

# Greater London Authority Housing Standards Review:

## EVIDENCE OF NEED

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May 2015

**GREATER LONDON AUTHORITY**

**Housing Standards Review**

Evidence of Need

**Final Report**

May 2015

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## EXECUTIVE SUMMARY

### Purpose of the Study

- i. This Housing Standards Viability Study was commissioned by the GLA to demonstrate the requirement in London for the Government's new national housing standards and to determine the impact of the adoption of these standards within London Plan policy on the viability of development in London.
- ii. This element of the study consists of a desktop review of existing evidence and research relating to housing standards, and analysis of the impact of population projections on the need for each of the standards:
  - Nationally described **space standards**
  - Optional **access** requirements M4(2) and M4(3)
  - Optional requirements for **water efficiency**
  - **Carbon dioxide reduction targets / Energy standards**
- iii. It demonstrates a clear need for the inclusion of housing standards within the London Plan. They are a necessary and appropriate mechanism to ensure that housing is sustainable and of high quality whilst offering the space and flexibility required to accommodate the demands of a rapidly growing and ageing population in a high density city facing distinct climate challenges.

## **1.0 INTRODUCTION**

- 1.1 On 25 March 2015 the Government set out in a Written Ministerial Statement the introduction of new technical housing standards in England and detailed how these would be applied through planning policy<sup>1</sup>. The new system comprises of new additional 'optional' Building Regulations on water and access, and a nationally described space standard<sup>2</sup> (referred to as "the new national technical standards"). Further guidance on the new standards is set out in the National Planning Policy Guidance (NPPG).
- 1.2 The aim of a national set of standards is to enhance residential quality and reduce the administrative burden on new housing developments by simplifying and rationalising the wide variety of standards that local authorities across England apply to new homes.
- 1.3 In its Statement, the Government has set out transitional arrangements until such time as local planning authorities are able to review their local plans. Once a local authority decides to review their local plan, in order to apply the optional national standards, it must demonstrate that there is both a need for the standards and show that they have considered the viability implications of adopting the standards.
- 1.4 The Mayor already has in place housing standards which broadly conform to the Government's standards and have been subject to a number of Examinations in Public (EiPs). However, for the avoidance of doubt and in order to meet the National Planning Policy Framework (NPPF) tests of need and viability, the Mayor has commissioned research to identify the need for the optional standards and assess the impact of the adoption of the national standards (both mandatory and optional standards) on the viability of development in London.
- 1.5 This is one of three studies. This report looks specifically at evidence of need for the standards. Section 2 sets out the policy context and Sections 3 – 6 set out in turn, the analysis specific to each of the standards on space, access, water and energy. Section 7 provides a summary and conclusions to the findings.
- 1.6 The Study 2 report is the Housing Standards Review Viability Assessment and assesses the viability implications of the application of the housing standards across London. The Study 3 Report assesses the proposed change to the carbon dioxide reduction targets for non-residential development.

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<sup>1</sup> DCLG, March 2015. *Steps the government are taking to streamline the planning system, protect the environment, support economic growth and assist locally-led decision making*. Written Ministerial Statement

<sup>2</sup> DCLG, 2015. *Technical housing standards – nationally described space standard*

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## **2.0 POLICY CONTEXT**

### **2.1 National Policy Context**

#### **National Housing Standards**

- 2.1.1 In August 2013 the Government consulted on its intention to introduce national housing standards<sup>3</sup> to replace existing standards used by local authorities across England. The aim was to reduce the administrative burden on new housing developments by simplifying and rationalising the large number of standards that local authorities apply to new homes. In September 2014, the Government issued for further consultation the technical matters related to the review.
- 2.1.2 Through the Deregulation Bill, which was given Royal Assent on 26 March 2015, the Government has made amendments to the Building Act 1984 to enable building regulations to set 'optional requirements' in relation to access and water above the basic minimum set out in the Building Regulations 2010. In terms of access, the Government has introduced a three tier standard for accessibility in Part M (access to and use of buildings) of Schedule 1 of the Building Regulations. There is a mandatory baseline building regulation, which sets a minimum requirement M4(1) – visitable dwellings and two optional requirements, M4(2) – accessible and adaptable dwellings and M4(3) – wheelchair user dwellings<sup>4</sup>. For water efficiency, in addition to the mandatory building regulation of 125 litres per person per day, the Government has introduced an optional requirement of 110 litres per person per day. Furthermore, the Government has also introduced an optional national standard for space, although the standards for space are not part of the amendments to building regulations.
- 2.1.3 In the Bill, the Government has also introduced a mandatory security building regulation requirement (related to locks) and has updated its mandatory building regulation on solid waste storage requirements (bin storage).
- 2.1.4 These changes enable the new standards to be enforced through building regulations with the optional requirements applied through planning policy by way of condition attached to planning consents
- 2.1.5 In addition, the Written Ministerial Statement, published on the 25<sup>th</sup> of March sets out the Government's new national planning policy on the setting of standards. In this Statement, the Government has also set out transitional arrangements until such time as local planning authorities are able to review their local plans. The transitional

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<sup>3</sup> DCLG, 2013. *Housing Standards Review: Consultation*

<sup>4</sup> [www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/354091/02\\_140731\\_HSR\\_Supporting\\_Doc1\\_Access.pdf](http://www.gov.uk/government/uploads/system/uploads/attachment_data/file/354091/02_140731_HSR_Supporting_Doc1_Access.pdf)

arrangements state that in terms of the optional housing standards, a local planning authority's equivalent standards will be considered robust where justified with sound evidence. Local authorities can publish their own statements setting out how the national standards will replace their existing standards.

2.1.6 Alongside these amendments to building regulations, the Deregulation Act introduced the provision to amend Section 1(c) of the Planning and Energy Act 2008 from the implementation of Zero Carbon in 2016. The Planning and Energy Act enables local authorities to set energy policies requiring development in their area to comply with energy efficiency standards that exceed the energy requirements of building regulations. The Government indicated that they would expect local planning authorities to take their proposed requirements for zero carbon homes into consideration when setting energy performance standards in the run up to 2016. The minimum onsite energy performance requirement for zero carbon homes will be broadly equivalent to the Code for Sustainable Homes Level 4<sup>5</sup>, with developers having various options to meet the remaining carbon reductions, including further investment in onsite energy performance and low carbon technologies, or offset payments. Code 4 is broadly equivalent to a 25 per cent improvement on Part L 2010. London Plan policy 5.2 seeks a 40 per cent improvement on Part L 2010. However as with the Government's proposed zero carbon homes standard, this allows for offsite investment if required.

2.1.7 The Ministerial Statement also confirmed that there will be a small site exemption to the allowable solutions element of the Zero Carbon Homes policy applying to housing sites of 10 units or fewer<sup>6</sup>.

2.1.8 The Ministerial Statement makes clear that the intention of the housing standards is to ensure that new homes are high quality, accessible and sustainable. The optional new technical standards should only be required through any new Local Plan policies if they address a clearly evidenced need and where their impact on viability has been considered<sup>7</sup>. This report analyses the first of these considerations, relating to need, with the other studies in this commission considering the viability aspect.

#### **National Planning Policy Framework, 2012**

2.1.9 In assessing the need for the proposed national optional housing standards, authorities must be able to satisfy the statutory requirements of the National Planning Policy Framework (NPPF, 2012). The NPPF requires local planning authorities to ensure that *"the Local Plan is based on adequate, up-to-date and relevant evidence about the*

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<sup>5</sup> DCLG, *Planning Update March 2015*.

<sup>6</sup> *Ibid.*

<sup>7</sup> *Ibid.*

*economic, social and environmental characteristics and prospects of the area*". This proportionate evidence base must also *"take full account of relevant market and economic signals"* (NPPF, para 158).

- 2.1.10 The NPPF also sets out the requirements for local planning authorities to *"assess the likely cumulative impacts on development in their area of all existing and proposed local standards, supplementary planning documents and policies that support the development plan, when added to nationally required standards...Evidence supporting the assessment should be proportionate, using only appropriate available evidence"* (NPPF, para 174).

#### **National Planning Practice Guidance**

- 2.1.11 The NPPG includes details on the application of the Optional Technical Standards, stating that:

*"Local planning authorities have the option to set additional technical requirements exceeding the minimum standards required by Building Regulations in respect of access and water, and an optional nationally described space standard. Local planning authorities will need to gather evidence to determine whether there is a need for additional standards in their area, and justify setting appropriate policies in their Local Plans."*<sup>8</sup> [Author's emphasis]

- 2.1.12 And:

*"Local planning authorities should consider the impact of using these standards as part of their Local Plan viability assessment."*

## **2.2 London Policy Context**

### **Draft Minor Alterations to the London Plan**

- 2.2.1 The draft Minor Alterations to the London Plan (MALP) amend London Plan policy relating to:

- Nationally described **space standards**
- Optional **access** requirements M4(2) and M4(3)
- Optional requirements for **water efficiency**
- **Carbon dioxide reduction targets**

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<sup>8</sup> DCLG. *National Planning Practice Guidance, Housing – Optional Technical Standards*, para 002, reference ID 56-002-20150327



- 2.2.2 The principal alterations are summarised below and a summary of each policy change is outlined at the outset of each specific section.
- 2.2.3 The London Plan space standards set out at Table 3.3, secured by Policy 3.5, are amended where required to correspond with the Nationally Described Space Standards. However, the MALP strongly encourages a ceiling height of at least 2.5m, whereas the Government's nationally described space standards sets this at 2.3m.
- 2.2.4 In terms of access, the current requirement for all new housing to be Lifetime Homes compliant is superseded with a requirement in Policy 3.8 for 90 per cent of new housing to be 'accessible and adaptable' dwellings, reflecting the optional Building Regulations access requirements under M4(2). The requirement for 10 per cent wheelchair dwellings has been updated to reflect Building Regulation M4(3) 'wheelchair user dwellings'.
- 2.2.5 The London Plan Policy 5.15 water consumption target of 105 litres or less per head per day is retained. However, a footnote and supporting text is added to explain that this target excludes the allowance for 5 litres or less external water consumption. This brings the policy in line with the optional requirement of 110 litres per head per day.
- 2.2.6 The London Plan Policy 5.2 targets relating to minimising carbon dioxide emissions are retained and they continue to seek a 'stepped' approach towards zero carbon residential buildings by 2016. The target has been recalibrated and expressed in terms of Part L 2013 Building Regulation. In the period 2014-2016 it requires a 35 per cent minimum improvement on 2013 Building Regulations.

### 3.0 INTERNAL SPACE

#### 3.1 National Space Standards and London Plan Policy

##### The Nationally Described Standards

- 3.1.1 On the 27<sup>th</sup> of March the Government published its “Technical Housing Standards – nationally described space standard<sup>9</sup>” and updated the NPPG to reflect the policy approach set out in the written ministerial statement<sup>10</sup>. See section 2.2 and 3.1.11 – 3.1.12 of this report for detail of the nationally described space standards and associated requirements.
- 3.1.2 The nationally described standards are not significantly different from those already in place in the London Plan. However, certain aspects of the standards do vary, including the standards for larger houses. There is also a reduced minimum (2.3m) floor to ceiling height in the nationally described standards than already exists in London policy (2.5m). Nevertheless, of the stakeholders surveyed as part of this research study, 74 per cent considered that there would be minimal or no impact on the supply of new homes resulting from the imposition of the national standards<sup>11</sup> (see Housing Standards Review – Viability assessment<sup>12</sup> for more detail on the impact of the space standards on viability).
- 3.1.3 Nationally, the housing standards policy context has become increasingly complex and fragmented. Standards across England have been developed in a piecemeal fashion based on different criteria. For instance, some space standards within local planning guidance are based purely on unit sizes. However, the HCA’s space standards which relate to the National Affordable Housing Programme, include reference to occupancy and are set against a performance based scoring system rather than a minimum threshold to achieve<sup>13</sup>.
- 3.1.4 This situation is emphasised within responses to the Government’s August 2013 Housing Standards Review consultation, which identified that “*current space standards adopted by local authorities vary from simple minimum internal floor areas for a small*

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<sup>9</sup> DCLG, 2015 *Technical housing standards – nationally described space standard*

<sup>10</sup> DCLG. 2015 Written Ministerial Statement Rt Hon Eric Pickles. Planning Update

<sup>11</sup> David Lock Associates, Hoare Lea, Gardiner & Theobald, 2015. *Greater London Authority Housing Standards Review Viability Assessment*

<sup>12</sup> David Lock Associates, Hoare Lea, Gardiner & Theobald, 2015. *Greater London Authority Housing Standards Review Viability Assessment*

<sup>13</sup> *Housing Corporation Design and Quality Standards, 2007; and Housing Quality Indicators version 4, 2008*

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*number of typical home types to highly detailed standards setting out requirements for individual room sizes, widths and specific furnishing requirements”<sup>14</sup>.*

- 3.1.5 As highlighted in the 2010 GLA report into the need for housing design standards, there is *“a pressing need for consolidation and consistency in the design standards that the industry is currently expected to work with”<sup>15</sup>*. The nationally described space standards go some way to achieving this in providing a ‘level playing field’. The rolling out of space standards nationally is intended to provide clarity and consistency for developers when dealing with local planning authorities in England, helping to provide a clearer and more streamlined approach. It should be recognised that the introduction of a pan-London set of space standards in the Mayor’s 2011 London Plan did successfully establish a consistent set of standards for developers in London, which provided certainty and clarity about the requirements for new development within the capital. However, national standards have the potential to reduce the burden of regulation through review and consolidation into a more streamlined approach <sup>16</sup>, and also add extra status to the existing London standards.
- 3.1.6 Common standards for space at a national level should also allow a more competitive market *“with land values adjusting to take account of the requirements”<sup>17</sup>*. Experience of space standards in other countries has shown that they can create a ‘market standard’ that shapes expectations of buyers and creates stability in the industry. Moreover, standards may even be able to reduce the risk of market failure - smaller homes have a narrower market and a focus on a smaller market is inherently risky for builders, and in turn for buyers who may find it difficult when it comes to resale<sup>18</sup>.
- 3.1.7 Nationally described cross tenure space standards are a new concept in national policy guidance terms and reflect current reports and evidence indicating that existing dwellings in the UK are below the European average in terms of space. For example, a number of studies have found that the UK has the smallest homes by floor space in Europe, with a recent study finding that the average new build property is 76sq m compared with a unit size almost double that amount of 137sq m in Denmark<sup>19</sup>. New homes in the Netherlands and Denmark are on average 53 per cent and 80 per cent bigger than new homes in the UK respectively<sup>20</sup>. RIBA research also shows that space

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<sup>14</sup> DCLG, 2013. *Housing Standards Review: Consultation*, Para 126

<sup>15</sup> Greater London Authority, 2010. *Housing Design Standards: Evidence Summary*, para 3.2.6

<sup>16</sup> Ibid, para 5.12

<sup>17</sup> Ibid

<sup>18</sup> See Carmona et al 2010 op cit and Gallent, N, Madeddu, M and Mace A. 2010 Internal housing standards in Italy and England: reviewing the ‘conditions’ of regulation. RICS

<sup>19</sup> See Morgan M and Cruickshank H 2014. Quantifying the extent of space shortages: English Dwellings, Gallent, N, Madeddu, M. & Mace, A. 2010. Internal housing space standards in Italy and England. *Progress in Planning*, 74(1), 1-52, RIBA 2011. The case for space. The size of England’s New Homes. HATC, 2006. *Housing Space Standards*. GLA

<sup>20</sup> RIBA. 2011. The case for space, page 10

standards in Germany are on average 20 per cent higher than those set out in the Mayor's 2015 London Plan<sup>21</sup>.

- 3.1.8 In London standards on space requirements have been part of the London Plan since 2011 (see Policy 3.5 and Table 3.3 of the 2015 Plan). Additional detail is provided within the Housing Supplementary Planning Guidance (SPG) which was published in 2012.
- 3.1.9 Alongside minimum gross internal unit areas, the standards in the London Plan and Housing SPG include other space, dimension and quality requirements (room sizes and dimensions, floor to ceiling heights, requirements for private outdoor space, restrictions on the number of dwellings per core etc). The same principles are now incorporated within the nationally described standard. The SPG contains detailed requirements based on Lifetime Homes and HCA guidance, both of which were initially applied only to new affordable housing developments. However, as discussed below, the nature of housing in London and the importance of space for quality of life mean that the standards should apply to all housing tenures.
- 3.1.10 The Mayor set out his intention in the 2015 London Plan to bring forward a minor alteration to the Plan to reflect the Government's new national technical standards. All development proposals located within London will be expected to meet these standards. Currently, the Mayor's existing minimum space standards for new development are broken down by dwelling type, bedroom number and bedspaces.
- 3.1.11 The 2012 Housing SPG provides a more detailed breakdown of minimum floorspace for all housing types<sup>22</sup>, from 1 person studios to 12 person, 7 bedroom dwellings, up to 3 storeys in height.

Figure 3.1: London Plan Table 3.3

	<b>Dwelling type</b> (bedroom (b)/ persons-bedspaces (p))	<b>GIA</b> (sq m)
<b>Flats</b>	1p	37
	1b2p	50
	2b3p	61
	2b4p	70
	3b4p	74
	3b5p	86
	4b5p	90
	4b6p	99
	<b>2 storey house</b>	2b4p

<sup>21</sup> RIBA. 2011. The case for space, page 10

<sup>22</sup> Greater London Authority, 2012. *Housing Supplementary Planning Guidance*, Annex 4

	3b4p	87
	3b5p	96
	4b5p	100
	4b6p	107
<b>3 storey house</b>	3b5p	102
	4b5p	106
	4b6p	113

Figure 3.2: London Housing Supplementary Planning Document Annex 4

Occupancy (persons)	No. of Beds	1 storey	2 storey	3 storey
1p(a)		37		
1p(b)		39		
2p	1	50	61	
3p	2	61	74	
4p	2	70	83	
	3	74	87	93
5p	3	86	96	102
	4	90	100	106
6p	3	95	105	111
	4	99	107	113
	5	103	113	119
7p	4	108	118	124
	5	112	122	128
	6	116	126	132
8p	4	117	127	133
	5	121	131	137
	6	125	135	141
	7	129	139	145
9p	5	130	140	146
	6	134	144	150
	7	138	148	154
10p	5	139	149	155
	6	143	153	159
	7	147	157	163

11p	6	152	162	168
	7	156	166	172
12p	6	161	171	177
	7	165	175	181

(Source: London Housing Supplementary Planning Document, Annex 4)

3.1.12 The Government's new space standards are presented in a comparable format and broadly require similar minimum floorspace for the various housing types, although the floor space for larger houses is different to the London Plan. They are set out in Table 1 of the nationally described space standard (as detailed in Figure 3.3 below).

