With regard to mental health and well-being it is stated that there appears 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.

3.129 In respect to sustainability there is an environmental argument for setting minimum space standards that hinges on the assumption that what is currently marketable may not be readily marketable in a few decades. 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 to 3 years. 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. Unnecessary redevelopment involves a 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.

3.130 The HATC predicts that there will be an increase in working from home and as a result there may well be a significantly greater demand for additional space than has been the case over previous decades for designated workspace.

3.131 The HATC makes a number of recommendations for the GLA to consider and to take forward. These are that:

i. The GLA considers options for implementing the standards and adopt the Baseline Standards and the Additional Standards set out in the report and publish the Minimum Internal Dwelling Areas as indicators of whether the Baseline and Additional Standards are likely to be achieved.
ii. The GLA commissions further case study analysis to test these proposed standards against current practice and to assess implications on cost and value.
iii. 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):

- 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;
- Floor area of built in storage cupboards; and
- Net internal dwelling floor area.

19. Building for Life: Better Neighbourhoods, Making Higher Density Work, Literature Review (2005)

3.132 '*Building for Life: Better Neighbourhoods, Making Higher Density Work, Literature Review 2005*' (BFL) considers the design quality and density of new dwellings. It was found that density in itself does not appear to be an issue, but what is important is the density of a specific site in relation to its design, facilities and the general standards and behaviours in the neighbourhood and the people who will live in the housing.

3.133 This BFL document cites Tunstall who states that people's perceptions of housing density are driven by design and other environmental clues and can differ substantially from actual density figures. Tunstall is cited as stated that when choosing areas to live in, people were attracted by low crime rates, good health facilities, low cost of living, good shopping and good race relations.

3.134 Research undertaken by Llewellyn-Davies in respect to density is cited within this BFL document. It is suggested by Llewellyn-Davies that on suburban sites net development densities of 250 habitable rooms per hectare (or approximately 59 dwellings per hectare) can be achieved with a mix of terrace and detached houses with gardens. On suburban sites offering a mix of terraced, semi-detached and

detached houses with gardens as well as apartments with a mix of private and communal open space, they suggest that densities can increase to between 300 and 400 hrh (c 115 dwellings per hectare).

3.135 URBED (with the TCPA) examined the suburbs and provides design guidance specifically relevant to the intensification of housing. CABE notes that movement networks are critical, and that there is no standard formulae for designing layouts, much will depend on the local context and how the development relates to existing areas.

3.136 Most publications emphasised that successful intensified housing development should take the form of dense walkable settlements around public transport nodes and routes.

3.137 A number of the publications reviewed found open space and landscape to be of importance in the design of housing. The need for design and the management and maintenance quality and its proximity and accessibility to housing was also emphasised.

3.138 A common conclusion of a number of publications was the rediscovery of the importance of the street as the central organising element of urban areas. It was found that strong block structures result in clearly defined spaces and places between buildings and give spatial continuity to routes connecting surrounding neighbourhoods, centres and established routes, street, place and space patterns thereby providing a high degree of urban integration.

20. Ely, Alex Double Standards: Building Magazine (2005)

3.139 In *'Double Standards'*, Ely provides a critique of the quality of new housing being delivered in the UK and highlights the discrepancies within public policy. It is questioned whether there is sufficient coordination of policy to be able to deliver high quality and sustainable housing. These discrepancies are summarised below:

- There is national legislation that sets minimum density targets of units per hectare and maximum car parking requirements but no requirements for the amount of space within a home;
- Planning policy protects a persons right to light from new development but does not protect an individual's right to a decent amount of daylight within a new home;
- The current Part L of the Building Regulations focuses more on heat loss through windows than light levels into a house however regulations allow for deep plan single aspect apartments and windowless bathrooms, kitchens and corridors;
- The Housing Corporation's requirement of Eco-Homes 'Very Good' (at time of publication) is estimated to save 35,000 tonnes of carbon dioxide emissions a year. A further 120,000 tonnes of CO2 emissions could be saved if Eco-Homes 'Very Good' were a compulsory requirement of all new homes (Building Regulations have since been amended). Ely states that when global warming

affects everyone of us, it is illogical to apply one value to public sector housing and settle for a lower standard for the private sector;

- The failure of *'Homes for Today and Tomorrow'* of 1961 to deal with place-making has been addressed by the introduction of *'By Design'*. Without the mandatory space standards offered by Parker Morris, good space is often jettisoned in the interests of reducing costs.
- Well-planned, generously lit and spacious homes are as important in delivering sustainability as urban design and building performance. Space standards are, on average, back to where they were at the time of the Tudor Walters Report of 1918, which was introduced to deal with slums and overcrowding.

21. Evans, A. and Hartwich, O.M. Unaffordable Housing: Fables and Myths Policy Exchange: London (2005)

3.140 The Policy Exchange pamphlet *'Unaffordable Housing: Fables and Myths'*, provides a history of the UK planning system and the economics of housing and planning. It explores a number of 'myths' that have influenced planning policy in one way or another, notably: Britain is a small country; a crowded South means that more people should live in the North; and as people get older they need a smaller home.