Figure 3.3: Nationally Described Space Standard Table 1

Number of bedrooms	Number of bed spaces	Minimum GIA (m <sup>2</sup> )			Built-in storage (m <sup>2</sup> )
		1 storey dwellings	2 storey dwellings	3 storey dwellings	
1b	1p	39 (37)*			1.0
	2p	50	58		1.5
2b	3p	61	70		2.0
	4p	70	79		
3b	4p	74	84	90	2.5
	5p	86	93	99	
	6p	95	102	108	
4b	5p	90	97	103	3.0
	6p	99	106	112	
	7p	108	115	121	
	8p	117	124	130	
5b	6p	103	110	116	3.5
	7p	112	119	125	
	8p	121	128	134	
6b	7p	116	123	129	4.0

\*Where a studio has a shower room instead of a bathroom, the floor area may be reduced from 39m<sup>2</sup> to 37m<sup>2</sup>, as shown bracketed

3.1.13 In addition to the minimum floorspace per dwelling, there are a number of other technical requirements that are set out within the nationally described space standard. The London Housing SPG also contains similar guidance. Paragraph 10 of the nationally described space standard sets these out, stating [with SPG comparison where relevant], "The standard requires that:

- a) The dwelling provides at least the gross internal floor area and built-in storage area set out in Table 1

- b) *A dwelling with two or more bedspaces has at least one double (or twin) bedroom*
- c) *In order to provide one bedspace, a single bedroom has a floor area of at least 7.5m<sup>2</sup> [compared to a good practice standard of 8m<sup>2</sup> in the current London Housing SPG] and is at least 2.15m wide*
- d) *In order to provide two bedspaces, a double (or twin bedroom) has a floor area of at least 11.5m<sup>2</sup> [compared to a good practice standard of 12m<sup>2</sup> in the current London Housing SPG]*
- e) *One double (or twin) bedroom is at least 2.75m wide [reflecting the London Housing SPG] and every other double (or twin) bedroom is at least 2.55m wide*
- f) *Any area with a headroom of less than 1.5m is not counted within the Gross Internal Area unless used solely for storage (if the area under the stairs is to be used for storage, assume a general floor area of 1m<sup>2</sup> within the Gross Internal Area)*
- g) *Any other area that is used solely for storage and has a headroom of 900-1500mm (such as under eaves) is counted at 50 per cent of its floor area, and any area lower than 900mm is not counted at all*
- h) *A built-in wardrobe counts towards the Gross Internal Area and bedroom floor area requirements, but should not reduce the effective width of the room below the minimum widths set out above. The built-in area in excess of 0.72m<sup>2</sup> in a double bedroom and 0.36m<sup>2</sup> in a single bedroom counts towards the built-in storage requirement*
- i) *The minimum floor to ceiling height is 2.3m for at least 75 per cent of the Gross internal area [minimum of 2.5m in current the London Housing SPG].”*

3.1.14 In terms of this last requirement, this is a change from the current London SPG requirement of at least 2.5m between finished floor level and finished ceiling level in habitable rooms<sup>23</sup>. The importance of ensuring adequate ceiling heights is discussed in part 3.2 and 3.4 below.

### **3.2 Rationale for national space standards**

3.2.1 The absence of cross tenure space standards has been linked to the aforementioned lack of space in UK homes<sup>24</sup>.

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<sup>23</sup> Greater London Authority, 2012. *Housing Supplementary Planning Guidance*, p72

<sup>24</sup> Greater London Authority, 2010. *Housing Design Standards: Evidence Summary*, para. 1.8

- 3.2.2 Morgan and Cruickshank's (2014)<sup>25</sup> research found that between 21 per cent and 55 per cent of dwellings in England failed to meet standards based on the London Housing Design Guide 2010. Within this they found that flats and small terraced houses were most commonly below the standards. This is of particular relevance to London given the prevalence of this type of dwelling. Research by RIBA shows that new homes in the UK are getting smaller both in terms of average overall floor space and room sizes when compared to the average sizes in the existing built housing stock<sup>26</sup>. This finding suggests that the market cannot be relied upon to deliver adequate levels of space, in the absence of housing standards required through the planning system. Moreover, the sampling of recent new build development on a regional basis by RIBA shows that standards in London are helping to secure larger 1 bed homes than in other regions where no standards are in place<sup>27</sup>.
- 3.2.3 Research also shows that adequate internal space is an important factor for households, despite the fact that homes in the UK are typically marketed on the basis of room numbers, rather than floorspace<sup>28</sup>. In a survey conducted by Ipsos Mori and RIBA, a high proportion of respondents identified the importance of space when purchasing or renting a home, with 80 per cent of respondents stating that they would be more likely to select a home that meets a minimum standard relating to 'space'<sup>29</sup>. A RIBA commissioned YouGov poll to test public attitudes towards new built housing showed that nearly a third of people surveyed would not consider buying a home built in the last 10 years, or would only do so as a last resort<sup>30</sup>. Of these, 60 per cent of said that it was because the rooms are too small. Consultation responses received as part of the Government's housing standards review showed that most respondents were in favour of space standards (80 per cent) and space labelling (88 per cent)<sup>31</sup>.
- 3.2.4 A study commissioned by CABE 'Space in new homes-what residents think' (2009) surveyed 2,239 residents in private homes built since 2002 in Greater London and Southern England. The research found that homes often do not have enough:
- space for the furniture residents want or need;
  - storage space;
  - space to prepare food easily;

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<sup>25</sup> Morgan M and Cruickshank H, 2014. Quantifying the extent of space shortages: English dwellings. Building Research and Information.

<sup>26</sup> RIBA, 2011. *The Case for Space: the size of England's new homes*, page 10

<sup>27</sup> RIBA, 2011. *The Case for Space: the size of England's new homes*, page 23

<sup>28</sup> RIBA, 2011. *The Case for Space: the size of England's new homes*, page 4

<sup>29</sup> Ipsos Mori, 2013. *Housing Standards and Satisfaction: What the public wants – IPSOS Mori and RIBA Survey Results*

<sup>30</sup> RIBA, 2011. *The case for space*, page 8

<sup>31</sup> DCLG, 2014. *Housing standards review Summary of Responses*



- space for children and adults to socialise.

3.2.5 Ensuring adequate amounts of space helps ensure homes can provide a comfortable standard of living, improve natural ventilation and provide opportunities to segregate activities and ameliorate feelings of claustrophobia<sup>32</sup>. A study carried out by HATC in 2006<sup>33</sup> identified that additional space in homes may result in a broad range of health, wellbeing and quality of life benefits.

3.2.6 CABE also commissioned UCL to carry out a study of the benefits of space standards which was published in 2010<sup>34</sup>. This concluded that the following are important acknowledged benefits of ensuring provision of sufficient space<sup>35</sup>:

- The general health and wellbeing benefits that accrue from living in a well-designed home that offers both privacy and sociability, and that it 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;
- The potential to work from home;
- Greater flexibility and ability to adapt to changing needs and lifestyles;
- 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 mixed and balanced neighbourhoods;
- The societal benefits stemming from reduced overcrowding and the consequential reduction in aggressive and anti-social behaviour;
- Creating a potentially more stable housing market, driven by a more complete understanding of long term need and utility rather than short term investment decisions.

3.2.7 RIBA's 'The Case for Space' report<sup>36</sup> suggests that homes should provide adequate internal space to address a range of necessary domestic requirements, including space for:

- Furniture, equipment and possessions needed by residents (including occasional visitors);
- Normal living activities including washing, dressing, cooking, eating, playing and socialising;

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<sup>32</sup> Morgan and Cruickshank 2014 *Op cit*

<sup>33</sup> HATC 2006 *Op Cit*

<sup>34</sup> University College London, 2010. *Space standards: the benefits*

<sup>35</sup> *Ibid* page 13.

<sup>36</sup> RIBA, 2011. *The Case for Space: the size of England's new homes*

- The storage of clean and dry items (eg linen, mops, hoovers, kitchen cutlery and appliances);
- The storage of dirty items (eg bicycles and prams);
- Household waste and recycling;
- Studying or working from home and relaxing.

3.2.8 Although focusing on the issue of overcrowding, research commissioned by Shelter in 2005<sup>37</sup> highlighted how having adequate space is important in providing personal privacy, reducing depression, anxiety and stress and ensuring children have room to play. There is also evidence about the negative implications of lack of space on children's educational attainment<sup>38</sup>. Overcrowding is a particular issue in London which is highlighted in part 3.4.

3.2.9 An interrelated problem is that increasingly cramped new homes can have inadequate access to natural light which has adverse health effects and affects the way we live<sup>39</sup>. RIBA launched the 'Without Space + Light' initiative as part of their 'Home Wise' campaign in 2013 after research showed that "63% of people we [RIBA] asked rated natural light as the most important aspect of a home"<sup>40</sup>. The application of minimum space standards should secure adequate space within homes and an acceptable level of natural daylight.

3.2.10 A critical element of the standards, as well as overall space requirements, is the minimum floor to ceiling height. As is discussed below, London is under great pressure to deliver housing, with the majority of new stock coming forward as flats within high density developments. Appropriate floor to ceiling heights contribute to ensuring appropriate daylight as well as ventilation.

3.2.11 All this evidence points to the importance of ensuring a home has adequate levels of space for the number for the number of people it is intended to accommodate. The relevance of these findings for London specifically is discussed in more detail in part 3.4.

### **3.3 Space standards – historic context**

3.3.1 The section below sets out the history of space standards in England. This helps understand how the rationale for space standards in the past are applicable to day.

#### **The Inter-War Years**

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<sup>37</sup> Reynolds L 2005. *Full house? How overcrowded housing affects families*. Shelter

<sup>38</sup> HATC 2006 *op cit* and Carmona M, Gallent N, and Sarkar R, 2010. *Space standards the benefits*. UCL

<sup>39</sup> RIBA, 2015. *Without Space + Light*, available at: [www.withoutspaceandlight.com/#!/about](http://www.withoutspaceandlight.com/#!/about)

<sup>40</sup> RIBA, 2015. *Without Space + Light*, available at: [www.withoutspaceandlight.com/#!/without-light](http://www.withoutspaceandlight.com/#!/without-light)

- 3.3.2 The first space standards were set out in the 1919 Housing Act which related to all new *“housing intended or used for occupation by the working classes”*<sup>41</sup>. This was initiated by the Government in commissioning the Tudor Walters Committee *“to review housing conditions and make recommendations regarding the design and layout of new homes to be built following the First World War”*<sup>42</sup>. This recommended that every house should contain three ground floor rooms (a living room, parlour and scullery), at least three bedrooms (one of which must take two beds), bathroom and larder.
- 3.3.3 The primary function of the Act was to provide details of subsidies and guidance for increased building following the War. However, in response to the Committee’s recommendations concerning a perceived lack of fitness among WW1 military recruits linked to the standard of the housing from which they came, it also included standards for new local authority housing. This was highlighted by the Tudor Walters Committee in its Report<sup>43</sup>, and in a campaign at the time specifically relating to the standard of housing and the categorisation of the fitness of the soldiers, which bore the tagline, *“You cannot expect to get an A1 population out of C3 homes”*<sup>44</sup>.
- 3.3.4 Requirements relating to space for new housing to be provided by Local Authorities were therefore set within the 1919 Housing and Planning Act: *“requiring provision adequate for the use of and readily accessible to each family of – (i) closet accommodation; (ii) water supply and washing accommodation; (iii) accommodation for the storage, preparation and cooking of food; and, where necessary, for securing separate accommodation as aforesaid for every part of such house which is occupied as a separate dwelling”*<sup>45</sup>.
- 3.3.5 It is apparent that from the first introduction of standards for housing, which included ensuring adequate storage and separated space, the reasons were much the same and remain valid in London today; to improve the health and well-being of residents through improved space, recognising the causal link between the two.
- 3.3.6 These recommendations were revised in the light of the Dudley Report of 1944<sup>46</sup>. Again, there was clearly a drive to rebuild the significant number of homes lost during Second World War. However, it was again recognised that the quality of accommodation is of crucial importance to the well-being of residents, and must not be lost in the pressures accompanying the efforts to build in large numbers.

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<sup>41</sup> Housing, Town Planning, &c. Act, 1919, 26-(1)

<sup>42</sup> Greater London Authority, 2010. *Housing Design Standards: Evidence Summary*, para. 3.1.3

<sup>43</sup> Alan Crisp, 1998. *The Working-Class Owner-Occupied House of the 1930s*

<sup>44</sup> *Ibid*

<sup>45</sup> Housing, Town Planning, &c. Act, 1919, 26-(1)(d)

<sup>46</sup> Bowie, Duncan, May 2010. *The Politics of Housing Development in an Age of Austerity*. Highbury Group Paper

- 3.3.7 The author of an archived Spectator commentary article<sup>47</sup> of the time stated: *“In starting a great national drive for the better housing of the nation it is essential to avoid the defects of the past—not merely the drabness and squalor of the nineteenth century, but the monotony of the inter-war period, the cramped accommodation for living, the inadequacy of outbuildings, and the absence of labour-saving devices and comforts. To get the least that we demand we should be sure that those who are preparing schemes should employ trained architects, and that we should draw on that great body of professional talent with which this country is better supplied than most. The Committee recommend local authorities to concentrate on three-bed-roomed houses, with two good rooms on the ground floor, with a separate place for laundry and similar work, bathrooms and w.c.s in different compartments, and adequate arrangements for a coal range and other utilities.”*
- 3.3.8 The benefits and importance of quality of space were recognised by commentators and seen as integral to guidance. The tone of the Dudley Report reflected opportunities for new technologies to respond to the growing concern about housing policy for families with children and their particular space needs. The recommendations from the Dudley Report were written in to a 1944 Housing Manual, suggesting a 800-900 sq ft (74.3-83.6 sq m) norm for a three bed dwelling<sup>48</sup>.

#### 1960s-Present

- 3.3.9 Space was also a key consideration in the Parker Morris report, *Homes for Today and Tomorrow* in 1961, which was further developed by the Ministry of Housing and Local Government in Design Bulletin 6 in 1963<sup>49</sup>. The standards related to council housing, but also to all new housing delivered in New Towns. At the time of the Parker Morris report there was considerable levels of and a significant reliance on local authority built accommodation for the less well off ‘working classes’, hence the focus on and recognition of ensuring this accommodation was of a suitable standard.
- 3.3.10 The Parker Morris standards established a functional approach, based on living patterns, furniture and equipment: *“the right approach to the design of a room is, first to define what activities are likely to take place in it, then to assess the furniture and equipment necessary for those activities, and then to design around these needs, plus others no less important, such as aspect, prospect and communication with other parts of the home”*<sup>50</sup>.

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<sup>47</sup> The Spectator, 20 July 1944, page 3. *Post War Housing*. Accessed at <http://archive.spectator.co.uk/article/21st-july-1944/3/post-war-housing>

<sup>48</sup> UCL, April 2010. *Housing standards: evidence and research. Space Standards: The Benefits*, p2

<sup>49</sup> Greater London Authority, 2010. *Housing Design Standards: Evidence Summary*, pp. 12

<sup>50</sup> Greater London Authority, 2010. *Housing Design Standards: Evidence Summary*, para 4.1.5

- 3.3.11 Parker Morris standards included the requirement for a flushing toilet in one, two and three bedroom dwellings; a minimum net floor area of the equivalent of 72m<sup>2</sup> for 4-person semi-detached dwellings; and enclosed kitchen storage space of the equivalent of 2.3m<sup>2</sup> for dwellings of 3+ persons<sup>51</sup>.
- 3.3.12 This further historical evidence again demonstrates that the need for quality of living through provision of minimum internal space has long been recognised. The Parker Morris approach focused on the needs of the family occupying the space as a 'community', providing social and private space<sup>52</sup>.
- 3.3.13 Though not formally adopted, in 1967 the National House Builders Registration Council (NHBRC – later to become the NHBC) provided guideline standards for new housing, which were based upon the Parker Morris standards. Importantly, this was the first time there was a recognition that guidance should also be provided for private housing.
- 3.3.14 The Parker Morris space standards were removed in the 1980s, with the Government arguing that the market would provide the right type and size of homes<sup>53</sup>, and with the publication of the Local Government, Planning and Land Act 1980.
- 3.3.15 Local authority housebuilding declined from the 1970s and through 1980s and Housing Associations became the main provider of new social housing. The 'Right to Buy' introduced as part of the Housing Act 1980 led to many of the better quality and larger, family-sized council properties being purchased. The stock retained was of poorer quality and the number of houses managed by London's councils shrank from 840,000 in 1984 to just over 500,000 by the end of the century<sup>54</sup>.
- 3.3.16 The Housing Corporation set out to reverse the resulting reduction in existing quality of social housing stock by developing its Scheme Development Standards (SDS) in 1993 for new social housing development. The fifth edition of the SDS was published in 2003. Whilst this stopped short of setting specific space standards, it made clear that, "*Internal environments should be comfortable, convenient, capable of sensibly accommodating the necessary furniture and equipment associated with specific room activities...*".
- 3.3.17 The SDS suggests that Housing Quality Indicators assessments should be carried out to ascertain how developments achieve quality of internal accommodation. Many of the indicators relate to "adequate space". All the evidence suggests that internal space and quality of living are intrinsically linked. The requirement to comply with minimum

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<sup>51</sup> Parker Morris Committee, 1961. *Homes for Today and Tomorrow*.

<sup>52</sup> UCL, April 2010. *Housing standards: evidence and research. Space Standards: The Benefits*, p3

<sup>53</sup> Royal Institute of British Architects, September 2011. *The Case for Space – The Size of England's New Homes*

<sup>54</sup> The University of the West of England, 2008. *The History of Council Housing*.

standards through adopted policy allows policy makers to ensure that this is not compromised by other factors influencing development in London.

- 3.3.18 The approach to housing standards has evolved over time, reflecting particular social and family needs. Since 1919, policy and guidance has been seen as the appropriate tool to secure appropriate space standards. There is a clear recognition that space can enhance quality of life and personal health, which should not be diluted as a result of pressures to build significant numbers of new homes. These pressures are now particularly acute in London, and there is a clear and evidenced need for their retention in the context of the housing numbers required to meet the projected demand, as set out below in part 3.4.
- 3.3.19 The need for space standards to reflect the functional requirements of living in homes with the necessary furniture and equipment remains relevant today. This is reflected by the fact that the Homes and Communities Agency's (HCA) 2007 proposed national core housing and sustainability standards specify standards in relation to the internal layout of homes, including minimum space standards, minimum storage provision and recommended room sizes and ceiling heights<sup>55</sup>.
- 3.3.20 Similarly the Housing Quality Indicator on which the greatest emphasis is placed by the HCA relates to unit size, a further indication of internal space being directly linked to quality of space and, ergo, quality of living. The HCA indicators are only applicable to affordable housing, but the standards themselves are intended to ensure well designed and good quality housing.

#### **Housing standards in London**

- 3.3.21 Space standards have been embedded in policy in London since the publication of the 2011 London Plan and are retained in policy in the recently adopted 2015 London Plan. The standards were introduced in London to ensure a minimum gross internal area for all new residential development. The principal intention was to *“to encourage provision of enough space in dwellings to ensure homes can be flexibly used by a range of residents”*<sup>56</sup>. These standards were subject to a cost and delivery impact assessment<sup>57</sup> and were found sound at Examination in Public in 2010<sup>58</sup>. They were also subject to viability testing as part of the 2014 Strategic Housing Land Availability Assessment viability study<sup>59</sup>.