3.141 The main argument is that housing is 'unaffordable' because planners are ignorant of the relationship between supply, demand and price. By restricting the supply of land in relation to demand since the Town and Country Planning Act of 1947, land prices have gone up and house prices have risen in tandem and have now become 'unaffordable'. Evidence includes details of annual house completions in Britain since 1949, residential building land prices since 1892, inflation-adjusted residential property prices in different countries since 1970 and residential property prices and income.

3.142 This document argues that by ignoring the role of supply in determining house prices, planners have created a system that has led not only to higher house prices but is also delivering the wrong kind of housing.

3.143 The document is critical of the planning system in that it attempts to ensure that what is thought best for the people is what is produced. The system currently attempts to produce exactly the number of dwellings which are estimated to be required from calculations of need, calculations involving assessments of demographic change, household formation, household splits, migration, deaths, births etc.

3.144 The author references the housing cycle and its influence on dwelling size. It is stated that if too little housing is provided, house prices rise and housing becomes expensive. When it is more expensive, people can afford less and so buy smaller homes. With smaller homes, more dwellings can be provided on less land because homes can be built at higher densities, namely flats or houses with small gardens. It is suggested that this is not what people want. This document cites the March 2005 MORI poll, which states that 50% of those questioned favoured a detached house and 22 per cent a bungalow. Just 2 per cent wanted a low rise flat and 1 per cent

a flat in a high rise block. But houses and bungalows use more land, so while in 1990 about an eighth of newly built dwellings were apartments, by 2004 this had increased to just under 50%. This document also cites a survey, financed by Joseph Rowntree Foundation, which found that in 2004, when asked about development in their area, people preferred houses to flats, and that the type of housing that people most disliked was blocks of flats of four storeys or more.

3.145 This document concludes by stating that the rise in land prices and the consequent high cost of housing, impacts upon the demand for larger houses at all income levels, which would otherwise occur as incomes increase. Citing the Baker Report this report demonstrates that the rise in house prices has almost exactly balanced the increase in incomes. This means that, in general, although people's incomes are two or three times higher than they were thirty or forty years ago, the size of house that they can buy has on average, stayed the same size. Since prices has risen more in the South than in the North, the implication is that the size of house which can be bought is, on average, actually smaller in the South. It is bought because that is all that is made available and the cost of land resulting from the policy of constraint means that people cannot afford the houses that they aspire to.

22. Office of the Deputy Prime Minister, Sustainable Communities: Homes For All (2005)

3.146 The Office of the Deputy Prime Minister (ODPM) launched the Sustainable Communities Plan in 2003. The Plan set out a long-term programme of action for delivering sustainable communities in both urban and rural areas. It aims to tackle housing supply issues in the South East, low demand in other parts of the country and the quality of public spaces. The Plan seeks reform to housing and planning by adopting a new approach to how new homes are built and what is built.

3.147 There is a focus on delivering decent homes and a good quality local environment in all regions. Indeed one of the objectives is to deliver a well-integrated mix of decent homes of different types and tenures to support a range of household sizes, ages and incomes. This plan considered decent homes to be at the heart of a sustainable community. It notes that a third of all housing falls below the decent homes standard.

23. BICS: Five Year Review of UK Housing RICS (2005)

3.148 The *'Five Year Review of UK Housing'* which was conducted by the Building Cost Information Service (BCIS) has found that British homes are becoming more condensed, with more rooms in the same space. It was stated within this review that the 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 a dwellings floor area as opposed to the number of bedrooms. Other findings include:

- The increase in the number of three storey dwellings;

- The increasing use of rooms in the roof;
- The increasing popularity of bay windows; and
- The increase in the number of garages.

24. Shelter Crowded House: Living in England's Housing (2004)

3.149 *'Crowded House'* sought to examine the impact on overcrowded housing on all aspects of people's lives. It states that overcrowding impacts upon children in terms of increased risk of infections and a lack of space and privacy, which can affect how they do at school, whilst for parents it is a barrier to providing positive opportunities for their children and a constant cause of anxiety and depression.

3.150 Whilst this paper concentrated on the conditions of the affordable housing sector, it does set out a number of policy recommendations in respect to the overcrowding of housing.

3.151 The evidence from this report demonstrates the scale of the overcrowding problem and the detrimental impacts it can have on people's childhood and adulthood. This study stated that a renewed focus is required that addresses the needs of overcrowded families and that real improvement will only be brought about through a long-term strategy which aims to tackle overcrowding against measures acceptable by today's modern living standards. The emphasis should be on more resources being available to provide more homes of the right size.

3.152 One of the recommendations seeks the introduction of a nationally recognised overcrowding measure based on the 'bedroom standard'. It is stated that a national overcrowding standard would ensure that the problem of overcrowding can be properly measured. This would establish a true reflection of the problem and assist in making more accurate assessments of housing need and in particular, the numbers of family-sized homes required.

3.153 This report was followed by a further Shelter publication titled *'Full House? How Overcrowded Housing Affects Families'* (2005), a more quantitative analysis of health and housing space. A survey of 505 households in accommodation deemed to be 'overcrowded' revealed the importance of space in providing personal privacy, reducing depression, anxiety and stress, giving children room to play and ensuring a good night's sleep. Three quarters of respondents (77%) in this survey saw space as playing a key role in determining the quality of family relationships.

25. Imrie, R. The Role of the Building Regulations in Achieving Housing Quality, in Environment and Planning Planning and Design, 31, pp.419-437 (2004)

3.154 Imrie in '*The Role of the Building Regulations in Achieving Housing Quality'* evaluates the role and relevance of the building regulations in seeking to deliver design quality in dwellings. This is done so with reference to an empirical study of Part M of the Building Regulations (England and Wales). This requires builders to provide access to dwellings for disabled people. The research indicates that the use

of the Building Regulations is unlikely to significantly raise the quality of design in dwellings.

3.155 Imrie tries to bridge the divide between regulations that aim to assist disabled occupants and possible measures to more generally improve the design of housing.

3.156 Drawing on a survey of building control officers undertaken in 2001 and 2002, it is argued that there has been too much focus on 'access' and not enough on 'living conditions'. Broadening this out, Imrie suggests that future regulation should have a broader concern with design benefits and future adaptability of homes, for all users.

26. Sheridan, L., Visscher, H. & Meijer, F. Building Regulations in Europe Part II: A Comparison of Technical Requirements in Eight European Countries Delft University Press (2003)

3.157 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.

3.158 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.

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

27. Bartlett, Ken et al: Consumer Choice in Housing, the Beginnings of a Homebuyer Revolt JRF (2002)

3.160 *'Consumer Choice in Housing, the Beginnings of a Homebuyer Revolt'* is a collection of essays that investigates the attention paid to consumer opinion and the public image of house builders. The report aims to identify what characteristics that would attract consumers to new houses. It also offers positive suggestions about how the gap between housing providers and consumers can be closed.

3.161 This document highlights the fact that there are gaps between what new home owners expect and what is currently being offered by the house building industry.

These gaps relate to service provision, the quality of workmanship and also in the design of housing. This document highlights the importance of discussions between the house builder and the customer as this reduces misunderstanding on the house builder's part about the customer's design preferences and requirements. It is noted that efforts have to be made to close these gaps within recent years.

3.162 This document demonstrates that the number of bedrooms has become the determinant of a house value and not the numeric floorspace indicator which is more commonly used in other EU countries.

3.163 This document suggests that the use of design tools and guides, such as Housing Quality Indicators (HQIs), may facilitate an improvement in quality. Such indicators not only consider size and layout, but also other issues such as light and services, accessibility, energy and sustainability issues and performance in use.

3.164 In its conclusions this document highlights the importance of market research to help house builders capture and understand what people expect. The document states that the integration of the design process with sales and marketing could help to close the gap described above between the housing offer and expectations.

28. Tunstall, Rebecca: Housing Density, What do Residents Think: LSE (2002)

3.165 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 found 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.

29. Hooper, A. and Nicol, C. The Design and Planning of Residential Development: Standard House Types in the Speculative Housebuilding Industry, Environment and Planning Planning and Design, 26, pp. 793-805 (1999)

3.166 Over 80% of new housing output is produced by private speculative housebuilders. In this paper Hooper and Nicol examine the employment of standard house types in speculative housebuilding. This study examines, by means of a nationally representative questionnaire survey of housebuilding firms and interview of key personnel within the industry, the dominant design practices currently utilised in the industry. The focus is the extent to which volume housebuilding firms (defined as those producing in excess of 1000 units per annum) utilise standard designs, and

the interrelationship between such designs and the construction technology are employed.

3.167 Hooper and Nicol state that the private sector housebuilding industry has undergone significant change in the last two decades, with considerable concentration of production by large firms.

3.168 From the evidence gained within the study Hooper and Nicol identify a general standardisation of housing designs delivered through private enterprise. Hooper and Nicol argue that one consequence of standardisation is to deliver a housing stock that caters for a limited range of needs and which cannot be easily adapted to changing circumstances. This is a more general concern about housing design and production processes in the UK, however there are close links to internal space such as the lack of space combined with general standardisation of housing products may be seen as factors limiting flexibility and adaptability.

30. Levitt, D Housing Standards: Standards past – and future? Architects Journal 17 November (1982)

3.169 This article coincided with the ending of Parker Morris requirements for publicly funded housing in England. It offers a thorough analysis of housing standards, legislation and 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 alone 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.

Section 4: Residential Standards in a Southend-on-Sea Context

4.1 This section provides an assessment of the minimum residential standards within new residential developments, recently approved in Southend-on-Sea.