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<sup>55</sup> Greater London Authority, 2010. *Housing Design Standards: Evidence Summary*, para 3.2.4

<sup>56</sup> Greater London Authority, 2010. *Interim London Housing Design Guide*, pp. 7

<sup>57</sup> GVA, 2010. *London Housing Design Guide: Cost and Delivery Impact Assessment*. HCA, LDA, GLA.

<sup>58</sup> Planning inspectorate, 2010. *Draft replacement London Plan Report of the Panel March 2010*.

<sup>59</sup> Three Dragons, David Lock Associates, Traderisks, 2014. *Greater London Authority 2013 SHLAA Viability Assessment*

- 3.3.22 The space standards in the 2015 London Plan have, therefore, been subject to extensive previous independent examination and found to be sound and viable. The proposed minor alterations to the London Plan provide an appropriate method of incorporating the optional national standards, which are broadly consistent with current GLA standards. It would bring the two in line with each other and ensure that the need for space standards continues to be a central policy theme.
- 3.3.23 More detail on the GLA's standards are set out in the London 2012 Housing SPG, which provides guidance for boroughs and developers. As the London Plan is part of the development plan for each borough, the standards provide a consistent minimum standard across London. However, currently boroughs are able to adopt more generous standards if they can be justified. In the main, London boroughs have adopted the minimum standards as set out in the Plan and SPG. The Local Authority Policy Survey that accompanied the publication of the DCLG standards on 31 March 2015 suggested that 33 per cent of authorities surveyed included a space standard policy and of these, 56 per cent of the standards reflected HCA or London Housing SPG standards<sup>60</sup>.

#### **3.4 London specific rationale for space standards**

- 3.4.1 The GLA carried out a significant amount of research and analysis when assessing the need for housing standards as part of the evidence base for the 2011 London Plan and the 2010 Housing Strategy. In particular, it commissioned HATC<sup>61</sup> to provide an understating of the evolution, role, operation and impact that space standards have had and may have in the future within London. Building on this study and the large amount of other research available, the GLA produced a summary of evidence for its proposed Housing Design Standards in 2010<sup>62</sup> to inform the Examination in Public into the Draft Replacement London Plan (DRLP). These standards are now set out in Policy 3.5 of the London Plan London Plan<sup>63</sup> and the 2012 Housing Supplementary Planning Guidance (SPG). The discussions below demonstrate that the evidence set out in the 2010 report remains relevant today. Indeed, the need for standards can be argued to have increased in importance with the growth of London's population and the significant pressure on current and future housing stock.
- 3.4.2 Like the rest of England, new homes being delivered in London before the introduction of space standards were not delivering adequate levels of space. A HATC study

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<sup>60</sup> EC Harris, June 2014. *DCLG Housing Standards Review Local Authority Policy Survey*

<sup>61</sup> HATC, 2006. *Housing Space Standards*. GLA

<sup>62</sup> Greater London Authority, 2010. *Housing Design Standards: Evidence Summary*

<sup>63</sup> Mayor of London, *London Plan 2015. Consolidated with Alterations since 2011*

(carried out in 2010)<sup>64</sup> found that two-bedroom dwellings fell well below proposed HCA benchmarks (at that time) by an average of 10m<sup>2</sup> (equivalent to roughly the size of a small double bedroom) and almost 60 per cent of the one-bedroom dwellings in London analysed had no storage space. This is a particular concern in London where the majority of new homes are within flatted developments, which could be potentially occupied by families with children (see below).

- 3.4.3 Following the introduction of space standards through the 2011 London Plan, the GLA commissioned a baseline study to support the monitoring of the new standards, this focused on private homes only as minimum standards for affordable housing had already been in place for some time. This found that only 42 per cent of the units sampled met the 2011 London Plan space standards, again demonstrating the need for formal space standards to ensure new homes include adequate space.

#### **Population Growth, Demographics and Changing Occupation Patterns in London**

- 3.4.4 London's population is growing significantly and is now greater than any other time in recorded history. GLA central population projections, on which the 2015 London Plan is based, show that the capital's population is expected to grow by around 1.5 million between 2015 and 2036, raising the capital's population to over 10 million by 2036<sup>65</sup>. By 2050 London's population is expected to be about 11.27 million, over 3.1 million more people than today<sup>66</sup>. The 2015 London Plan also identifies that the number of households in London will increase from 3.74 million in 2011 to 4.26 million by 2036<sup>67</sup>. Using these population projections, the London Strategic Housing Market Assessment (SHMA) identifies a need for 48,841 additional homes a year to meet London's growing housing requirements and address existing backlog need over the period 2011-2035<sup>68</sup>. In the face of these pressures the Mayor considers that housing must be provided to a high quality and standard. In the foreword to the Draft London Housing Strategy 2013, the Mayor states that:

*"we have to ensure that these are inspiring new homes in attractive neighbourhoods and vibrant town centres, and that they are well connected to jobs – not just serried ranks of stultifying rabbit hutches", and, "My aim is to make sure that the homes we build better reward those who work hard to make this city a success."*<sup>69</sup>

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<sup>64</sup> HATC, *Room to swing a cat? The amount and use of space in new dwellings in London & the South East*, 2010, pp. 21

<sup>65</sup> Mayor of London, *London Plan 2015. Consolidated with Alterations since 2011*, page 27

<sup>66</sup> Mayor of London, 2014. *London 2050 Infrastructure Plan*. GLA

<sup>67</sup> Mayor of London, *London Plan 2015. Consolidated with Alterations since 2011*, para 1.15b – 1.15c

<sup>68</sup> Mayor of London, *The 2013 London Strategic Housing Market Assessment*

<sup>69</sup> Mayor of London, November 2013. *Homes for London: The Draft London Housing Strategy 2013*



- 3.4.5 This emphasises the Mayor's support for the continued inclusion of housing standards within the London Plan:

*"I believe it is right to expect higher housing standards for taxpayers' money, especially as allowing design mistakes today would inevitably burden the public purse tomorrow."*

*"New homes in London are some of the smallest in Western Europe and to continue to build cramped 'hobbit homes' is indefensible."* Both Boris Johnson, Mayor of London<sup>70</sup>

- 3.4.6 In the face of a rapidly rising population and the densities that will be necessary to meet this need (see density sub-section below), housing standards are recognised as one of the most effective tools to ensure that new homes are of good quality, fit for purpose and meet the needs of its residents now and in the future. Essentially, it is clear that the principle and main justification for the housing standards remains the same as it always has, as evidenced by the 1919 Housing Act and the 1944 Dudley Report – namely the quality of homes and the well-being of their residents must be ensured, despite the pressures that arise from the need to build significant numbers of homes.

- 3.4.7 London has also seen a reduced net outward migration rate since the start of the 2008 recession. *"Out migration was over 260,000 pa until 2008, after which point it fell to 240,000 pa and has yet to return to pre-2008 levels."*<sup>71</sup> There are a number of reasons for this including the decline in job opportunities, particularly in areas outside of London, which led to reduced movement in the housing stock, leading to families staying in London, often in flats, rather than moving to other areas of the UK (including the wider South East) as they may have previously done.

- 3.4.8 In combination with natural population growth and continued inward migration, the outward migration from the time of the recession has *"underpinned higher annual increments to the population, especially since 2007."*<sup>72</sup>

- 3.4.9 To accommodate population and household growth, London must double recent annual rates of housing output and must sustain this level of growth for the next 20 years. This will mean fully optimising housing potential on large brownfield sites in areas of good accessibility, in line with Policy 3.4 of the London Plan and guidance in the Mayor's Housing SPG. The inclusion of housing standards within London Plan policy is especially crucial at the present time, in ensuring that substantial increases in

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<sup>70</sup> Mayor of London, from [www.london.gov.uk/priorities/housing-land/improving-quality/putting-design-at-the-heart-of-each-new-home-we-build](http://www.london.gov.uk/priorities/housing-land/improving-quality/putting-design-at-the-heart-of-each-new-home-we-build), accessed 15/4/15

<sup>71</sup> Mayor of London, *London Plan 2015. Consolidated with Alterations since 2011*, para 1.9

<sup>72</sup> Ibid

housing output are achieved, without reducing the quality of new homes (see density below).

### Density

- 3.4.10 As discussed above, the London Plan identifies a need for 49,000 additional homes a year to meet London's growing housing requirements and address existing backlog need over a 20 year period<sup>73</sup>. The 2015 London Plan is predicated on the idea that London can meet its own requirements without necessitating release of Green Belt or Metropolitan Open Land. The 2015 plan is clear that this can only be done by optimising densities on brownfield development, particularly those areas which are highly accessible by public transport (for example town centres). This approach was found sound at the EIP, but in his report, the inspector was clear that in meeting the pressing need for housing in London must not be done in a way that means London becomes an unpleasant place to visit, live and work<sup>74</sup>. Ensuring adequate space is a key part of ensuring the long term sustainability of London, particularly if families are to be accommodated in cities<sup>75</sup>.
- 3.4.11 There exists a significant amount of academic literature around the benefits and harms of increased densities both on quality of life and the economic success of a city (for example see Boyko and Cooper 2011<sup>76</sup>, Burton 2000, Glaeser 2012<sup>77</sup>). Higher density housing should not automatically lead to smaller space standards. However, without such space standards, there is a risk that developers would interpret increased density as equating to a reduction in dwelling size<sup>78</sup>. A study of regulators, builders and architects in Italy found that more space in homes was viewed as a crucial means of ensuring 'liveability' especially in instances where planning authorities are pushing for higher densities<sup>79</sup>.
- 3.4.12 The density matrix at Table 3.2 of the 2015 London Plan provides guidance on development densities that are potentially acceptable, depending on Public Transport Accessibility Level (PTAL) ratings and taking the prevailing character of the area into account. The Housing SPG is clear that the matrix should not be applied mechanistically on a site by site basis and, depending on the site specifics and the design quality of the proposed development, schemes may exceed the density matrix.

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<sup>73</sup> Mayor of London, *The 2013 London Strategic Housing Market Assessment*

<sup>74</sup> PINS, 2014. [Examination in Public] *Report to the Mayor of London*, para 42

<sup>75</sup> See Winston N. 2014. Sustainable Communities? A comparative Perspective on Urban Housing in the European Union. *European Planning studies* 2014.

<sup>76</sup> Boyko, C.T and Cooper R. 2011 Clarifying and re-conceptualising density. *Progress in Planning*. 76 (1).

<sup>77</sup> Glaeser E 2012. *Triumph of the City*.

<sup>78</sup> HACT 2006 *Op Cit*

<sup>79</sup> Carmona 2010 *op cit*

3.4.13 The 2013 SHLAA report provided an analysis of the density of completions in London on sites of 0.25ha and above, between 2004 and 2013, within the various PTAL areas and character settings<sup>80</sup>:

*Figure 3.4: Average density (dwelling per hectare) of completions 2004-2013 on sites 0.25ha and above by PTAL.*

PTAL	0	1	2	3	4	5	6	Average
Central	5	131	212	232	200	313	328	156
Urban	11	73	118	137	183	210	274	126
Suburban	12	38	69	128	75	351		54

*Figure 3.5 Average density (dwelling per hectare): allocated and potential sites 2015-2025.*

PTAL	0	1	2	3	4	5	6	Average
Central		103	152	207	283	310	393	302
Urban		79	120	138	167	203	240	152
Suburban	38	43	63	66	100	107	130	59

3.4.14 Compared to Figure 3.4, Figure 3.5 shows that, at an average of 302 dwelling per hectare (dph) and 152dph within central and urban areas is expected to be delivered in order to achieve London Plan minimum targets. Consequently, it can be assumed that new development in London will need to be built at a higher average density than that which has been delivered in order to meet London’s housing requirements.

3.4.15 In addition to the flexibility set out in the Housing SPG, the London Plan also offers the potential for the density guidelines within the Housing SPG and the density matrix to be exceeded in some town centres: *“In all centres with good public transport, the residential element of mixed use development is likely to have scope to go towards the top of the relevant density range. The Housing SPG provides guidance on the exceptional circumstances in which these ranges can be exceeded. These higher density developments will be particularly suitable in addressing the growing housing requirements of different types of smaller households including some older Londoners, as well as specialist needs such as those of students.”*<sup>81</sup>

3.4.16 Official DCLG statistics detailing the density of new dwellings completed in the UK show that average residential densities in London have increased substantially since 1999 and were over three times the UK average during 2008-2011 (see figure 3.5a below). In inner London average densities during this period were over 5 and a half times the UK average. Even in outer London densities are typically double the UK average. For example, the average density in Tower Hamlets during this period was

<sup>80</sup> Mayor of London, 2013. *The London Strategic Housing Land Availability Assessment 2013*, p64

<sup>81</sup> Mayor of London, *London Plan 2015. Consolidated with Alterations since 2011*, para 2.72F

385 dwellings per hectare<sup>82</sup>. Whilst these densities are important in order to optimise potential housing capacity and address London’s substantial housing need, it is critical higher residential densities are achieved alongside adequate internal space standards to ensure a good quality of life for occupants.

*Figure 3.5a: Density of new dwellings built 1996 to 2011*

Location	Density - dwellings per hectare			
	1996-1999	2000-2003	2004-2007	2008-2011
London	57	78	105	140
Inner London Average	84	126	164	230
Outer London Average	40	47	66	81
UK Average	25	28	41	42

Source: DCLG, 2013, Table P231 Land Use Change: Density of new dwellings built, England, 1989 to 2011

- 3.4.17 This evidence demonstrates a track record of optimising densities in London and a commitment for this to continue, perhaps at even higher levels in appropriate locations. The need to do so is clear – to meet the significant increase in housing requirements.
- 3.4.18 This is yet further evidence that demonstrates the need to incorporate housing standards in London Plan policy to ensure that the standard of accommodation is not compromised by the continued volume of building at high densities.
- 3.4.19 Access to natural light and ventilation in homes is also closely linked to the density of developments. Where land is in limited supply and land costs high, as is the case in much of London, there is an increasing pressure to build upwards in the form of high density housing<sup>83</sup>.
- 3.4.20 Ensuring adequate GIAs and high ceiling heights can significantly improve the light, ventilation and comfort of a high density dwelling. The current standard in London is for ceiling heights to be a minimum 2.5m for habitable rooms, with higher heights encouraged. The Government standard of 2.3m for 75 per cent of the dwelling may not necessarily deliver the benefits associated with the Mayor’s current standard. Moreover, minimum standards can often be interpreted by developers as maximum standards. Again, this emphasises the need for appropriate standards which have been present within the London Housing SPG for some time.
- 3.4.21 Adequate ventilation is particularly important given the climatic projections that temperatures will increase in the UK. The UK Climate Projections 2009 (UKCP09) suggests that:

<sup>82</sup> DCLG, 2013 Table P231 Land Use Change: Density of new dwellings built, England, 1989 to 2011

<sup>83</sup> London First, 2014. *Home Truths: 12 steps to solving London’s Housing Crisis*, pp. 24

- by the 2020s, summer mean temperatures could increase by 1.5 degrees Celsius
- by the 2050s, summer mean temperatures could increase by 2.7 degrees Celsius
- by the 2080s, summer mean temperatures could increase by 3.9 degrees Celsius

3.4.22 The effects of climate change are already being felt. Average summer temperatures in London have warmed by over 2°C over the period 1977 – 2006<sup>84</sup>. These climate change increases in temperature could be exacerbated by the urban heat island effect<sup>85</sup>. The heat generated in the city by traffic, air conditioning systems and other energy uses also act to raise temperatures. This man-made contribution to the urban heat island effect can have significant local impact in high-density areas, raising summer temperatures by a further 2°C<sup>86</sup>. If the use of air conditioning were to become more widespread, the impacts of the urban heat island effect in London would be greater.

3.4.23 The August 2003 heatwave provided a dramatic example of how vulnerable Londoners are to heat. It is estimated that at least 600 people died in London<sup>87</sup> because of the heatwave. The impact of the 2003 heatwave on Londoners appears to have been greater than anywhere else in the UK<sup>88</sup>. An analysis of the excess deaths during the August 2003 heatwave for each UK government region shows that whilst London did not experience the highest temperatures nationally, London had the highest number of excess deaths for any region, even allowing for the size of its population.

3.4.24 London's aging population is more susceptible to the detrimental health effects of the urban heat island effect. Up to 2036, it is projected that London's population over 64 will increase by 64 per cent, from 580,000 to reach 1.49 million<sup>89</sup>.

3.4.25 To address the health concerns of the urban heat island effect it is important that housing is designed to ensure the comfort of occupants over the lifetime of the development. The London Plan sets out a cooling hierarchy. The third element of this hierarchy is to 'manage heat within the building through exposed internal thermal mass

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<sup>84</sup> Mayor of London. *London Climate Change Adaptation Strategy 2011*

<sup>85</sup> The urban heat island effect is created by the thermal mass within a city, such as its roads and buildings. Heat is absorbed into these structures and slowly released as the temperature cools. The release of heat keeps the temperature higher than the surrounding area.

<sup>86</sup> Hamilton I., Davies M., Steadman P., Stone A., Ridley I., and Evans S. (2009). *The significance of the anthropogenic heat emissions of London's buildings: A comparison against captured shortwave radiation*. Building and Environment 44(4) pp. 807-817

<sup>87</sup> Office for National Statistics. Excess deaths are calculated by subtracting the number of expected deaths from the number of observed deaths. These are estimates because it is not possible to define the cause of death being due to high temperatures.

<sup>88</sup> Johnson H., Kovats R.S. et al (2005) The impact of the 2003 heat wave on daily mortality in England and Wales and the use of rapid weekly mortality estimates

<sup>89</sup> Mayor of London, *London Plan 2015. Consolidated with Alterations since 2011*

and high ceilings'. High ceilings are important to address overheating and ensure adequate ventilation<sup>90</sup>.

3.4.26 London's housing need must be achieved in a sustainable way by providing a good standard and quality of living, with space standards for London being fundamental to this objective. Indeed, embedding these requirements in policy can ensure that numbers and density are not sought at any cost. The Summary of Responses published in March 2015 to the Housing Standards Review consultation demonstrates why standards are needed. It states, "*Opposition to the proposed space standard was most significant from builders / developers with more than double the number opposing the space standard than supporting it. The more fundamental concerns which were put forward as reasons to object to the proposals were that: space should be left to the market.*" However, the experience in the UK where there has not been national space standards has shown that the market cannot be relied upon to deliver adequate levels of space. To illustrate this point, research by RIBA shows that new homes in the UK have been shrinking in terms of overall floor space and the average floor space per room when compared to the existing housing stock<sup>91</sup>.

3.4.27 This further emphasises the need for the London Plan space standards policy.

#### Type

3.4.28 The predominance of high density flatted development in London increases the pressure on quality, as referenced above. The 2011 census data shows that flats comprise just over half of London's accommodation, compared to less than 20 per cent in the rest of the country<sup>92</sup> and make up the large majority (7/8<sup>th</sup>) of new dwellings being built in London.