Methodology

4.2 The assessment of gross internal residential space within new market dwellings in Southend-on-Sea is based upon a sample of completions over the last 5-years (2006 – 2010). The sample is 8% of all completions during this time. The sample is based upon the percentage proportion of dwelling completions by type and number of bedrooms as an average over the last 5-years (2006-2010). Table 1 sets this out in more detail.

4.3 The Southend-on-Sea Annual Monitoring Report provides a detailed breakdown of the dwelling completions. It is highlights that over the last 8-years approximately a quarter of all completions have been houses and the remaining three-quarters being flats. The sample has been constructed to broadly reflect this proportion. A larger proportion of 3-bedroom houses was assessed as this type of accommodation is stereotypically associated with young families and it was highlighted in the literature review that this type family had significant pressures in terms of space requirements and space availability.

Table 1: Sample Size: Total Number of Dwellings Assessed

	1-Bedroom House	2-Bedroom House	3-Bedroom House	4-Bedroom House	1-Bedroom Flat	2-Bedroom Flat	3-Bedroom Flat
Sample	n/a	11	32	12	25	65	4
Sample %	0	7.4%	21.4%	8.0%	16.7%	43.6%	2.9%
% Average Proportion 2006 to 2010	1.6%	6.0%	9.9%	6.72%	19.8%	50.9%	3.6%

Source: Southend-on-Sea Borough Council 2011

4.4 The gross internal floor of each of the sample dwellings were measured using the approved the planning drawings. The intended occupancy was measured using the principle that bedroom sizes of 10m^2 or less is suitable for single occupancy and that 10m^2 or more is suitable for double occupancy.

Key Findings

4.5 Table 2 highlights that the internal space of new residential dwellings varies significantly, this range being more acute in the new houses. The internal dwelling size for 2-bedroom house ranges from 55m^2 to over double this size of 128m^2. By comparison a 2-bedroom flat ranges from 56m^2 to 90m^2. The degree of variation is even greater for 3-bedroom houses, which ranges from 76m^2 to 276m^2. It is clear that the degree of internal space variation is less for flatted dwellings than that of houses.

Table 2: Minimum Internal Space Range

1-Bedroom House	2-Bedroom House	3-Bedroom House	4-Bedroom House	1-Bedroom Flat	2-Bedroom Flat	3-Bedroom Flat
n/a	55 to 128	76 to 276	109 to 208	48 to 93	56 to 90	91 to 99

* Sample size too small to provide meaningful data
Source: Southend-on-Sea Borough Council 2011

4.7 Table 3 sets out the average gross internal space for new dwellings. The average internal space by number of bedrooms varies significantly between flatted dwellings and houses. Houses, on average, have a greater level of internal space compared to that of flats. Also of note, is that there is little internal space difference between 1-bedroom flats and 2-bedroom flats. This is a cause of concern as it implies that internal conditions of a 2-bedroom dwelling are being compromised to create an additional bedroom.

Table 3: Average Gross Internal Space

1-Bedroom House	2-Bedroom House	3-Bedroom House	4-Bedroom House	1-Bedroom Flat	2-Bedroom Flat	3-Bedroom Flat
n/a	89	113	157	69	70	95

* Sample size too small to provide meaningful data
Source: Southend-on-Sea Borough Council 2011

Comparison with Housing Corporation Residential Standards

4.8 Housing Corporation standards (2007) sets out minimum and maximum space requirements for publicly funded housing. The minimum range of acceptable area sizes was defined in order to deliver the optimum number of units, which were not too small to be liveable.

4.9 To ensure that space standards are tenure blind it will necessary to consider how market housing compares with the Housing Corporation standards and whether there is a need to align minimum standards for market and publically funded.

4.10 From the findings of the sample there is a clear identified local issue in terms of lack of internal floor space for dwellings intended for 3 and 4 occupants. A high

proportion of these dwelling types would not meet the minimum internal space standards requirements of the Housing Corporation.

4.11 These dwellings tend to be within 2-bedroom dwellings. This type of dwelling has had the highest proportion of dwellings delivered over the last 5-years at approximately 56% of all dwellings per annum between 2006 and 2010. The number of 2-bedroom dwellings that do not meet the Housing Corporation's minimum residential standards represents 10.7% of all 2-bedroom dwellings sampled and 5% of all dwellings. The high level of completions for this type of dwelling and the high proportion that would not meet the Housing Corporation's minimum residential standards emphasises the internal space issue within a Southend-on-Sea context.

4.12 By contrast, dwellings intended for 2, 5, 6 and 7 occupants would all meet the minimum internal space standards requirements of the Housing Corporation.

Table 4: Indicative Residential Space Standards

Number of Occupants	Minimum Housing Corporation GIA (floor area) m^2	No of dwellings that do not meet the standards
1	30	Not sampled
2	45	0
3	57	4
4	67	3
5	75 (1-storey) or 82 (2-storey)	0
6	85 1-storey) or 95 (2-storey)	0
7	108	0

* Sample size too small to provide meaningful data
Source: Southend-on-Sea Borough Council 2011

4.13 The inclusion of a minimum space standard within Southend-on-Sea's Local Development Framework's development plan documents would ensure that appropriate internal space would be delivered to meet the needs of the intended occupants of the proposed dwellings, especially for 2-bedroom dwellings. All other type dwellings appear to be meeting the Housing Corporation's minimum residential standards and therefore there would be minimal impact in terms of viability on the delivery of these type dwellings, if such a policy were to be introduced.