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<sup>90</sup> Mayor of London, *Draft Interim Housing SPG, 2015*, page 79

<sup>91</sup> RIBA, 2011. *The Case for Space: the size of England's new homes*, page 10

<sup>92</sup> Mayor of London, 2014. *Housing in London 2014 – the evidence base for the Mayor's housing Strategy*, p16

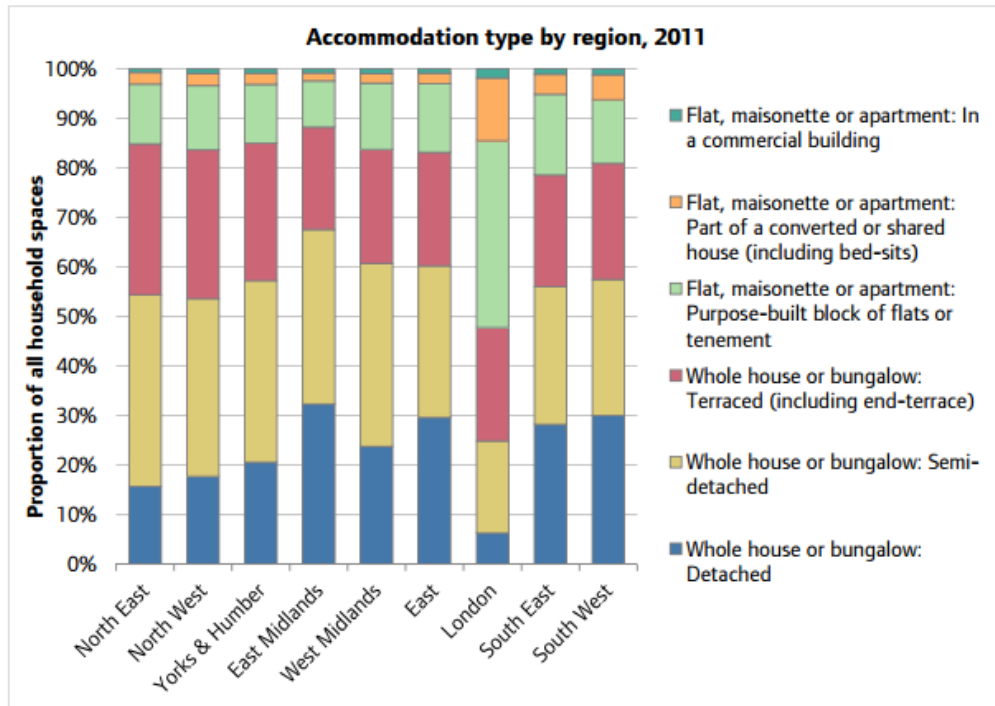


Figure 3.6: Accommodation type by region, 2011 (Source: Mayor of London, *Housing in London 2014*)

3.4.29 In terms of new build housing, London Development Database (LDD) monitoring shows that 85 per cent of completed new homes in London between 2009 and 2012 were flats. Monitoring also shows that 70 per cent of completed 3 bed units in London were flats, rather than houses, which are likely to be occupied by families with children. In addition, despite the London Plan's definition of a family unit being one with three beds or above, a significant number of families live in 2 bed units<sup>93</sup>. The greater number of families living in flats in London means that these homes need to be of high quality and provide adequate family space that is suitable for accommodating children and teenagers. However, research investigating the size of homes in terms of floor space has found that flatted developments are less likely to meet adequate size requirements<sup>94</sup>.

3.4.30 The London Strategic Housing Market Assessment (SHMA) shows that demand for 3 and 4+ bedroom homes comprises around 48 per cent of net annual housing requirements between 2015 and 2035<sup>95</sup>. Importantly, it shows that 31 per cent of projected annual household growth in London between 2011 and 2035 comprises families with children<sup>96</sup> - amounting to over 12,000 households each year. Space

<sup>93</sup> Census data suggests that 30% of families with children live in two beds. ONS census data.

<sup>94</sup> See for example HATC 2012 *op cit* and Morgan and Cruickshank 2014 *op cit*.

<sup>95</sup> Mayor of London, 2013, London Strategic Housing Market Assessment, 2013, page 2

<sup>96</sup> Mayor of London, 2013, London Strategic Housing Market Assessment, 2013, Table 11, page 74

standards will be essential to address this requirement for adequately sized family housing.<sup>3.4.3</sup>

3.4.31 Research discussed in part 3.2 demonstrates the crucial importance of adequate levels of space on the quality of family life. The provision of adequate internal and storage space is a particular issue for families with children living in flatted accommodation, as outdoor and internal space to care for and entertain children can be more limited in single storey residential accommodation without gardens that is located above the ground floor. The nationally described space standards reflect the Mayor's Housing SPG standards in requiring minimum bedroom sizes and dimensions and requirements for double / twin bedrooms. These measures assist in the delivery of flexible accommodation, capable of housing individuals, couple or families in adequate space.

### **Overcrowding**

3.4.32 Ensuring the delivery of appropriately sized new build housing provision will be important to addressing overcrowding issues in London in all tenures, given the levels of housing demand highlighted in the SHMA and affordability issues. The London Strategic Housing Market Assessment (SHMA) shows that 8.4 per cent of households in London were overcrowded compared to 2.1 per cent in the rest of England, based on English Housing Survey data<sup>97</sup>. It also shows that there are around 126,000 overcrowded households in affordable housing need to move to an affordable home of a more suitable size<sup>98</sup>. Due to housing affordability issues in the capital, families and other households may choose to economise on space and the number of rooms in a home, potentially leading to overcrowding.

### **Tenure**

3.4.33 Over recent years, and particularly since the 2008 recession, there has been a change in the proportion of London households in different housing tenures. Levels of owner occupation have fallen to just under half of all households in 2011, with the number of private rented sector households increasing from 14 per cent in 1991 to 26 per cent in 2011<sup>99</sup>.

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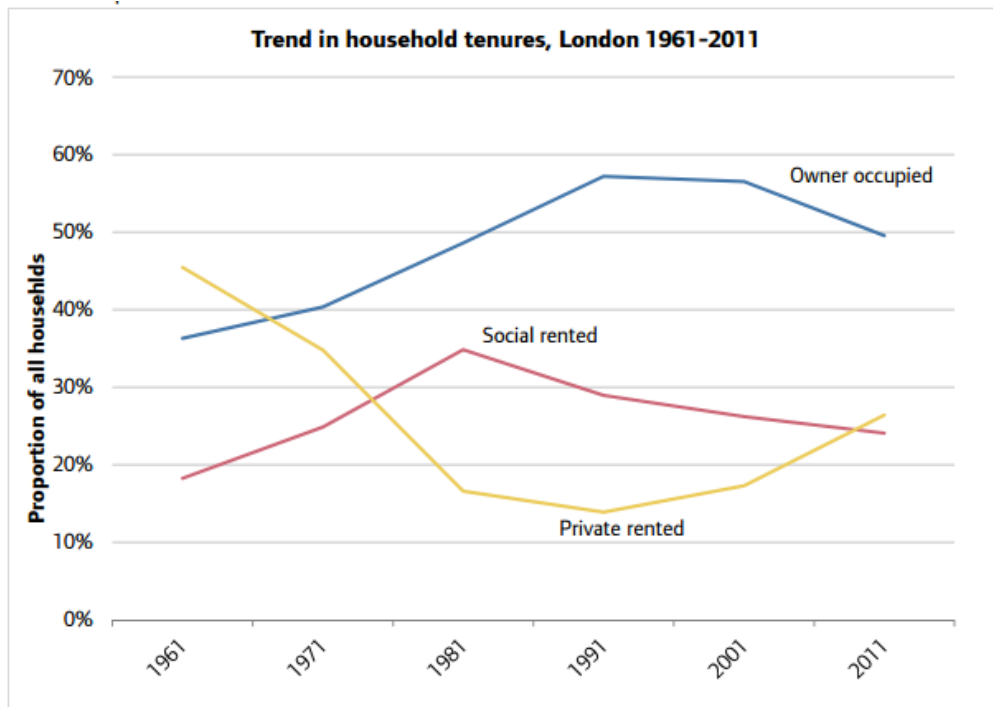
<sup>97</sup> Mayor of London, 2013, London Strategic Housing Market Assessment, page 66

<sup>98</sup> Ibid, page 2

<sup>99</sup> Mayor of London, 2014. *The 2013 London Strategic Housing Market Assessment*, para 2.13



Figure 3.7: Trend in household tenures, London 1961-2011 (Source: Mayor of London, *Housing in London 2014*)



3.4.34 As highlighted in Paragraph 3.2.1 above, historically housing standards have applied to social housing ensuring the large numbers of local authority accommodation were built to an appropriate and high quality standard. This ensured the health and well-being of residents who were generally those in the most need. Local authorities built significant volumes of housing during the post-war period. Reports commissioned at the time recognised the importance of space and standards in contributing to the standard of living and quality of life of the population. However, tenure patterns have changed and this should be reflected in the application of housing standards to all housing tenures.

3.4.35 The overall cost of housing has an impact on the way people use homes. Whilst London has always been home to a significant private rented sector - partly due to the number of mobile workers who appreciate a flexible tenure – house price increases and the continued reduction of the social housing sector has meant that more and more people are relying on the private rented sector to meet their housing needs. 2011 census data for London shows that there are more private rented units (861,865) than social rented (785,993). The proportion of London households who own their own home had fallen to just under half by the time of the 2011 census, the first time owner occupiers have been the minority since the 1980s<sup>100</sup>.

<sup>100</sup> Mayor of London, 2014. *Housing in London*.

- 3.4.36 The shrinking of the social housing sector has led to more people in housing need being housed in private rented accommodation, sometimes in properties previously owned by the social sector<sup>101</sup>. Accommodation in both tenures is significantly more likely to be occupied to the maximum (according to the bedroom standard) or be over-occupied than properties within the owner occupied sector<sup>102</sup>. 21 per cent of London's families with children now live in the private rented sector<sup>103</sup>.
- 3.4.37 This demonstrates the pressures that are placed upon dwellings, in potentially having to cater for families, rather than smaller households as may have been originally assumed. Cross-tenure housing standards ensure that dwellings are large enough and with sufficient living space to accommodate families or sharers. This reflects how a home might be used by different households over time and provides flexibility and adaptability.
- 3.4.38 Access to mortgage lending has significantly reduced since the credit crunch, making it much harder for first time buyers in particular to access homeownership. This is especially the case in London, which has experienced significant house price increases. Land registry data shows that house prices in London have increased at 11.3 per cent a year in London – much higher than most other regions<sup>104</sup>. The typical first time buyer in London is now borrowing nearly four times their income and has to put down a deposit of around 24 per cent of the value of a new home<sup>105</sup>. Savills research shows that house price increases in London mean that first time buyers are now heavily dependent on assistance from the 'bank of mum and dad' in order to access the required deposit to purchase a new home<sup>106</sup>. Although first time buying is supported by intermediate housing products such as shared ownership, the trends above have led to more people relying on the private rented sector for longer periods of their lifetime than was previously the case. Ensuring housing provision of a high quality in the private rented sector is a particular Mayoral objective and will be supported by housing standards that apply to all tenures.
- 3.4.39 For a variety of reasons including those set out above, more people are sharing homes. Like the private rented sector generally, multi adult households are usually at maximum occupancy levels. The provision of sufficient space is crucial for such households. Rooms are also required to serve more than one purpose, for instance, a bedroom is used for sleeping, relaxation and study. Also each individual will have their own set of

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<sup>101</sup> Sprigings N and Smith D, 2012. *Unintended consequences; local housing allowance meets right to buy*. Policy, Place and Policy Online

<sup>102</sup> Office of National Statistics census 2011 data

<sup>103</sup> Ibid.

<sup>104</sup> Land Registry, 2015, House Price Index, page 4

<sup>105</sup> Mayor of London, 2014, Housing in London, page 59 (updated with new GLA statistics)

<sup>106</sup> Savills, 2015. *Housing Market Note – First time buyer affordability*

belongings that need to be accommodated, making sufficient storage important. Homes must be capable of being flexible enough to accommodate these needs.

3.4.40 The growth of single person households may increase the demand for more one and two bed units. GLA household projections suggest that 16 per cent of household growth will be in one person households<sup>107</sup>. As already discussed, it is these smaller (in terms of bedrooms) dwelling types that, in the absence of space standards, tend to be built without adequate space. This again supports the application of space standards to ensure adequate amenity and enjoyment of the home.

3.4.41 The changes in the way homes are occupied means a cross tenure standard, as applied in much of Europe, is necessary. Homes need to meet a range of needs across their lifespan and may change tenures a number of times. Thus the previous justifications for applying standards to the social sector are now equally applicable to all homes. This has been recognised and addressed within London Plan policy since 2011.

#### **Storage**

3.4.42 An increase in the number of flats in London also means people cannot rely on sheds, lofts, cellars and garages to store their extra possessions, making it ever more imperative that new space standards for flats respond to this increasing requirement for more internal storage.

3.4.43 Storage space within homes is now required to provide for a greater range of contemporary needs such as recycling bins in the kitchen, cycle storage and other household items such as a vacuum cleaner, ironing board and suitcases. Adequate storage space can be particularly important for families with children who require additional space for children's toy and prams.

#### **Delivery and affordability**

3.4.44 Finally, some argue that space standards can actually help produce a more stable market<sup>108</sup>. Standards provide certainty to developers so they can be sure of the floorspace to be required and the number of units a site could yield and factor this into the gross development values assumed for a site and the potential price paid for the land. As already highlighted, this is particularly important when promoting high density development in order to meet need. Moreover, adequately sized units are more flexible and therefore have a wider market for future sales<sup>109</sup>.

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<sup>107</sup>Mayor of London, 2014. *The 2013 London Strategic Housing Market Assessment*, para 7.3

<sup>108</sup>Carmona 2010. *Op cit*

<sup>109</sup>Ibid.

3.4.45 National Planning Practice Guidance suggests that the impacts on affordability should be considered where a space standard is to be adopted<sup>110</sup>. Consistent pan-London space standards for flats and houses in all tenures have been in place since the 2011 London Plan and should now be reflected in land values. Over the past five years space standards have not had a discernible negative impact on housing delivery in London, nor have they been seen to negatively impact the affordability of new build housing. In addition, publicly funded affordable housing has had to meet housing quality indicators for an even longer period, so the rolling forward of standards for new housing provision will not have a negative impact on current rates of affordable housing delivery in London<sup>111</sup>. Research undertaken at the time of their implementation suggested that the Mayor's 2011 housing standards - which are closely aligned with the nationally described space standards for houses and identical for flats – were unlikely to constrain the physical capacity on a given site and that any additional development costs associated with the standards should be expected to reduce over time<sup>112</sup>.

### **Conclusion**

3.4.46 London's space standards were designed to enable greater flexibility in the use of space within homes. This delivers improved environmental sustainability by providing buildings that have a reasonably long life, are capable of adapting to changing needs over their lifetime, and homes are fit for purpose both now and in the future<sup>113</sup>. As identified by the GLA in 2010: *"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"*<sup>114</sup>.

3.4.47 Housing standards and good design principles have long been set out within various planning policies. However, these very rarely have included specific unit size minimum thresholds. DCLG are clear about the intentions underlying a standardised approach to national space standards. This follows the approach taken in the London Plan for the last five years.

3.4.48 The evidence above indicates a clear need to provide adequate space in new development in London. The justification for providing housing standards, including minimum space sizes, ceiling heights and bedroom sizes remains as compelling as

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<sup>110</sup> DCLG, 2015. *National Planning Practice Guidance*, Paragraph: 020 Reference ID: 56-020-20150327

<sup>111</sup> Housing Corporation, 2007. *Design and Quality Standards*

<sup>112</sup> GVA Grimley et al, 2010. *Draft London Housing Design Guide: Cost and Delivery Impact Assessment Pre Publication Draft*

<sup>113</sup> Greater London Authority, 2012. *Housing Supplementary Planning Guidance*, para. 2.3.11

<sup>114</sup> Greater London Authority, 2010. *Housing Design Standards: Evidence Summary*, para 4.1.11

when the standards were first established. They rightly recognise that the proper provision of space for residents ensures a better standard of living and quality of life.

## 4.0 ACCESS

### 4.1 Optional access requirements M4(2) and M4(3)

4.1.1 The optional access requirements M4(2) and M4(3) are part of a three tier standard for accessibility in Part M (access to and use of dwellings) Volume 1: Dwellings of Schedule 1 of the Building Regulations. The optional access requirement proposed in M4(2) relates to providing 'accessible and adaptable dwellings' and M4(3) relates to providing 'wheelchair user dwellings'.

4.1.2 M4(2) and M4(3) are 'optional requirements' as defined in the Building Regulations. They only apply when conditions requiring dwellings to comply are attached to planning consents<sup>115</sup>.

#### M4(2) Optional Requirement M4(2): Category 2 – Accessible and adaptable dwellings

<i>Optional Requirement</i>	<i>Limits on application</i>
<p><b>PART M ACCESS TO AND USE OF BUILDINGS</b> Volume 1: Dwellings Category 2 – Accessible and adaptable dwellings <b>M4(2) Optional requirement.</b></p> <p>(1) Reasonable provision must be made for people to – (a) gain access to, and (b) use, the dwelling and its facilities.</p> <p>(2) The provision made must be sufficient to – (a) meet the needs of occupants with differing needs, including some older or disabled people; and (b) to allow adaptation of the dwelling to meet the changing needs of occupants over time.</p>	<p>Optional requirement M4(2) –</p> <p>(a) may apply only in relation to a dwelling that is erected;</p> <p>(b) will apply in substitution for requirement M4(1);</p> <p>(c) does not apply where optional requirement M4(3) applies;</p> <p>(d) Does not apply to any part of a building that is used solely to enable the building or any service or fitting in the building to be inspected, repaired or maintained.</p>

<sup>115</sup> HM Government, 2015. *The Building Regulations 2010 – Access to and use of buildings Approved Document M, 2015 edition*

Performance Objectives

- 4.1.3 The approved document sets out a number of performance objectives to identify where a new dwelling has made reasonable provision for the M4(2) optional requirement, which comprises the following:
- a) *Within the curtilage of the dwelling, or the building containing the dwelling, it is possible to approach and gain step-free access to the dwelling and to any associated parking space and communal facilities that are intended for the occupants to use.*
  - b) *There is step-free access to the WC and other accommodation within the entrance storey, and to any associated private outdoor space directly connected to the entrance storey.*
  - c) *A wide range of people, including older and disabled people and some wheelchair users, are able to use the accommodation, including its sanitary facilities.*
  - d) *Features are provided to enable common adaptations to be carried out at a future date to increase the accessibility and functionality of the dwelling.*
  - e) *Wall-mounted switches, socket outlets and other controls are reasonably accessible to people who have reduced reach.*

Optional Requirement M4(3) Category 3 – Wheelchair user dwellings

Optional Requirement	Limits on application
<b>Part M access to and use of buildings</b>	Optional requirement M4(3) –
Category 3 – Wheelchair user dwellings	(a) may apply only in relation to a dwelling that is erected;
<b>M4(3) Optional requirement.</b>	(b) will apply in substitution for requirement M4(1);
(1) Reasonable provision must be made for people to –	(c) does not apply where optional requirement M4(2) applies;
(a) gain access to, and	(d) does not apply to any part of a building that is used solely to enable the building or any service or fitting in the building to be inspected, repaired or maintained.
(b) use, the dwelling and its facilities.	Optional requirement M4(3) (2)(b) applies only where the planning permission under which the building work is carried out specifies that it shall be complied with.
(2) The provision made must be sufficient to–	
(a) allow simple adaptation of the dwelling to meet the needs of occupants who use wheelchairs; or	
(b) meet the needs of occupants who use wheelchairs.	

### Performance Objectives

4.1.4 Similarly, the approved document sets out performance objectives to identify where a new dwelling has made reasonable provision for the M4(3) optional requirement, which comprise the following:

- a) *Within the curtilage of the dwelling or the building containing the dwelling, a wheelchair user can approach and gain step-free access to every private entrance to the dwelling and to every associated private outdoor space, parking space and communal facility for occupants' use.*
- b) *Access to the WC and other accommodation within the entrance storey is step-free and the dwelling is designed to have and the potential to achieve step-free access to all other parts.*
- c) *There is sufficient internal space to make accommodation within the dwelling suitable for a wheelchair user.*
- d) *The dwelling is wheelchair adaptable such that key parts of the accommodation, including its sanitary facilities and kitchens, could be easily altered to meet the needs of a wheelchair user or, where required by a local planning authority, the dwelling is wheelchair accessible.*
- e) *Wall-mounted switches, controls and socket outlets are accessible to people who have reduced reach.*

4.1.5 Optional requirement M4(3) – wheelchair user dwellings - distinguishes between wheelchair accessible dwellings and wheelchair adaptable dwellings; wheelchair adaptable dwellings are homes that are designed for future adaptability – which means houses would need to be able to accommodate wheelchair access and circulation but all of the equipment would not need to be installed at the time of initial build (eg. through- floor lifting device provision). Wheelchair accessible dwellings are properties which are fully fitted out (e.g. wheelchair accessible) so that they are readily useable by a wheelchair user at the point of completion. However, the National Planning Practice Guidance (NPPG) states that wheelchair accessible dwellings should be applied only to dwellings that the local authority is responsible for allocating or nominating a person to live in<sup>116</sup>.

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<sup>116</sup> DCLG, 2015, NPPG, para 009 Reference ID: 56-009-20150327



## 4.2 Existing policy context

### The 2015 London Plan

#### *Lifetime homes*

4.2.1 Policy 3.8B(c) of the 2015 London Plan requires that all new housing is built to 'The Lifetime Homes' standard. Lifetime Homes Standard comprises of a set of sixteen Design Criteria. These are applied to general needs housing to provide accessible and convenient accommodation for a wide range of the population, from families with young children to older people, and individuals with temporary or permanent physical or sensory impairment<sup>117</sup>. This also means that some wheelchair users will be able to approach and move around a Lifetime Home, depending on their impairment or access needs, having access or potential access (by simple adaptation), to the rooms and their facilities<sup>118</sup>.

4.2.2 Importantly, the criteria enables homes to be easily adapted to meet the needs of future occupants, including many disabled people for example, by ensuring: that the walls of bathrooms are capable of supporting grab rails; that ceilings can potentially support a hoist; and stairs are wide enough to allow for a stair lift to be fitted. Consequently, Lifetime Homes Standards allow homes to be adapted to meet the needs of many future disabled occupants or to address the changing needs and circumstances of occupants as they age or experience mobility issue during their lifetime.

#### *Wheelchair accessible homes*

4.2.3 Policy 3.8B(d) of the 2015 London Plan requires that ten per cent of new housing is designed to be wheelchair accessible, or easily adaptable for residents who are wheelchair users. The glossary to the London Plan defines wheelchair accessible housing as homes that meet the standards set out in the second edition of the Wheelchair Housing Design Guide<sup>119</sup>.

4.2.4 Wheelchair accessible housing is designed specifically to meet the diverse and changing needs of wheelchair users. More generous space standards, greater flexibility and higher specification in a property designed to wheelchair accessible housing standards ensures that wheelchair users have access to every facility inside and outside of the dwelling<sup>120</sup>. It also provides choice on how best to approach (and sometimes adjust) the dwelling and its facilities to suit an individual's particular needs.

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<sup>117</sup> Mayor of London, *London Plan 2015. Consolidated with Alterations since 2011*, page 394

<sup>118</sup> The Lifetime Homes Foundation

<sup>119</sup> Habinteg Housing Association, 2006, *Wheelchair Housing Design Guide, second edition*

<sup>120</sup> Lifetime Homes, 2015. *Lifetime Homes and wheelchair housing design: the difference explained*.

Available at: [www.lifetimehomes.org.uk/pages/lifetime-homes-and-wheelchair-design.html](http://www.lifetimehomes.org.uk/pages/lifetime-homes-and-wheelchair-design.html)

### The NPPF

- 4.2.5 The National Planning Policy Framework (NPPF) highlights the need to deliver a wide choice of high quality homes and create sustainable, inclusive and mixed communities<sup>121</sup>. Paragraph 50 of the NPPF requires development plans to enable a mix of housing based on current and future demographic trends, taking into account the needs of different groups in the community, including older people and people with disabilities. Paragraph 159 of the NPPF requires development plans to address the requirement for all types of housing, including that for families with children and older and disabled people, based on an understanding of the housing needs in their area.
- 4.2.6 The NPPG states that it will be for local planning authorities to set out how they intend to approach demonstrating the need for Requirement M4(2) and / or M4(3) of the building regulations, taking account of several factors including the likely future need for housing for older and disabled people (including wheelchair user dwellings)<sup>122</sup>. These two different housing standards provide for distinct household types, with wheelchair accessible homes enabling a greater degree of independence for some people with more complex or distinct needs<sup>123</sup>.

### Proposed Policy

- 4.2.7 It is proposed in the Minor Alterations that Requirement M4(2) will replace the London Plan's Lifetime Homes standards with a new target for 90 per cent of new housing to be built to the 'accessible and adaptable dwellings' standard.
- 4.2.8 It is also proposed in the Minor Alterations that that the optional access requirement M4(3) is referenced as the relevant standard to satisfy the Housing Choice policy in terms of wheelchair user dwellings.
- 4.2.9 Neither proposal is considered to represent new policy within London as the requirements of Policy 3.8 highlighted above have been applied in London since the 2004 London Plan. The proposed changes are intended to align existing policy with the new Optional Building Regulations for Access, as required in the Minister's Written Statement<sup>124</sup>.
- 4.2.10 The change from 'all dwellings' to 90 per cent required to be accessible and adaptable arises because building regulations compliance must be assessed against a single requirement, i.e. those that are required to be assessed under wheelchair user dwellings criteria (M4(3)) cannot also be assessed against the accessible and

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<sup>121</sup> DCLG, 2012, National Planning Policy Framework (NPPF), paragraph 50

<sup>122</sup> DCLG, 2015. *National Planning Practice Guidance*, para 007, reference ID 56-007-20150327

<sup>123</sup> Lifetime Homes, 2015. *Lifetime Homes and wheelchair housing design: the difference explained*.

Available at: [www.lifetimehomes.org.uk/pages/lifetime-homes-and-wheelchair-design.html](http://www.lifetimehomes.org.uk/pages/lifetime-homes-and-wheelchair-design.html)

<sup>124</sup> DCLG, 2015, *Written statement to Parliament Planning update March 2015*

adaptable dwellings criteria (M4(2)). A 90 per cent requirement for accessible and adaptable dwellings therefore allows for the retention of a 10 per cent wheelchair user housing requirement.

4.2.11 The 2015 London Plan does not have a specific policy on the provision of lifts within residential developments. However, guidance on the implementation of Policy 3.5 for all housing tenures is provided within the Housing SPG<sup>125</sup>. The standards identify that:

- For buildings with dwellings entered from communal circulation at the first, second or third floor where lifts are not provided, space should be identified within or adjacent to the circulation cores for the future installation of a wheelchair accessible lift.
- All dwellings entered at the fourth floor (fifth storey) and above should be served by at least one wheelchair accessible lift, and it is desirable that dwellings entered at the third floor (fourth storey) are served by at least one such lift.
- All dwellings entered at the seventh floor (eighth storey) and above should be served by at least two lifts.

4.2.12 The Lifetime Homes standards do not require the provision of lifts. However M4(2) requires all dwellings to have step-free access. This means that all dwellings accessed above the ground floor require a lift access. The Minor Alteration recognises that the application of requirement M4(2) has particular implications for three and four storey blocks of flats or stacked maisonettes, which historically have not been required to provide lifts by the London Plan and Housing SPG. To address this specific issue, the Minor Alterations state that this requirement may be subject to development-specific viability assessments and consideration should be given to ongoing maintenance costs. Further guidance will be provided in the revised 2015 Housing SPG. The impact on viability is addressed within the Housing Standards Review Viability Assessment published at the same time as this report.

#### Market consultation

4.2.13 A survey conducted in January and February 2015 as part of this research study questioned a number of stakeholders to examine their view on the appropriateness of the 10 per cent requirement for wheelchair user dwellings. Stakeholders comprised house builders operating in London, agents and London Boroughs. Of those who responded, 61.5 per cent agreed that the 10 per cent requirement was appropriate. One London Borough noted that they have been building 10 per cent wheelchair user dwellings across tenures for many years *“whilst still retaining a waiting list of people*

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<sup>125</sup> Mayor of London, 2012, *Housing Supplementary Planning Guidance*

*who require this type of accommodation*<sup>126</sup> demonstrating that 10 per cent is required as a minimum to meet demand.

- 4.2.14 The 10 per cent requirement was considered appropriate by the majority of stakeholders questioned, including those directly involved in the delivery and occupancy of such dwellings. The same survey revealed that only 14.3 per cent of (relevant) respondents employ specific and targeted marketing for these specialist units in the marketing material for new housing developments. Whilst no respondents considered there was a lower value to wheelchair user dwellings, 62.5 per cent considered that there was a lower demand.<sup>127</sup> However, this is likely to be linked to the lack of targeted marketing in developer promoted schemes, particularly as this is inconsistent with the Local Authority comments on waiting lists.
- 4.2.15 Research carried out by Leonard Cheshire Disability suggests that at the time of their reporting in December 2014 300,000 disabled people were on housing waiting lists across Britain. This research was based upon a survey of Local Authority waiting lists and a pro-rata basis applied to responses to arrive at the total number<sup>128</sup> as more than 4 in 5 (83 per cent) of Councils do not have an accessible housing register.

### **4.3 Need**

- 4.3.1 As highlighted in paragraph 4.1.3, optional access requirement M4(2) - accessible and adaptable dwellings - requires provision to be made to meet the needs of occupants with different needs, including some older and disabled people and some wheelchair users. Requirements of M4(2) state that there should be sufficient provision to allow for the adaptation of the dwelling to meet the changing needs of occupants over time. Together with other specific design requirements, M4(2) necessitates the provision of step-free access to the dwelling and, within the dwelling, step-free access to facilities on the entrance floor and any private outdoor space directly connected to the entrance floor. This provides a higher level of accessibility to M4(1) – visitable dwellings – and sets out requirements similar to Lifetime Homes standards.
- 4.3.2 As with Lifetime Homes, M4(2) accessible and adaptable dwellings will be suitable for older people – whose numbers are increasing – some disabled people including some wheelchair users, and also for non-disabled people, including families with children. Requiring 90 per cent of new housing to be built to M4(2) accessible and adaptable standard will ensure that London's housing stock becomes progressively more capable of responding to the needs of households as they live independently for longer and

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<sup>126</sup> David Lock Associates, 2015. *Housing Standards Stakeholder Survey*

<sup>127</sup> Ibid.

<sup>128</sup> Leonard Cheshire Disability, 2014. *No Place Like Home – 5 million reasons to make housing disabled friendly*

their circumstances and levels of mobility change over time. It ensures that households who need to accommodate a disabled family member from birth, or through accident, injury or illness or old age are able to make feasible and effective adaptations to their homes, without or incurring substantial cost or needing to move property<sup>129</sup>.

- 4.3.3 Many older and disabled people living in unsuitable housing must make expensive adaptations to their homes when their needs change<sup>130</sup>. Indeed, research shows that even small-scale adaptations may not be possible in many homes due to structural or dimensional constraints, which could be easily avoided at design stage<sup>131</sup>. Where households are unable to address an individual's changing circumstances, this can have a negative impact on a person or family's independence, dignity, health and wellbeing<sup>132</sup>. Future proofing homes so that they can be easily adapted if required enables more effective adaptations to be made in a way that is considerably cheaper in the long run<sup>133</sup>. DCLG research found that cost of adapting homes not built to Lifetime Homes standards for use by a disabled person can be substantial<sup>134</sup>.
- 4.3.4 Drawing on GLA analysis of English Housing Survey data for 2008/9 – 2011/12, the Mayor's Accessible London SPG highlights that around 240,000 households indicate that the disability of a household member requires a home adaptation. This constitutes around 8 per cent of all households in London. Of these, around 10 per cent (25,000 households) indicate that they are attempting to move to a more suitable home in order to cope with the disability, compared to a national percentage of 8 per cent<sup>135</sup>.
- 4.3.5 The provision of homes in accordance with accessible and adaptable standards would help address these issues by enabling households to make necessary adjustments and adaptations without needing to move home. Whilst the figures above detailing English Housing Survey statistics indicate the number of London households who currently need to adapt their homes and would benefit from occupying an accessible and adaptable home, these figures should be considered in the context of anticipated increases in the numbers of older Londoners and that households typically will need to make adaptations during their lifetime.
- 4.3.6 A Leonard Cheshire commissioned ComRes survey found that around 11 per cent of respondents reported that they had a mobility problem. Of these, 72 per cent said that

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<sup>129</sup> DCLG, 2007. *The Future of the Code for Sustainable Homes*. Page 46

<sup>130</sup> Greater London Authority, 2007. *Wheelchair accessible housing: Designing homes that can be easily adapted for residents who are wheelchair users – Best Practice Guidance*, pp. 1

<sup>131</sup> Leonard Cheshire Disability, 2014, *The Hidden Housing Crisis*.

<sup>132</sup> Ibid

<sup>133</sup> Ibid

<sup>134</sup> DCLG, 2007. *The Future of the Code for Sustainable Homes*. Page 46

<sup>135</sup> Mayor of London, 2014, *London Strategic Housing Market Assessment 2013*, pp. 95

the entrance to their property is not properly accessible; 52 per cent suggested their stairs are not wide enough for a stair lift to be fitted; and 44 per cent reported to not having strong enough walls in their bathrooms for the installation of grab-bars<sup>136</sup>.

**Impact of an aging population**

4.3.7 According to the GLA's central population projection the number of people aged 65 and above in London is projected to grow rapidly from 910,000 in 2011 to 1.49 million by 2036. Even more significantly, projections show that the number of Londoners aged over 90 is expected to increase by 200 per cent to 131,000<sup>137</sup>. Figure 4.1 below shows during the 10 years between 2011 and 2021, demographic changes are most substantial in the cohort of Londoners aged 85 and above.

*Figure 4.1: GLA Household projections by age for London (central trend) 2011- 2021*

<b>Age group</b>	<b>% change</b>
Under 65	13%
65 to 74	19%
75 to 84	14%
Over 85	39%
All 65 or over	20%
<b>All households</b>	<b>14%</b>

4.3.8 Moreover, due to medical advances, improvements in lifestyles and new technologies, older people are also living with a disability or long term illness for a greater proportion of their life<sup>138</sup>. According to ONS statistics, men aged 65 are now expected to live with a disability for around 8 years and women 10 years<sup>139</sup>. This is coupled with the general trend for older people to prefer to live independently in their own home. Currently, 90 per cent of older British people live in mainstream housing, compared to 10 per cent in sheltered housing or residential care homes<sup>140</sup>.

4.3.9 The GLA commissioned research to estimate the impact of this growth in the older population for different types of accommodation. This showed that many older people choose to remain in their own homes for longer. Some 10-15 per cent of older people appear likely to want to move in to specialist housing while 85 per cent would prefer to stay in their own home. This highlights the need to ensure accommodation is appropriate and adaptable. The research assumed that 2.5 per cent of households headed by someone aged 65 to 74 and 15 per cent of those headed by someone aged 75 or more would require specialist accommodation in future. Applying these rates to

<sup>136</sup> Leonard Cheshire Disability, 2014, *Ibid*, p9

<sup>137</sup> Mayor of London, 2015. *Draft Interim Housing SPG*, p102

<sup>138</sup> Kings College London, 2015. *An age friendly city – how far as London come?* p10

<sup>139</sup> ONS, 2014. *Sub-national health expectations*. England 2009-11, London

<sup>140</sup> Kings College London, 2015. *An age friendly city – how far as London come?* p10

the GLA's household projections indicates a required stock of around 61,000 units of specialist provision in 2015 and 76,000 by 2025<sup>141</sup>.

- 4.3.10 Research undertaken for the GLA in 2014 also suggested that a considerable proportion of the existing affordable rented stock of specialist homes in London is not fit for purpose<sup>142</sup>. It also shows that an undersupply of new build specialist housing for older people in London means that there is a significant gap between potential demand for specialist housing and current provision<sup>143</sup>. Given the recent undersupply of specialist homes and anticipated unmet demand in the forthcoming years, the mainstream stock of homes will be increasingly expected to accommodate older Londoners who are likely to experience mobility and accessibility issues at some point in their life. This means that it is important to ensure new homes are built to an accessible and adaptable standard.
- 4.3.11 The 2013 London SHMA highlights the issues of under-occupation in the market sector of the London housing market and highlights the implications that the under-occupation of homes has on London's overall housing requirements<sup>144</sup>. To address this issue, the Mayor's 2015 Draft Interim Housing SPG encourages the provision of high quality accessible and adaptable new homes for older and smaller households in suitable locations in order to facilitate downsizing and realise the benefits of freeing up larger under-occupied homes for families and other large households<sup>145</sup>. Not only will the provision of accessible and adaptable homes help to meet the changing needs of households over their entire lifetimes and allow older Londoners to secure more appropriately designed and sized properties, new build provision may also help to address London's overall housing requirement by encouraging turnover in the existing housing stock.
- 4.3.12 Accessible and adaptable homes also provide a range of benefits for families with small children, ensuring homes are accessible for families using prams (i.e. through the provision of step free access and sufficient space within the home). The London Strategic Housing Market Assessment (SHMA) shows that 31 per cent of projected annual household growth in London between 2011 and 2035 comprises families with children<sup>146</sup>. As explained in Chapter 3 on space standards, substantial numbers of families with children in London are accommodated in high density, flatted

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<sup>141</sup> Mayor of London, 2014. *The 2013 London Strategic Housing Market Assessment: Part of the evidence base for the Mayor's London Plan*, para 8.8

<sup>142</sup> Three Dragons and Celandine Strategic Housing, 2014. *GLA Older Persons Housing Needs Assessment Report*, p3

<sup>143</sup> Ibid

<sup>144</sup> Mayor of London, 2014. *The 2013 London Strategic Housing Market Assessment: Part of the evidence base for the Mayor's London Plan*, chapter 7

<sup>145</sup> Mayor of London, 2015, *Draft Interim Housing SPG*, part 1 – supply; and part 3 - choice

<sup>146</sup> Mayor of London, 2013. *London Strategic Housing Market Assessment*, Table 11, page 74

development. This increases the need for M4(2) dwellings in London, which allow families with small children the same levels of accessibility, flexibility and adaptability as in other areas of the country where lower residential densities and greater numbers of houses are delivered as opposed to flats.