Section 5: Summary of Residential Space Issues

Introduction

5.1 The introduction of minimum space standards is supported by national planning policy and statute. The Planning and Compulsory Purchase Act 2004 imbeds sustainable development into the planning system whilst the Government's *'Sustainable Communities Plan'* considers decent homes to be at the heart of a sustainable community. Space standards are capable of being a key component of sustainable development in that they will: deliver a better quality of life; ensure decent homes for all; maximise densities; provide an appropriate mix of house types capable of meeting demonstrated strategic and local needs; provide high quality residential environments; and deliver sustainable design and construction. These aspirations are set out in *PPS1, PPS3* and *PPS12*.

5.2 The following paragraphs provide a summary of the key residential issues identified in the literature review. These key issues are set out under the following headings:

- Affordable and Market Housing;
- Room Cramming;
- Flexible Space;
- Quality of Life;
- Functionality;
- Storage;
- Outdoor Provision;
- Climate Change; and
- Economic Cost.

5.3 The number references in the following paragraphs refers back to the document numbers in Section 3 of this document.

Affordable and Market Housing

5.4 It was questioned whether there is a difference between the space needs of a household within an affordable house and one within a market house.

5.5 The literature review states that the minimum amount of space needed per person is not felt to vary by tenure (1, 6). Evidence cited within the literature review demonstrated that the desire for more indoor and outdoor space is strong across all tenure groups and household types and to be especially crucial for families (2).

5.6 It is stated that social housing tends to be fully occupied but this is not always the case for private housing over the lifetime of the dwelling. It is argued that dwellings built initially for private households or 'public' households will not always be occupied by such households. For example, 'public' households exercise the right to buy their home and so the dwelling 'moves' into the private sector whilst 'private' homes are often bought by public bodies such as housing associations. This refers not just to the potential tenure but also the household life cycle of a dwelling (13).

5.7 Research cited within the literature review found that irrespective of tenure both affordable and market households desire more space within the home (2). The research found that within both tenures kitchens were seen as too small and there was a lack of storage space.

5.8 Furthermore the *Sustainable Communities Plan* is focused on delivering a well-integrated mix of decent homes of different types and tenures to support a range of household sizes, ages and incomes. This *Sustainable Communities Plan* considered decent homes to be at the heart of a sustainable community (22).

Room Cramming

5.9 The amount of space within a dwelling is an important consideration in ensuring the delivery of 'good design'. However there has been a well documented decline in space sizes within new dwellings. Indeed current room sizes are comparable to those that prompted the Tudor Walters Report of 1918, which was introduced to deal with slums and overcrowding (20).

5.10 The number of bedrooms within a UK house (new or second-hand) is a key a determinant of its house price. With the cost of housing production being primarily related to the dwelling floor area, housebuilders will meet such aspirations by providing as many separate rooms as possible within a limited floor area. This approach has been referenced as 'room cramming' as it results in smaller rooms. The main consequent reduction is a reduction in each room's usefulness and flexibility (18). The research has indicated that people are prepared to accept the trade-off between smaller and denser homes, when other factors and advantages are present such as location (18).

5.11 A number of commentators have indicated the housing density measure 'dwellings per hectare' has inadvertently encouraged the trend towards delivering smaller dwellings sizes and a predominance of small units of 1 and 2 bedroom units (15). It is stated that 'dwellings per hectare' is not a meaningful measure of density if the aim of planning policy is to deliver liveable, decent homes. This density measure encourages developers to squeeze more units onto the same parcel of land. Attempts by planning authorities to encourage a mix of dwelling sizes (defined by number of rooms) compound the problem, resulting in the development of homes with 'half rooms' or unusable 'box rooms'.

5.12 It is stated that density should become a question of habitable rooms or residential floor space and that the efficiency of land should become an issue of occupancy (8, 15, 23). Other commentators take a similar view but state that density should take account of social and environmental factors that affects living standards (12, 19).

5.13 It was noted in the literature review that housebuilders argue that the introduction of space standards will result in fewer dwellings being built on a given amount of land and therefore reduced capacity. However, it was argued that without space

standards the quality of homes will be neglected to the detriment of delivering decent new homes (13).

Flexible Space

5.14 An important theme that has emerged from the literature review is the need for new dwellings to be flexible over the lifetime of the building to take account of the needs of different potential occupiers and/or changes in the way a household uses the space.

5.15 Flexibility is the potential for rooms in a home to be used in a variety of ways without altering the building fabric. In practice, this means making individual rooms large enough to accommodate different types and arrangements of furniture, carefully considering the location of doors, windows and built-in furniture and building in the potential for spaces to be linked or separated without moving walls or changing the position of openings (1, 2, 4, 6, 11, 16). Flexible housing also includes the potential to incorporate new technologies over time, to adjust to changing demographics and economic conditions (11, 16).