- 4.3.13 The need for step free access to dwellings is a key element to ensure homes are accessible to residents both now and in the future. The Department for Transport's *Inclusive Mobility* document largely provides information and guidance on designing for an accessible public transport and barrier-free pedestrian environment for mobility-impaired users. It also identifies the importance of step free access to wheelchair users more generally within public spaces. It states, "*even a single step will prevent access for the great majority of wheelchair users (and be a trip hazard for others), so alternatives must be provided; either ramps or lifts.*"<sup>147</sup> The document also states that the provision of "*lifts are essential for wheelchair users and for some people who have walking difficulties when there is a substantial change in levels*"<sup>148</sup>. The need for many people to have step free access in dwellings is therefore important.
- 4.3.14 According to the English Housing Survey, 2012, only 5 per cent of homes in England can be visited by someone using a wheelchair<sup>149</sup>. Some 21.5 million homes (95 per cent) across the country were not fully 'visitable' by disabled people, including people using wheelchairs, with only 1.2 million dwellings (5 per cent of total stock) possessing all four of the key features for full visitability.
- 4.3.15 Within the home, wheelchair users also need sufficient space to move around comfortably and safely, and "*usually more than mobility impaired people, although those who walk with two sticks can occupy a greater width than someone using a wheelchair*"<sup>150</sup>.
- 4.3.16 For many potential households, the application of Lifetime Homes Standards will be sufficient to provide adequate access to a new property. However, the retention of a 10 per cent wheelchair housing requirement ensures that new stock is fully accessible or easily adaptable for those in need who may be living in older homes that are unsuitable for adaptation. It also ensures that 10 per cent of new housing provision is fully accessible to wheelchair users on completion or, where not subject to local authority nomination or allocations, can be augmented easily and cheaply in order to provide the facilities and equipment necessary to enable wheelchair users to occupy a dwelling and live independently. Wheelchair user dwellings ensure that fittings and

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<sup>147</sup> Department for Transport, 2005. *Inclusive Mobility*, Section 8.4

<sup>148</sup> Department for Transport, 2005. *Inclusive Mobility*, Section 8.4.5

<sup>149</sup> Leonard Cheshire Disability, 2014. *No Place like Home: 5 million reasons to make housing disabled-friendly*. p. 1

<sup>150</sup> Department for Transport, 2005. *Inclusive Mobility*, Section 2.3



fixtures that may be required by an individual can be added at a later date without enlarging or structurally modifying their home, enabling an effective and quick response to a family's changing circumstances with minimum cost and disruption<sup>151</sup>.

- 4.3.17 Not all new homes will necessarily be occupied by a wheelchair user or person with specific access-related requirements from the outset, and the need for this requirement from existing or future occupants may emerge later. The provision of more generous space in circulation areas associated with optional standards M4(2) and M4(3) will make all residents' lives easier<sup>152</sup> regardless of their current level of mobility.
- 4.3.18 Analysis of the English Housing Survey identifies that 9 per cent of Londoner's over the age of 65 use a wheelchair, suggesting that approximately 74,500 Londoners in this age group will be wheelchair users. The London and Sub-Regional Strategy Support Studies identified the extent of specialist adaptations required in housing to cater for those households in London who live in unsuitable housing. This included "20 per cent who require wheelchair access and 19 per cent who need a lift or stair lift"<sup>153</sup>. The latest statistics on the housing needs of households identify that just over 10% of all households in London, "say they are attempting to move to somewhere more suitable to cope with the disability" of a household member<sup>154</sup>.
- 4.3.19 The context in London is unique in terms of built form and population density (see Figure 3.5a). Increasing numbers of high density developments within the capital make accessibility an ever greater challenge and access standards must respond. In addition, there is a requirement to address the growing trend of Londoners reportedly having less frequent contact with family and friends (54 per cent of Londoners) compared with that of the national average (67 per cent of UK residents) and ensure social inclusion<sup>155</sup>. Provision of suitable accommodation for wheelchair users will improve interaction and the ability to move around. It will also enable more frequent visits by family and friends, improving visitability and helping and address social exclusion and isolation<sup>156</sup>.
- 4.3.20 Analysis of the English Housing Survey data used by Leonard Cheshire in their report *No Place like Home* identifies that 9 per cent of London Homes have four visitable features compared to the national figure of 5 per cent. It is significant that London has

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<sup>151</sup> Greater London Authority, 2007. *Wheelchair accessible housing: Designing homes that can be easily adapted for residents who are wheelchair users – Best Practice Guidance*, pp. 2

<sup>152</sup> Ibid

<sup>153</sup> Greater London Authority, 2007. *Wheelchair accessible housing: Designing homes that can be easily adapted for residents who are wheelchair users – Best Practice Guidance*, pp. 1

<sup>154</sup> Greater London Authority, 2014. *Shaping Neighbourhoods – Accessible London: Achieving an Inclusive Environment Supplementary Planning Guidance*, pp. 100

<sup>155</sup> Institute for Public Policy Research, 2011. *Older Londoners*, pp. 5

<sup>156</sup> Ibid

achieved a 4 per cent improvement on the national average, considering that London Plan policies on Lifetime Homes and wheelchair accessible homes have been in place since 2004.

#### **Additional benefits of accessible housing**

4.3.21 DCLG research<sup>157</sup> suggests that encouraging the application of Lifetime Homes standards could provide a number of positive health and cost benefits, including helping to:

- reduce or delay the need for people to move in to residential care;
- reduce the demand for temporary residential care;
- ensure that people are discharged from hospital to suitable accommodation instead of remaining in hospital because their accommodation is unsuitable;
- reduce the need for home care for disabled people.

4.3.22 Significant costs are associated with housing which does not meet the needs of its occupants, particularly to the NHS. The Building Research Establishment (BRE) estimates that poor housing costs the health service £600 million every year and that the total cost to society, including benefit expenditure and lost tax revenues from those left unable to work, could be as high as £1.5 billion. A substantial proportion of this cost relates to the lack of disabled-friendly housing. For example, when people's homes are not adapted for their needs, it is can be hazardous for them to continue to live there due to the risk of slipping in bathrooms without grab rails and hoists, falling down stairs with no stair lift, or scalding themselves in kitchens where they can't reach the kettle properly.

4.3.23 Research by Leonard Cheshire shows that the relatively minor cost of applying lifetime homes criteria to new homes can be set against potentially considerable public sector costs of addressing an older or vulnerable person's fall or accident in the home and the associated A&E or operation costs<sup>158</sup>. DCLG research in 2012 to assess the health benefits of Lifetime Homes suggested that building to Lifetime Homes standards could provide additional health care savings of £1,600 during a 60 year lifespan<sup>159</sup>. This is close to the additional cost of building to Lifetime Homes Standards, which the various reports estimate to range from between £1,100<sup>160</sup> to £1,600<sup>161</sup> per unit. The same report estimates that cost savings of around £8,400 can be assumed over the same

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<sup>157</sup> DCLG, 2007. *The Future of the Code for Sustainable Homes*. Page 46

<sup>158</sup> Leonard Cheshire Disability, 2014, *Ibid*, p 9

<sup>159</sup> DCLG. 2012. *Assessing the health benefits of Lifetime Homes*. p 4

<sup>160</sup> Leonard Cheshire Disability, 2014, *Ibid*, p 4

<sup>161</sup> DCLG. 2012. *Assessing the health benefits of Lifetime Homes*. p 20

period, where potential adaptations are made to Lifetime Homes to make them fully accessible to disabled occupants<sup>162</sup>.

4.3.24 DCLG research also highlights a range of indirect health benefits including the promotion of psychological wellbeing, independence, activity and supporting a good quality of life<sup>163</sup>. The provision of accessible and adaptable dwellings and wheelchair user dwellings also enables older, vulnerable and disabled people to lead independent lives, ensuring individuals are able to continue to live socially inclusive lives within their community and thereby benefit from informal care networks such as friends and family<sup>164</sup>. Lifetime Homes are considered to reduce the social and financial costs of depression by up to 89 per cent<sup>165</sup> by facilitating social interaction.

4.3.25 The DCLG impact assessment sets out a range of social benefits that will arise through the building of more accessible housing, implementing the M4(2) and M4(3) optional access requirements. The most common savings include, but are not limited to:

- Avoiding temporary residential costs by enabling early return from hospital;
- Reduced bed blocking in primary health care due to inappropriate housing preventing return home;
- Reduced residential care costs by delaying long term need to move in to residential accommodation;
- Reduced cost of and need for care assistance in the home;
- Reduced costs to the health service arising from unsuitable housing and including trips, falls and injury to carers;
- Reduced cost or need for adaptations;
- Reduced cost of removing adaptations;
- Reduced administration costs in re-housing older or disabled people<sup>166</sup>

## **Conclusion**

### **Implementing the proposed optional access requirements M4(2) and M4(3)**

4.3.26 There is a demonstrable need for the inclusion of M4(2) and M4(3) optional access requirements, which will ensure appropriate and accessible dwellings to serve London, with significant social inclusion and long-term cost saving benefits for households and society as a whole. Significantly, the numbers of older Londoners is expected to increase substantially over the next 20 years, especially those age 90 and over (see para 4.3.7). It is clear, therefore, that the pressures and demand for accessible and

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<sup>162</sup> DCLG, 2012. *Assessing the health benefits of Lifetime Homes*. p 4

<sup>163</sup> DCLG, 2012. *Assessing the health benefits of Lifetime Homes*. p 8

<sup>164</sup> DCLG, 2008. *Lifetime Homes, Lifetime Neighbourhoods: A National Strategy for Housing in an Ageing Society*, pp. 88

<sup>165</sup> DCLG, 2012. *Assessing the health benefits of Lifetime Homes*, pp. 10

<sup>166</sup> DCLG, 2015. *Housing Standards Review – Final Implementation Impact Assessment*, para 252

adaptable housing and wheelchair accessible housing will increase and become a considerable housing issue, particularly given the low levels of accessibility found in London's existing housing stock. Evidence points to a continued and growing need in London over the coming years. Ignoring these demographic changes and the associated need for accessible housing may result in homes being provided that are not fit for purpose in the future to meet identified housing need.

- 4.3.27 It is important to reiterate that the requirement for all new housing in London to be built to lifetime homes standards was embedded in London Plan policy from its inception in 2004 and has been through several Examinations in Public and found to be sound and viable. As evidenced in the market survey, the standards have been accepted by the housebuilding sector<sup>167</sup>, and have become the accepted norm as the starting point for new dwellings. Requiring 90 per cent of homes to comply with the optional access requirements under M4(2) will allow a continuation of new build homes in London to be built to the required access standards for which there is evidenced need, as set out above.
- 4.3.28 Since 2004 the London Plan has set out a requirement for 10 per cent of all new homes to be adapted for wheelchair users. This has enabled 10.2 per cent of new homes in London to be designed to be wheelchair accessible, or easily adaptable for residents who are wheelchair users, and 93 per cent of new build homes to comply with lifetime homes standards<sup>168</sup>. Building in the capital has not suffered as a result<sup>169</sup>.
- 4.3.29 Even though since 2004 all new homes have been required to be built to Lifetime Homes Standards and ten per cent of new housing is designed as wheelchair accessible or easily adaptable, there continues to be an unmet need (see paragraph 4.3.4 above) and only 9 per cent of London's homes can be visited by someone using a wheelchair.
- 4.3.30 The proposed optional access requirements M4(2) and M4(3) will help facilitate the provision of easily adaptable homes for disabled and older people both now and in the future. The requirements for level access in M4(2) entails the most significant change from existing London policy. However, in terms of accessibility this will ensure all accessible and adaptable units are fully accessible to wheelchair users and other disabled people, ensuring households do not need to move home in order to address mobility issues which may be experienced at some point during their lifetime.

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<sup>167</sup> David Lock Associates, 2015. *Housing Standards Stakeholder Survey*

<sup>168</sup> Mayor of London, 2015. *London Plan Annual Monitoring Report 11, 2013-14*

<sup>169</sup> David Lock Associates, 2015, *Stakeholder Survey*

- 4.3.31 Publically funded housing should be built to the appropriate standards from the outset<sup>170</sup>, but given substantial housing need across different tenures in London, the importance of including appropriate standards in all new housing is clear.
- 4.3.32 The evidence demonstrates a clear need to retain a requirement for accessible and adaptable homes as well as wheelchair user dwellings. The proposal in the Minor Alterations that 90 per cent of new housing be built to the 'accessible and adaptable dwellings' standard (M4(2) and 10 per cent of new housing to the Building Regulation requirement M4(3) 'wheelchair user dwellings' is a reasonable and justified basis for the continued provision of specialist dwellings.

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<sup>170</sup> Habinteg, October 2014, *Access and the review of housing standards: 7 things you need to know*

## 5.0 WATER EFFICIENCY

### 5.1 Background

#### Current Policy

#### National Policy

5.1.1 Part G of the Building Regulations includes requirements for water efficiency in residential properties. The baseline requirement is a maximum water consumption rate of 125 litres per person per day. With the introduction of the Code for Sustainable Homes a lower standard of 105 litres per person per day was introduced for Levels 3 and 4 of the Code. The Government has now withdrawn the Code for Sustainable Homes, but following the Housing Standards Review, has introduced an optional water efficiency standard of 110 litres per person per day in the Building Regulations. This figure includes 5 litres per person per day allowance for external water use.

5.1.2 The 2015 Building Regulations on water efficiency are as follows:

<i>Building Regulation Requirement</i>	<i>Limits on application</i>
<p><b>Water efficiency</b></p> <p><b>G2.</b> Reasonable provision must be made by the installation of fittings and fixed appliances that use water efficiency for the prevention of undue consumption of water.</p> <p><b>Water efficiency of new dwellings</b></p> <p><b>36.—(1)</b> The potential consumption of wholesome water by persons occupying a new dwelling must not exceed the requirement in paragraph (2).</p> <p>(2) The requirement referred to in paragraph (1) is either –</p> <p>(a) 125 litres per person per day; or</p> <p>(b) in a case to which paragraph (3) applies, the optional requirement of 110 litres per person per day,</p> <p>as measured in either case in accordance with the methodology set out in the document “The Water Efficiency Calculator for New Dwellings”, published in September 2009 by the Department for Communities and Local Government.</p>	<p><i>Requirement G2 applies only when a dwelling is—</i></p> <p>(a) erected; or</p> <p>(b) formed by a material change of use of a building within the meaning of regulation 5(a) or (b).</p>

<p><i>(3) This paragraph applies where the planning permission under which the building work is carried out-</i></p> <p><i>(a) specifies the optional requirement in paragraph (2)(b); and</i></p> <p><i>(b) makes it a condition that that requirement must be complied with.</i></p> <p><i>(4) In this Part, “new dwelling” does not include a dwelling that is formed by a material change of use of a building within the meaning of regulation 5(g).</i></p>	
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- 5.1.3 The transitional arrangements of the housing standards review state that where there is an existing plan policy which references the Code for Sustainable Homes, authorities may continue to apply a requirement for a water efficiency standard equivalent to the new national technical standard. From 1 October 2015, existing Local Plan policies relating to water efficiency should be interpreted in line with the new national technical standard.

**London Plan policy**

- 5.1.4 London Plan Policy 5.15 already sets a requirement that residential developments are to be designed so that mains water consumption will meet a maximum consumption rate of 105 litres per person per day. This is equivalent to the Government's optional Building Regulations Part G standard of 105 litres per head per day (when excluding external water use).

**Water companies**

- 5.1.5 The water companies that supply drinking water to Greater London are Thames Water, Affinity Water, Essex and Suffolk Water and Sutton and East Surrey. They also provide water to parts of the wider south-east. The water companies do not have specific consumption targets for residential properties. Water suppliers in the UK have a statutory duty to supply the population within their defined areas with a continuous supply of water at an adequate pressure for daily use. They have no control over the water fixtures and fittings that are installed in residential schemes and therefore their water consumption calculations have assumed a baseline Building Regulations water consumption rate of 125 litres per head per day for new residential development.

## The Issues

### Current Water Consumption

- 5.1.6 London's population is projected to rise from 8.2 million in 2011 to 9.54 million in 2026 and 10.11 million in 2036<sup>171</sup>. Demand for water will increase alongside the growth in resident population. On average Londoners use 164 litres of water per day<sup>172</sup>. This is around 20 litres per day above the national average, despite many Londoners not having gardens.
- 5.1.7 Water suppliers in the UK have a statutory duty to supply the population within their defined areas with a continuous supply of water at an adequate pressure for daily use. To meet supply they can use a combination of water efficiency measures, including retro-fitting existing properties with water efficiency measures, metering and addressing leaks, and increased supply measures, such as new and extended reservoirs or water re-use technology. The route chosen is generally to be based on minimising the cost to the customer, whilst protecting environmental processes. For example, abstraction may be limited to ensure sufficient water is maintained in rivers. As stated earlier, the Water Companies have no control over the water fixtures and fittings that are installed in residential schemes and do not set a water consumption target, however it is generally accepted that reducing demand upfront is cheaper than retro-fitting water efficiency measures or finding new water supplies.
- 5.1.8 The use of household water per person will depend upon a number of factors including *"household occupancy, water use of appliances, water use behaviour and whether the property is metered"*<sup>173</sup>. The elements of water use are typically referred to as 'micro-components such as *"washing machines or dishwashers; personal washing by bath or shower; toilet use; and the use of internal or external taps"*<sup>174</sup>. The application of a water efficiency standard will therefore have a direct effect on water consumption. It is this measure that planning, by way of setting a tighter standard, and Building Control, through enforcement play a role in reducing the demand for water from new residential development.
- 5.1.9 The Mayor intends to encourage London's water companies to raise customer awareness of the economic benefits of water efficiency<sup>175</sup>. This is intended to help

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<sup>171</sup> Mayor of London, *London Plan 2015. Consolidated with Alterations since 2011*

<sup>172</sup> Environment Agency, February 2013. *State of the Environment Report*

<sup>173</sup> Thames Water, 2014. *Thames Water: Final Water Resources Management Plan, 2015-2040*, Executive Summary, pp. 9

<sup>174</sup> Thames Water, 2014. *Thames Water: Final Water Resources Management Plan, 2015-2040*, Main Report – Section 3, pp. 27

<sup>175</sup> Mayor of London, 2014. *London Infrastructure Plan 2050: A Consultation*, pp. 54



reduce the level of household water usage per person in London and could support the understanding of occupants of new homes of their water efficient appliances.

5.1.10 There are a number of changes which can be made to each micro-component to assist raising awareness to customers of the economic benefits of limiting water use through the introduction of new, more efficient devices, which will be encouraged by the application of the water efficiency standard. These include:

- *“Toilet flushing (frequency 4.71 flushes / person / day from DEFRA research): reduction in average cistern size as new houses use smaller cisterns and customers replace old cisterns with new, more efficient devices.*
- *Personal washing (showers and baths): reduction in use of baths, increase in use and frequency of showers; increased installation and use of power showers.*
- *Clothes washing: reduction in washing machine water demand as new machines use less water (some clothes washing by hand continues).*
- *Dishwashing: reduction in dishwashing machine water demand as new machines use less water (some dishwashing by hand continues).*
- *Outdoor water use (includes hosepipes, sprinklers, watering cans, pressure washers): small increased ownership and use of certain devices as a result of drier, warmer summers brought about by climate change.*
- *Miscellaneous indoor use (includes cooking, cleaning, drinking, hand washing, teeth brushing): no change forecast from base year”<sup>176</sup>.*

5.1.11 Water suppliers are increasingly recognising the need to reduce water consumption. Essex and Suffolk Water is engaged in an initiative to help minimise their customers’ water usage through their ‘Save-a-Flush’ initiative, in which they offer customers a choice of two cistern displacement devices; “a 1 litre Save-a-Flush and a 1.2 litre Save-a-Flush” products<sup>177</sup>.

5.1.12 The installation of a water meter is another measure which water suppliers promote to help encourage more considered water use, however it is recognised that water use will fundamentally be “influenced by occupancy and the water use behaviour of the occupants”<sup>178</sup>. As identified by Essex and Suffolk Water, “those who tend to opt for a meter are often lower than average users of water to begin with. This is often why they

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<sup>176</sup> Affinity Water, 2014. *Our Plan for Customers & Communities: Final Water Resources Management Plan, 2015-2020*, pp. 108

<sup>177</sup> Essex and Suffolk Water, 2014. *Final Water Resources Management Plan 2014*, p. 213

<sup>178</sup> Thames Water, 2014. *Thames water: Final Water Resources Management Plan, 2015 – 2040*, Main Report – Section 3, pp. 31

*opt so as to gain a financial benefit for their careful water using behaviour*<sup>179</sup>. Nevertheless the installation of water meters goes some way to helping to minimise overall water use.

5.1.13 The average per capita consumption (PCC) of Thames Water is above the industry average currently (147 l/p/d)<sup>180</sup>. However, in their forecasts Thames Water have *“assumed all new properties achieve 125 l/h/d, and remain at that level over time”*<sup>181</sup>. Essex and Suffolk Water have likewise forecasted *“a PCC of 125 l/h/d as a result of the introduction of water efficiency standards into Part G of the Building Regulations”*<sup>182</sup>.

5.1.14 However, it should be noted that these water companies serve a wider area than just the parts of London they supply. The gradual compliance with the Code for Sustainable Home level 3 / 4 since 2006 across London, with its associated reduced water consumption rate of 105 l/h/d, is below the average consumption rate baseline assumed in the Water Resource Management Plans for the regions as a whole. The need driven by the significant population increase forecasts in London, and the deficit in supply as outlined above, would suggest that there remains a clear need for the 105 l/h/d standard to be applied, to respond to the specific circumstances in London.

## **5.2 Supply and Demand in London**

### **Water Resources**

5.2.1 London and the South East region are recognised as water-stressed areas by all water suppliers in this area and also by the Environment Agency<sup>183</sup>. Water stress is assessed by the Environment Agency which calculate the proportion of rainfall reaching rivers and streams, or percolating to groundwater compared to what is exploited through abstraction by water companies, businesses and farmers. The calculation for water stress includes impacts of changing demands such as through population growth or a changing climate. Water bodies at high risk of environmental impacts as a result of overexploitation from abstraction were classified as being stressed.

**Thames Water:** *“Of the rain that falls, two thirds is either lost to evaporation or transpired by growing vegetation. Of the remaining ‘effective’ rainfall, approximately*

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<sup>179</sup> Essex and Suffolk Water, 2014. *Final Water Resources Management Plan 2014*, pp. 252

<sup>180</sup> Thames Water, 2014. *Thames Water: Final Water Resources Management Plan, 2015-2040*, Main Report – Section 3, pp. 11

<sup>181</sup> Thames Water, 2014. *Thames Water: Final Water Resources Management Plan, 2015-2040*, Main Report – Section 3, pp. 31

<sup>182</sup> Essex and Suffolk Water, 2014. *Final Water Resources Management Plan 2014*, pp. 145

<sup>183</sup> Environment Agency and Natural Resources Wales, 2013. *Water stressed areas – final classification*

*55% is abstracted for use, making it one of the most intensively used river basins in the world. Of all the water abstracted, 82% is for public supply*<sup>184</sup>.

**Affinity Water:** *“All three of our regions [Central, East and Southeast] remain designated as ‘serious water stress’ areas*<sup>185</sup>.

**Essex and Suffolk Water:** *“The Essex and Suffolk supply areas are located within some of the driest areas of the country and as such face particular challenges including a general lack of new intrinsic water resources, growing demand, and uncertainty from climate change*<sup>186</sup>.

**Sutton and East Surrey:** *“The Company faces a number of challenges over the next 25 years, characterised by pressures on water availability due to increased demand from new and existing customers, the impacts of climate change, and the need to protect the environment. The area of South East England in which the Company operates has been classified by the Environment Agency (EA) as being under serious water stress*<sup>187</sup>.

- 5.2.2 The Mayor of London similarly recognises the stresses on water supply in London. He states, *“Simply to meet current demand for water, we are already abstracting too much from the environment, a problem that will grow worse as London’s population grows larger. We must therefore work to ensure we use the water at our disposal more wisely and that sustainable water resources are developed*<sup>188</sup>. The continued use of a water target in London would help to achieve more sustainable patterns of water usage.
- 5.2.3 A review of the relevant resource management plans gives a clearer picture on the pressures on supply as a result of the significant usage and demand.
- 5.2.4 For Thames Water, London is the region where the worst situation exists in terms of water resources. They forecast a growing deficit on a dry year annual average increasing from -133 mega litres a day (Ml/d) to -416 Mld in 2040<sup>189</sup>. Part of this is an increased outage assumption and an agreement to provide for another Company (Affinity). In terms of infrastructure to meet this demand, their preferred approach

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<sup>184</sup> Thames Water, 2014. *Thames Water: Final Water Resources Management Plan, 2015 – 2040*, Main Report – Section 4, pp. 2

<sup>185</sup> Affinity Water, 2014. *Our Plan for Customers & Communities: Final Water Resources Management Plan, 2015-2040*, pp. 56

<sup>186</sup> Essex and Suffolk Water, 2014. *Final Water Resources Management Plan 2014*, pp. 7

<sup>187</sup> Sutton and East Surrey Water, 2014. *Final Water Resources Management Plan 2014*, pp12

<sup>188</sup> Mayor of London, 2014. *London Infrastructure Plan 2050: A Consultation*, pp. 53

<sup>189</sup> Thames Water, 2014. *Thames Water: Final Water Resources Management Plan, 2015 – 2040*, Main Report – Executive Summary, pp. 16

would be the provision of two wastewater reverse osmosis re-use plants at Deephams (60 MI/d) in 2027 and Beckton (100 MI/d) in 2032<sup>190</sup>.

- 5.2.5 In the case of Affinity, their assessment of water available identifies that the Central region (which includes the areas of Greater London that they serve) does not have sufficient water for the whole 25 year (2015-2040) planning period to meet need, with the best case scenario suggesting a move to a deficit in the region in 2022-2024<sup>191</sup>. Affinity have an immediate focus on saving water through less leakage, more metering, generally being more efficient, and buying the bulk transfer of water from other companies.
- 5.2.6 The Essex region of Essex and Suffolk Water, which covers three London Boroughs, benefits from a sharp increase in supply through the opening of the Abberton Scheme (formal opening June 2015), a £150m investment including the enlargement and enhancement of Abberton Reservoir. As a result of this, the region sees a greater supply than demand for residents at a steady level throughout the period to 2040<sup>192</sup>.
- 5.2.7 Similarly, Sutton and East Surrey also show a greater supply than demand through their own plan period to 2040, albeit a slightly decreasing surplus, which is boosted at junctures through planning infrastructure improvements including a reservoir upgrade, a new borehole, and an improvement to an existing borehole<sup>193</sup>.
- 5.2.8 There is clear pressure on overall water demand, which will only increase as the population of London grows. The main providers in London are showing a worsening deficit in demand outstripping supply, and the application of an optional water standard can only assist in pushing down the per day usage and, as such, reducing demand. As such, there is an evidenced need for the optional Building Regulations water efficiency standard.

#### **Customer attitudes towards water saving devices**

- 5.2.9 A number of the water suppliers within London and South East region have undertaken trials and surveys to gain customer feedback on plans for water efficiency. These have received a high degree of positive feedback from customers, who are gaining an increasing awareness of the financial benefits of using water saving devices.

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<sup>190</sup> Thames Water, 2014. *Thames Water: Final Water Resources Management Plan, 2015 – 2040*, Main Report – Executive Summary, pp. 22-23

<sup>191</sup> Affinity Water, 2014. *Our Plan for Customers & Communities: Final Water Resources Management Plan, 2015-2040*, pp. 132

<sup>192</sup> Essex and Suffolk Water, 2014. *Final Water Resources Management Plan 2014*, pp. 325

<sup>193</sup> Sutton and East Surrey Water, 2014. *Final Water Resources Management Plan 2014, non-technical summary*, pp7

- 5.2.10 This is evidenced by Affinity Water who undertook a retrofit trial; *“our customers have indicated support for movement towards reducing the demand for water as part of a coherent demand management programme that will include metering, water efficiency, leakage reduction and pressure management to achieve our goal”*<sup>194</sup>.
- 5.2.11 An online panel of Affinity Water’s customers highlighted that *“The majority of respondents (87%) agreed they would use water saving devices were they supplied with them, and there was a high degree of interest in the supply of discounted water efficient white goods (72%)”*<sup>195</sup>.
- 5.2.12 Similarly Thames Water have identified that *“Our customers and stakeholders have also expressed their support for water efficiency, including more education to promote the efficient use of water as a priority”*<sup>196</sup>.
- 5.2.13 Thames Water make clear that whilst water saving devices can be used to reduce water demand, *“the demand will be reflective of the weather conditions experienced in that year”*<sup>197</sup>.

### **5.3 The Need for Optional Requirements for Water Efficiency in London**

- 5.3.1 The government’s guidance on the housing- optional technical standards<sup>198</sup> states that it will be for a local planning authority to establish a clear need based on:
- Existing sources of evidence;
  - Consultations with the local water and sewerage company, the Environment Agency and catchment partnerships; and
  - Consideration of the impact on viability and housing supply of such a requirement.

### **5.4 The Benefits of Reduced Water Consumption**

- 5.4.1 There are social, environmental and economic benefits that would result from a reduced usage of water in London. The above section outlined that London is within a

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<sup>194</sup> Affinity Water, 2014. *Our Plan for Customers & Communities: Final Water Resources Management Plan, 2015-2020*, pp. 61

<sup>195</sup> Affinity Water, 2014. *Our Plan for Customers & Communities: Final Water Resources Management Plan, 2015-2020*, pp. 62

<sup>196</sup> Thames Water, 2014. *Thames Water: Final Water Resources Management Plan, 2015-2040*, Main Report – Section 7, pp. 62

<sup>197</sup> Thames Water, 2014. *Thames Water: Final Water Resources Management Plan, 2015-2040*, Executive Summary, pp. 8

<sup>198</sup> <http://planningguidance.planningportal.gov.uk/blog/guidance/housing-optional-technical-standards/water-efficiency-standards/>

water stress area with all four companies supplying London's water relying on water stressed resources.

### **Social**

- 5.4.2 A report<sup>199</sup> in 2011 by OFWAT showed that 15 per cent of household customers said they struggle to pay their water and sewerage bills. Over five years, the amount owed to the companies has gone up by more than 50 per cent and they predict that this will get worse. A decreased personal use of water would result in a reduced bill cost for customers, affordability being recognised by the Water Companies as an immediate cause for concern in the context of general increases to the cost of living<sup>200</sup>. Thames Water, for example, fund significant measures including water usage data and smart metering to help limit bill costs. The application of the optional water resource standard will further assist in this, reducing water poverty, and benefitting those who need it the most.

### **Environmental**

- 5.4.3 As stated above water bodies at high risk of environmental impacts as a result of overexploitation from abstraction were classified as being stressed. The Environment Agency<sup>201</sup> has also highlighted the water quality benefits of reducing domestic water consumption. It highlighted a 2012 report commissioned by UK Water Industry Research, which concluded that reductions in per capita consumption of up to 25 per cent would in many cases improve sewage works effluent quality and in most cases environmental pollution load would be reduced. This allowed the Environment Agency to conclude, *"This is good news. Reducing PCC through water demand management offers an opportunity to improve the water environment not only by taking less water from it but also by putting less pollution back into it."*
- 5.4.4 Energy from fossil fuel power stations is used to treat and distribute water, contributing to our carbon footprint<sup>202</sup>. Using water more efficiently not only reduces the amount of water wasted but also helps to reduce the amount of carbon released in to the atmosphere, with further environmental benefits.

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<sup>199</sup> OFWAT, 2011. *Affordable for all. How can we help those who struggle to pay their water bills?*

<sup>200</sup> <http://www.thameswater.co.uk/cr/Puttingourcustomersfirst/Affordability/index.html>

<sup>201</sup> Environment Agency, May 2013. *Technical Briefing Note: Water quality benefits of reducing domestic water consumption.*

<sup>202</sup> South Staffs Water, 2010. *Water use in your home: Tips to help save water.*

**Economic**

- 5.4.5 The Water Management Plans set out a balance between minimising consumption and providing new infrastructure. The proposed water efficiency target will minimise the need for other more costly water saving and water supply infrastructure measures.
- 5.4.6 The cost of new infrastructure to increase water supply is significant, and projects have a considerable lead in and construction time. Any reasonable supply measures that can be implemented to assist in supply will reduce reliance on and the potential need for large scale water infrastructure.
- 5.4.7 The economic benefits are increased when the measures are low cost to implement, and reflective of standards that are already widely used by developers in new build housing.

**Industry opinion**

- 5.4.8 One housebuilder questioned on the impact of introducing the optional water requirement in a survey conducted in January and February 2015 as part of this research study identified that they are currently building to Code for Sustainable Homes level 4 compliance at 105 l/p/d and have had no resistance from customers and there has been no negative impact upon demand<sup>203</sup>.
- 5.4.9 The results of this survey (refer to Viability Study for full details) made it clear that those associated with the development industry did not consider that the proposed changes would have any impact on building. The table below summarises the analysis of results from those who responded to the relevant question, *“Please describe any impact you think the introduction of Optional Water Requirements and the use of the ‘fittings based approach’, will have on”*:

	Positive Impact	Negative Impact	No Impact
Demand for new units	0%	0%	100%
Supply of new units	0%	9%	91%
Sales prices	10%	0%	90%
Build costs	20%	20%	60%
Delivery programme	0%	0%	100% <sup>204</sup>

<sup>203</sup> David Lock Associates, 2015. *Housing Standards Stakeholder Survey*

<sup>204</sup> Ibid

- 5.4.10 This would suggest that the optional requirements approach is an appropriate one which will not be harmful to viability or deliverability (refer to Housing Standards Review Viability Study for further information and commentary).

**The proposed optional requirements for water efficiency**

- 5.4.11 It is evident from the water suppliers and their customers that there is a willingness to reduce water consumption, particularly for customers where it results in economic benefits to the customer. The optional consumer water usage target of 105 l/p/d (excluding external water use) will contribute towards maintaining the supply of water within this water stressed area.

**5.5 Conclusion**

- 5.5.1 Greater London is located in a water stress area. Its main water supplier, Thames Water already has a supply deficit while London's population continues to grow. Whilst it is feasible for the water companies to continue to increase supply at a cost to its customers, the installation of efficient water appliances in new residential developers has wider social, economic and environmental benefits. The proposed optional water efficiency standard is unlikely to prevent the need for further investment in other water efficiency and supply measures outlined in the water companies Water Resource Management Plans but may help to delay the need for large infrastructure measures.



## 6.0 CARBON DIOXIDE REDUCTION TARGETS

### 6.1 National standards and London Plan policy

#### National energy standards

- 6.1.1 In 2014 the Government reaffirmed its commitment to ensuring that new homes are built to a zero carbon standard by 2016, to reduce carbon emissions and household energy bills<sup>205</sup>. Clause 43 of the Deregulation Act 2015 introduced the provision to amend the Planning and Energy Act 2008 to prevent local authorities from setting domestic energy standards beyond the Building Regulations, with the intention that this would come into effect from the implementation of zero carbon homes in 2016. The Infrastructure Act 2015<sup>206</sup> introduced the ability for off-site carbon abatement measures to be allowed in building regulations as part of Government proposals for zero carbon homes.
- 6.1.2 National maximum carbon dioxide emission standards are set out in Part L of the Building Regulations. Updates to Part L over the last decade have set out more stringent requirements for carbon dioxide emissions from new development to support the move to zero carbon homes. The most recent update in 2013 required new homes to emit 6 per cent less carbon dioxide than the previous 2010 regulations; a reduction on the 8 per cent target suggested in the consultation on the changes.<sup>207</sup> Some commentators have suggested that this lower step change may mean the development industry could face a challenge in meeting zero carbon standards by 2016 and that stronger targets may have stimulated the installation and continued development of renewable energy technologies to support the move to zero carbon<sup>208</sup>.
- 6.1.3 Clause 43 of the Deregulation Act 2015 has not yet come into force. However the Ministerial Statement dated 25 March 2015 that accompanied the Governments housing standards indicated that they expect local planning authorities to take their proposed requirements for zero carbon homes into consideration when setting energy performance standards in the period to 2016. The minimum onsite energy performance requirement for zero carbon homes will be broadly equivalent to the Code for Sustainable Homes Level 4<sup>209</sup>, with developers having various options to meet the remaining carbon reductions, including further investment in onsite energy

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<sup>205</sup> Prime Minister's Office, June 2014, *The Queen's Speech 2014*

<sup>206</sup> Part 5, Clause 37(4), *Infrastructure Act 2015*

<sup>207</sup> <http://www.building.co.uk/zero-carbon-2016-target-%E2%80%98under-threat%E2%80%99/5058598.article>

<sup>208</sup> Renewable Energy Association, from: <http://www.building.co.uk/zero-carbon-2016-target-%E2%80%98under-threat%E2%80%99/5058598.article>

<sup>209</sup> DCLG, 2015. *Planning Update March 2015*

performance and low carbon technologies or offset payments. Code 4 is broadly equivalent to a 25 per cent improvement on Part L 2010.