5.16 The literature review suggests that dwellings should be developed with an anticipated life of 100 years. If new housing is to be functional and adaptable, homes with a long lifespan are required that take account of how people will use space in the home will be required (13). As such it has been suggested that space standards should be set at a level which allows the property to cater for a reasonably wide variety of diverse household needs that may occur over its lifecycle (9). It is noted that it is not possible to know for sure what types of households will live in a dwelling over its lifetime, hence the need to ensure flexibility in the building fabric.

5.17 It was argued that the national housebuilders use a general standardisation of housing designs which delivers a housing stock that caters for a limited range of needs and which cannot be easily adapted to changing circumstances and consequently lacks flexibility (29). The literature review highlights that households do not always want, nor are they always able, to move home as their circumstances change. Therefore every home should be flexible enough to accommodate a range of possible changes in circumstances (e.g. lifestyles change such as starting or growing a family, working from home and ageing).

5.18 It was stated by a number of commentators that there is a need to ensure some rooms are multi-functional for example, to allow for use as a work space, study, bedroom or playroom (2, 4, 11, 16). Play, work and study are as much a part of daily life as cooking, eating and sleeping, while storage and circulation areas support and provide essential buffers between these varied and conflicting activities. In allowing different living patterns within the same space, flexible housing tends to be more adaptable and sustainable and also cost-effective over the long-term.

5.19 If the space is adaptable, it can be used for multiple functions rather than a single designated use (16). For example the modern use of a home means that bedrooms

are not just used for sleeping but are also used for work and study or to relax away in private from the social spaces of the home.

5.20 The inclusivity provided by homes that have space to respond to occupiers changing physical requirements over their lifetimes has the knock-on benefit of creating more balanced and stable neighbourhoods (4).

Quality of Life

5.21 A key requirement in the design of new homes that has been identified is the need for both social rooms and private rooms within the house. A criticism of modern housing is that the there is often inadequate space for children and adults to socialise and many people cannot find a quiet or private place to relax particularly in more fully occupied homes. Indeed this issue was identified within research. It was found that the overall dwelling size is generally seen as less important than the size of rooms, their airiness and their layout. This suggests that residents want spaces in the home that function well and are pleasant to live in. (10, 11).

5.22 The research also noted that in households with children, it was important that the adults and children could have well demarcated, private space in which to get on with their own activities and that open plan designs in the smaller homes reviewed in the study did not give enough privacy between adults and children (2). In family homes, it is stated that children and young people need space in bedrooms for homework, play and hobbies, storing their belongings, entertaining friends, and spending time alone (1, 16).

5.23 The research studies identified in the literature review demonstrated that is a correlation between education attainment and where there are opportunities for children to study in private (4, 6).

5.24 The literature review noted that the changing economic conditions which have been supported by technological advances have allowed people to work from home whether it is full-time or just a day a week. It has been noted that this working arrangement has allowed for a greater live-work balance. As a result there may well be a significantly greater demand for additional space within the home than has been the case over previous decades for designated workspace (4, 6, 18). Flexible working patterns and wider access to the internet has made it possible for more people to work from home. Sufficient space within a dwelling is necessary to enable flexible working patterns and thereby contribute to improving life-work balance (12).

5.25 The health and well-being of an individual is identified as an issue that could be detrimentally affected by small dwelling and room sizes. It is stated that the research indicates that there appears to be a link between overcrowding and children's educational attainment, occupants' stress levels and household dysfunction. Research shows the costs to society of poor housing may be greater than £1.5 billion per year. Research identified within the literature review indicated increasing space within the home is important for providing personal privacy, reducing

depression, anxiety and stress, giving children room to play and ensuring a good night's sleep. It was also highlighted that overcrowding can result in aggressive and anti-social behaviour (4, 6, 20, 24).

5.26 There are therefore general health and wellbeing benefits that accrue from living in a well-designed home that offers both privacy and sociability and that in all respects provides adequate space to function well (3, 6, 17).

5.27 Crime was identified as being an important issue that impacted upon quality of life. The literature review recommended that design of new dwellings met 'Secured by Design' standards (3, 19). When choosing areas to live in, people were attracted to an area by a number of factors including low crime rates (19).

5.28 It is stated within the literature review that no amount of sensitive design can compensate for houses and flats that are too small and that minimum space standards are required to improve quality of life for all and ensure that new homes are accessible and able to accommodate changing personal circumstances and growing families.

Functionality

5.29 The design of the internal layout of a dwelling should accommodate the furniture and activity space required for the intended number of occupants.

5.30 *'Homes for Today and Tomorrow'* (1961) states that the space needed by households is driven by usability factors. Specifically, it considers what furniture people might want to have in each room, what size and how much space is needed to use each item and how much room is required to move around the furniture (13). Research within the literature review demonstrated that the room sizes within new dwellings are not large enough for the furniture requirements needed for modern living and that regard should be given to (10, 13, 18):

- Space for the furniture & equipment required, such as, computers, televisions and kitchen appliances;
- Space to access and use the furniture & equipment, doors and windows;
- Space to move around the home among the furniture & equipment;
- Space to undertake normal living activities that do not just use furniture, for example, washing, dressing, cooking, eating, playing, socialising;
- Space for storage of "clean and dry" items on shelves (linen, boxed up possessions, mops, hoover etc);
- Space for "dirty" storage, such as, bicycles;
- Space to avoid feeling 'cramped'; and
- Sufficient separation of rooms to allow the required level of privacy.

Planning application submissions should be required to indicate on the submitted plans how dwelling types facilitate flexible use. This can be achieved by demonstrating how furniture can fit in a room and displaying alternative furniture arrangements (1).

5.31 Additional rooms, including utility rooms, studies and en-suite bathrooms, are encouraged, but will require additional floor area above the minimum GIA to avoid compromising the space and functionality of other parts of the home (1, 18).

Storage

5.32 The lack of storage within new homes was identified by a number of commentators as being a significant issue that causes a detrimental impact upon the way a home is used.

5.33 It was noted that everyday household items including cleaning equipment need to be readily accessible whilst other belongings are only in seasonal use or occasional use, for example, suitcases or decorating equipment. Without adequate storage space, people's belongings will take space away from the rooms of the home and limit enjoyment of them. Indeed, the longer a household lives in a home the more storage space they require as they accumulate material possessions (1, 2, 10).

5.34 Evidence cited in the literature review demonstrates that residents of new homes are generally dissatisfied with the space and storage areas in the kitchen. A lack of space for indoor recycling bins and space for small children to play safely in the kitchen when it is being used was identified (2, 10).

5.35 Home buyers want houses rather than flats, larger rooms and more storage. Studies by BCIS and CABE indicate a pattern of increased "cramming" of rooms into dwellings leading to smaller rooms and significant reductions in storage space (18). The views of households were taken about their homes and it was found that one third of households living in modern housing would like more storage space (17).

5.36 Homes should be sensibly planned and functional, that is, designed to meet the demands of everyday life, providing enough space and facilities, such as storage, to enable residents to live comfortably and conveniently (9). The evidence cited calls for dedicated built-in storage cupboards of 1.5 sq m for 2 person dwellings and 0.5 sq m for each additional occupant (1).

Outdoor Provision

5.37 Research cited within the literature review found that there is a desire for more outdoor space (2). A number of the publications reviewed found open space and landscape to be of importance in the design of housing (19).

5.38 It was also found that that there is 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'. 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 space for private recreational activity and outside the home (18).

Climate Change

5.39 Improving the quality of a dwelling in terms of space standards and function contributes towards the mitigation of climate change. There is a need to use water, fuel and other limited resources in the most efficient way possible, to reduce carbon emissions and minimise the environmental impact of new development.

5.40 It is generally assumed that new housing will last for over 100 years before it needs significant remodelling or complete redevelopment. However, housebuilders supply whatever will sell in the market towards the end of the construction period. They have no interest in whether their product will hold its value over the long-term or not. Poorly designed buildings will quickly become functionally obsolescent or unsuitable for anyone except a narrow range of households. Unnecessary redevelopment involves greater waste of energy and natural resources and increased carbon cost therefore makes it harder to achieve sustainability targets.

5.41 A discrepancy between public sector and market housing was identified. It was noted that public sector housing has to achieve a minimum sustainable home standard but such a requirement is not made for market housing. It was questioned why this discrepancy exists as climate change affects everyone (20).

5.42 Well-planned, generously lit and spacious homes are as important in delivering sustainability as urban design and building performance (20). It is stated that natural light significantly improves the quality of circulation areas and that these spaces can also provide a thermal buffer between outdoors and the habitable rooms of a dwelling and can help with regulating temperatures and passive solar heating. It is also stated that well-designed homes cost less to heat, light and maintain.

5.43 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 (18). Well-designed, sustainable housing will last longer, be more flexible in use, improve accessibility, safety and security, and grow old more gracefully (1, 15).

Economic Cost

5.44 Economic research into the cost of introducing minimum space standards has indicated that the proposed HCA standards would result in an increase of £2,350 per dwelling (9). It is noted that space standards are seen as a threat to housing affordability. However the experience of the housebuilding industry has been to factor 'planning costs' into land transactions which causes a suppression of land values. It is stated that the priority should be ensuring that homes built today will be of the right quality, and will be useful, in the decades to come (8).

5.45 It was noted that high quality design adds value to homes and their surroundings and improve the quality of life of residents (15) however the research has indicated

that the quality of new homes is not of a high standard. Only one in five schemes were rated as 'good' or 'very good' by CABE whilst one in three homes were considered so poor that they should not have been given planning permission (3).

5.46 It was also noted that because house prices have risen faster in the south than the north of England, the size of houses in the south are generally smaller (21). Research has indicated that given the UK characteristic of judging the size of house by the number of bedrooms and not the actual floorspace there has been a tendency for smaller rooms (2).

Section 6: Recommendations

6.1 The issue of residential space standards has already incorporated into the Council's adopted planning policy through the Southend-on-Sea Core Strategy (adopted 2007) and the Design and Townscape Guide SPD (adopted 2009). In line with Policy KP3 of the Southend-on-Sea Core Strategy, a policy is required within the Development Management DPD that elaborates upon the existing policies in order to achieve design excellence in all new development and contribute towards sustainable development. The following paragraphs set out the policy recommendations based on the findings of the literature review and the need for a residential space standard policy.

Affordable Housing / Market Housing

1. Set minimum residential space standards for all housing irrespective of the tenure. To ensure that space standards are tenure blind it will necessary to align these with the existing Housing Corporation standards.

Flexible Space

2. Seek the provision of flexible rooms that are large enough and capable of being used for multi-functional purposes.

3. Ensure that new dwellings are built to take account of the anticipated life of the building and not just the short-term.

Quality of Life

4. Ensure that there is sufficient demarcation of space between adults and children within family housing. There is a need to provide social and private spaces. Open plan layouts do not provide sufficient privacy on their own.

5. Provision of space that will allow residents to work from home and / or children to study in private. This space should be large enough to accommodate a computer, bookcase or filing cabinet, and chair with space to move around the furniture. This space should have access to the internet.

6. Ensure that ceiling heights enable sufficient light and airiness.

7. Density should not just be measured by dwellings per hectare but instead be measured by occupancy per hectare. Density should also take account of social and environmental factors that affect the quality of life.

8. Seek to adopt 'Secured by Design' standards to reduce potential crime.

Functionality

9. Planning applications will need to set out the number of intended occupants that the dwelling has been designed for. Planning applications will need to set out the floorspace area and demonstrate how this meets the needs of the intended occupants.

10. All homes should be expected to meet the Lifetimes Homes Standard.

11. Rooms such as utility rooms, studies and en-suite bathrooms should be considered as additional rooms that are encouraged but are in addition to the minimum space requirements.

12. Planning application submissions should be required to indicate on the submitted plans how dwelling types facilitate flexible use. This can be achieved by demonstrating how furniture & equipment (such as computers, televisions and kitchen appliances) can fit in a room and displaying alternative furniture arrangements and marking out the circulation routes.

13. Planning application submissions will need to demonstrate that sufficient storage has been provided. Storage will need to include 'clean and dry' items such as linen, boxed up possessions, mops, vacuum cleaner etc and space for 'dirty' storage such as bicycles.

14. Planning applications will need to demonstrate that there is sufficient storage space within the kitchen to meet the needs of the intended user. This will also include demonstrating that there is sufficient space for indoor recycling bins.

15. Planning applications will need to demonstrate that the layout will not feel 'cramped'.

Outdoor Provision

16. Planning applications will need to demonstrate how private outdoor amenity space has been included within the scheme and that this space is usable and large enough for the intended occupiers.

Climate Change

17. Natural light will be encouraged through the dwelling to improve the quality of the dwelling and to create a thermal buffer between outdoors and the habitable rooms of a dwelling and can help with regulating temperatures and passive solar heating. Well-planned, generously lit and spacious homes are as important in delivering sustainability as urban design and building performance.

18. Dwellings will need to be designed to ensure a lifespan of at least 100 years.

Appendix 1: Document References

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Appendix 2: Residential Space Standards

Categories		HCA	GLA (Housing Design Guide): 2010	English Partnerships	Housing Corporation Standards (HQI)		Irish Standards	Sunderland Housing Group: Swing a Cat		Parker Morris	1949 standard
		Gross Internal Area (GIA) m²									
					Min	Max		Min	Max		Mean
Date		Mar-10	2010	Nov-07	Apr-07		2007	2007		1961	1949
Flats	1b1p										27.9
	1b2p	48	50	51	30	35	45	40	57	43	
	2b1p										32.5
	2b2p										46.5
	2b3p	61	61	66	45	50	63	57	80	58	
	2b4p	70	70	77	45	50	73	57	80	71	
	3b4p		74		57	67	76	65	90		
	3b5p	86	86	93	57	67	86	65	90	80	
	3b6p		95		57	67	94	65	90		
	4b5p		90		67	75		72	102		79

	4b6p	99	99	106	67	75		72	102	87	83.6
2-Storey House	**2b3p**	71		66	45	50	70	57	80		
	2b4p	80	83	77	45	50	80	57	80	77	72
	3b4p		87		57	67	83	65	90		
	3b5p	96	96	93	57	67	92	65	90		85.6
	4b5p		100		67	75		72	102		
	4b6p	109	107	106	67	75		72	102	95	97.1
3-Storey House	**3b5p**	101	102	93			102	65	90	96	95.3
	4b5p		106					72	102		
	4b6p	114	113	106				72	102	100	106.4