### London Plan Policy

6.1.4 London Plan Policy 5.2 sets out a stepped approach for both residential and non-domestic buildings to reduce their carbon dioxide emissions over the plan period to 2031. From 2013 a target of 40 per cent<sup>210</sup> carbon dioxide emissions reductions beyond 2010 Building Regulations has applied and is set to run to 2016, when the national policy requirement for zero carbon homes will take effect. The carbon dioxide reduction targets for domestic development are as follows:

Year	Improvement on 2010 Building Regulations
2010 – 2013	25 per cent
2013 – 2016	40 per cent
2016 – 2031	Zero carbon

*Fig 6.1. Carbon dioxide emissions reduction targets for new residential buildings in London*

6.1.5 These targets were based on the specific opportunities in London to reduce carbon dioxide emissions<sup>211</sup> and were established to provide a stepped approach to carbon dioxide reductions, ultimately leading to zero carbon residential buildings from 2016<sup>212</sup>. They support the Mayor’s strategic goal of reducing London’s overall carbon dioxide emissions by 60 per cent, beyond 1990 levels and demonstrate a commitment to reduce energy consumption in London from all major development, i.e. new build but also major refurbishments and extensions. The targets are also used to support the implementation of other London Plan energy policies, including policies 5.6 (decentralised energy in development proposals) and 5.7 (renewable technologies). Further detail to support this approach can be found in the Mayor’s studies on London’s decentralised energy capacity.<sup>213</sup>

6.1.6 The Mayor has set out an energy hierarchy to prioritise the order in which carbon saving measures should be applied to achieve the carbon dioxide emission reductions targets. This hierarchy is set out below.

- **Be lean:** use less energy
- **Be clean:** supply energy efficiently, particularly through the use of decentralised energy

<sup>210</sup> Recalibrated to a 35 per cent improvement beyond Part L 2013

<sup>211</sup> London South Bank University, 2009. *Monitoring the London Plan Energy Policies – Phase 3: Part 1 report*

<sup>212</sup> Mayor of London, *London Plan 2015. Consolidated with Alterations since 2011*, Policy 5.2(B)

<sup>213</sup> <http://www.london.gov.uk/priorities/environment/publications/decentralised-energy-capacity-study>

- **Be green:** use renewable energy<sup>214</sup>

- 6.1.7 The energy hierarchy offers an effective framework to guide energy policy and decision making by prioritising demand-side activities to reduce wastage and improve efficiency – a common-sense, cost-effective and sustainable energy policy aiming to reduce energy use before seeking to meet remaining demand by the cleanest means possible<sup>215</sup>. Although developments are encouraged to meet Building Regulations requirements through fabric efficiency measures alone when addressing the ‘be lean’ element of the hierarchy, the hierarchy framework does not set specific targets for low carbon or renewable technologies, recognising that there are a multitude of factors influencing the ability of developments to achieve carbon savings through different routes.
- 6.1.8 Policy 5.2 makes it clear that the carbon dioxide reduction targets should be met through on-site solutions if feasible, but that where it is clearly demonstrated that this is not possible, any shortfall may be provided off-site or through a cash in lieu contribution to the local borough, to be ring fenced in order to secure delivery of carbon dioxide savings elsewhere<sup>216</sup>. This reinforces the flexibility established through the objectives of the energy hierarchy and is line with the Government’s approach to zero carbon standards.
- 6.1.9 The targets in Policy 5.2 of the London Plan were originally set relative to Part L 2010 of the Building Regulations. Following the 2013 Building Regulations coming in to effect in April 2014, the Mayor has applied a 35 per cent reduction target beyond Part L 2013 – broadly equivalent to the 40 per cent beyond 2010 regulations set out in the London Plan. Retaining a flat percentage target across domestic and non-domestic buildings provides a clear, simple approach for developers to follow, particularly for mixed use developments.<sup>217</sup>.
- 6.1.10 These London Plan policies have been through examination prior to the Plan being adopted. Their application to strategic development schemes has therefore been endorsed through significant and extensive independent examination, and found in each instance to be sound. By retaining the current London Plan target, the Mayor seeks to encourage on-site carbon savings and, when these have been maximised, unlock the potential for carbon savings through investment in district energy and the

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<sup>214</sup> Mayor of London, *London Plan 2015. Consolidated with Alterations since 2011*, Policy 5.2(A)

<sup>215</sup> <http://www.imeche.org/knowledge/policy/energy/policy/the-energy-hierarchy>

<sup>216</sup> Mayor of London, *London Plan 2015. Consolidated with Alterations since 2011*, Policy 5.2(E)

<sup>217</sup> Greater London Authority, 2015. *Energy Planning: Greater London Authority guidance on preparing energy assessments*, p10-11

existing housing stock, where significant cost-effective carbon savings can be found.<sup>218</sup>  
This approach is supported by the National Planning Policy Framework (NPPF).<sup>219</sup>

- 6.1.11 The proposed Minor Alterations to the London Plan will update the policy targets to take account of the 2013 Building Regulations, whilst clarifying the implementation of targets in the context of the Housing Standards Review and the Government's zero carbon policies.

## **6.2 Evidence of the Need for Carbon Dioxide emission targets in London**

- 6.2.1 This section sets out and reviews a range of available evidence sources to identify whether there remains a need for a specific carbon dioxide emissions target in London in the run up to the introduction of zero carbon homes policies in 2016. The evidence below clearly demonstrates that this need exists, and that the current carbon dioxide emission targets in London, which have been in place since 2011, are required to continue to support a transitional approach towards zero carbon.

### **International, EU and UK targets and drivers and London's contribution**

#### **Reducing carbon dioxide emissions**

- 6.2.2 The need and push for emission reductions is set within the context of the Kyoto Protocol. The Protocol is an international agreement linked to the UN Framework Convention on Climate Change which sets internationally binding emission reduction targets – it was adopted in December 1997 and came in to force in February 2005<sup>220</sup>.
- 6.2.3 Alongside the UK becoming a signatory of the Kyoto protocol, and other international and EU commitments to address climate change, the UK Climate Change Act was passed in 2008 to establish a framework to develop an economically credible emissions reduction path. The Climate Change Act introduced a legally binding target to reduce the UK's greenhouse gas emissions to at least 80 per cent below 1990 levels by 2050,<sup>221</sup> exceeding the Kyoto Protocol requirements. The Act set out various measures to achieve this, including a set of legally binding carbon budgets: caps on the amount of greenhouse gases emitted in the UK over a five year period.
- 6.2.4 The latest progress report from the UK Committee on Climate Change states that the first carbon budget (2008-12) was met through a combination of the impact of the recession and low-carbon policies.<sup>222</sup> However, the Committee highlighted that further

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<sup>218</sup> Low Carbon Innovation Coordination Group, November 2012, *Technology Innovation Needs Assessment (TINA), Domestic Buildings Summary Report*

<sup>219</sup> Department of Communities and Local Government, 2012. *National Planning Policy Framework*, p22

<sup>220</sup> [http://unfccc.int/kyoto\\_protocol/items/2830.php](http://unfccc.int/kyoto_protocol/items/2830.php)

<sup>221</sup> Department of Energy and Climate Change, 2014. *Updated energy and emissions projections 2014*

<sup>222</sup> Committee on Climate Change, 2014. *Meeting Carbon Budgets – 2014 Progress Report to Parliament*

strengthening of policies, including those for residential energy efficiency would be required to achieve future carbon budgets and that both improving the energy efficiency of buildings and increasing uptake of low carbon heat should be a policy priority.<sup>223</sup>

- 6.2.5 In 2012 London's emissions were 40.75 MtCO<sub>2</sub>, seven per cent of the UK's total carbon dioxide emissions and a 10 per cent reduction from 1990 levels.<sup>224</sup> However in terms of emissions from residential buildings, London's carbon dioxide emissions are 10.8 per cent of the UK total.<sup>225</sup> In order to meet UK carbon budgets and associated EU and international commitments, London must play a leadership role, as a capital and world city, in reducing emissions from existing and new building stock and moving to new models of energy generation and consumption.<sup>226</sup>
- 6.2.6 To achieve this, the Mayor has set ambitious targets to address climate change and secure a resilient, low carbon energy supply. These include reducing carbon dioxide emissions by 60 per cent of 1990 levels, and supplying 25 per cent of London's energy from local sources, by 2025<sup>227</sup>. Progress towards these targets has been good. However there is a continued need to drive carbon dioxide reduction policies to achieve the further reductions required on 1990 levels by 2025 and hence ensure that London is contributing sufficiently to UK and international efforts to address climate change.
- 6.2.7 The London Plan targets ensure that new development makes every effort to reduce carbon dioxide emissions, minimising the additional impact new buildings could have on London's carbon emissions and energy consumption.

### **Decarbonising buildings**

- 6.2.8 The 2010 EU Directive on the Energy Performance of Buildings seeks to specifically address the contribution this sector needs to make to reduce energy dependency and greenhouse gas emissions. The purpose of the Directive is clear:

*"reduction of energy consumption and the use of energy from renewable sources in the buildings sector constitute important measures needed to reduce the [European] Union's energy dependency and greenhouse gas emissions."*<sup>228</sup>

Buildings account for 40 per cent of total energy consumption in the EU and in the context of a growing population and increased housing demand, it is vital that

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<sup>223</sup> Ibid.

<sup>224</sup> Greater London Authority, 2012. *London Energy and Greenhouse Gas Inventory (LEGGI)*

<sup>225</sup> London emissions from LEGGI 2012, UK emissions from Committee on Climate Change, Meeting Carbon Budgets – 2013 Progress Report to Parliament

<sup>226</sup> Greater London Authority, 2011. *Delivering London's Energy Future: The Mayor's Climate Change Mitigation and Energy Strategy*, pp. 4

<sup>227</sup> Greater London Authority, 2011. *Delivering London's Energy Future: The Mayor's Climate Change Mitigation and Energy Strategy*, Table 1

<sup>228</sup> European Union, 2010. Part (3), *Directive 2010/31/EU of the European Parliament and of the Council of 19 May 2010 on the energy performance of buildings*

Member States take the necessary measures to ensure new buildings meet minimum energy performance standards.<sup>229</sup>

6.2.9 The Directive also sets out that it is up to the Member States to establish their own approach to setting specific targets, with an ultimate objective of ensuring that by the end of 2020 all new buildings are 'nearly zero-energy buildings'<sup>230</sup>.

6.2.10 The Government's zero carbon homes policy for England and Wales brings forward the target for new homes to meet a zero carbon standard from 2016. Despite an apparent difference between the definitions of 'nearly zero energy buildings' set out by the EU and 'Zero Carbon Homes' for England and Wales (the former calculated using energy consumption; the latter carbon emissions), they can be converted from one to the other by using appropriate factors. Therefore the proposed Zero Carbon standard for England and Wales could be considered as their definition for domestic nearly zero energy buildings<sup>231</sup>. The requirements for zero carbon homes in England and Wales are set out in Fig 6.2 below.

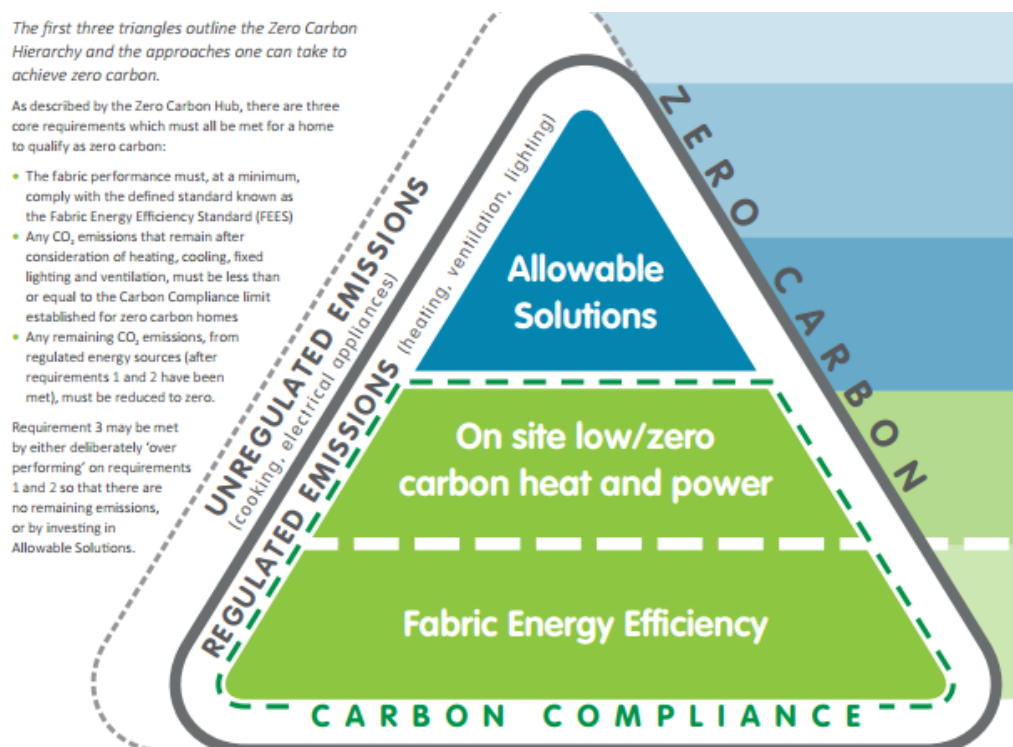


Fig 6.2: Zero Carbon Hierarchy for England and Wales<sup>232</sup>

<sup>229</sup> Directive 2010/31/EU of the European Parliament and of The Council, 19 May 2010, *on the energy performance of buildings*

<sup>230</sup> Directive 2010/31/EU of the European Parliament and of The Council, 19 May 2010, *on the energy performance of buildings*, Article 9,1,(a)

<sup>231</sup> Zero Carbon Hub, 2014, *Zero Carbon Homes and Nearly Zero Energy Buildings*

<sup>232</sup> Ibid

- 6.2.11 It should be noted that this definition of zero carbon includes the use of allowable solutions, a mechanism by which carbon dioxide emissions can be offset through investing in off-site carbon saving projects, whereas the EU's definition of 'nearly zero-energy buildings' is more stringent in specifying solutions that link directly to the building.
- 6.2.12 The need to set a clear policy direction towards Zero Carbon is acknowledged by Government and industry<sup>233</sup> and was reinforced by participants in a recent consultation carried out on behalf of the GLA.<sup>234</sup> The targets in Policy 5.2 of the London Plan were set out as minimum improvements, intended to set defined steps towards zero carbon development and drive investment and innovation in the low carbon industry. A 2012 report highlighted that innovation in the domestic buildings sector could help create additional export opportunities, but that *"Public sector support will be required to unlock this value, as there are significant market failures across the sector to overcome."*<sup>235</sup>
- 6.2.13 A reduction in London's carbon dioxide targets for domestic development at this late stage would negate this approach, causing a short-term drop in standards before zero carbon standards comes into force. This could disrupt the drive towards zero carbon development, causing confusion and a lack of certainty of current and future policy in the development industry. The retention of policy-based targets seeks to avoid such uncertainty, and potential disparity in the house-building sector as a result of potentially lower requirements imposed as planning conditions, depending on when a development may have been consented. This should also reduce any impact on the supply chain that has built up from 2011 in order to meet the London Plan carbon dioxide targets and zero carbon homes.

#### **Security of energy supply**

- 6.2.14 Seventy per cent of all heat in the UK currently comes from natural gas, and in London, gas supplies 38 per cent of all energy to homes, largely for hot water and heating requirements.<sup>236</sup> The UK's reliance on gas, and its position as a net importer, raises a potential economic risk from increased oil and gas prices<sup>237</sup>, which could result in a significant increase in the cost of transport, food, general retail goods and domestic heat and power. This could undermine UK competitiveness in the global market, and,

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<sup>233</sup> Zero Carbon Hub, July 2014. *Closing the Gap Between Designed & As Built – Route Map to 2020*

<sup>234</sup> David Lock Associates, 2015. *Housing Standards Stakeholder Survey*

<sup>235</sup> Low Carbon Innovation Coordination Group, November 2012, *Technology Innovation Needs Assessment (TINA), Domestic Buildings Summary Report*

<sup>236</sup> DECC, 2013. *The Future of Heating: Meeting the challenge*, and LEGGI 2012

<sup>237</sup> Greater London Authority, 2011. *Delivering London's Energy Future: The Mayor's Climate Change Mitigation and Energy Strategy*, pp. 74

from a social perspective hit the poorest members of society hardest in relative terms<sup>238</sup>.

- 6.2.15 A combination of reducing energy demand and a move to locally-supplied low carbon and renewable energy could help address this risk. The Mayor has carried out a study<sup>239</sup> that identifies sources of secondary or waste heat that could supply London's heat networks. The Mayor's target to supply 25 per cent of London's energy from local sources by 2025 is in line with the Government's policy commitments to support the development of decentralised energy as set out in the National Planning Policy Framework (NPPF).
- 6.2.16 The NPPF states that local authorities should "*identify opportunities where development can draw its energy supply from decentralised, renewable or low carbon energy supply systems*"<sup>240</sup> and that new development should be expected, if feasible and viable, to comply with Local Plan policies on requirements for decentralised energy supply.
- 6.2.17 The London Plan carbon dioxide reduction targets and the Mayor's energy hierarchy directly support this through encouraging development in London to reduce energy demand, maximise the use of low carbon technologies and, where possible, contribute to wider area decentralised energy plans.

### **Energy challenges and opportunities in London**

- 6.2.18 London has entered an unprecedented period of population growth. By 2050 London's population is expected to be about 11.27 million, over 3.1 million more people than today<sup>241</sup>. The 2015 consolidated London Plan also identifies that the number of households in London will increase from 3.74 million in 2011 to 4.26 million by 2036<sup>242</sup>. The 2013 London Strategic Housing Market Assessment translates this into an annual housing target of 48,841 new dwellings per year between 2011 and 2035 to meet this growth.<sup>243</sup>
- 6.2.19 The Mayor's housing standards, set out in the London Plan, play an important role in ensuring that housing quality is not compromised through a high volume of delivery, and new housing makes best use of resources and reduces the impact of development on the environment.

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<sup>238</sup> Ibid, pp. 75

<sup>239</sup> Greater London Authority, 2013. *London's Zero Carbon Energy Resource: Secondary Heat* <http://www.london.gov.uk/priorities/environment/publications/secondary-heat-study-london-s-zero-carbon-energy-resource>

<sup>240</sup> Communities and Local Government, 2012. National Planning Policy Framework, pp23

<sup>241</sup> London 2050 Infrastructure Plan

<sup>242</sup> Mayor of London, *London Plan 2015. Consolidated with Alterations since 2011*, para 1.15b – 1.15c

<sup>243</sup> Mayor of London, 2014. *The 2013 London Strategic Housing Market Assessment*, para 0.18



6.2.20 As a result of the projections relating to both population and economic growth it has been identified that a 20 per cent increase in energy supply capacity for London will be required by 2050.<sup>244</sup> London's infrastructure is aging and the capital will soon face an energy crisis as demand begins to outstrip the capacity of the supply network and the increasing quantum of development puts pressure on an already stressed electricity distribution network<sup>245</sup>. There is recognition that London's energy infrastructure needs to be developed in the most cost effective and sustainable way<sup>246</sup>, to ensure long term resilience of supply and to avoid exposure of increased energy costs.

6.2.21 The London Plan carbon dioxide targets support the provision of low and zero carbon infrastructure. In 2013 alone, developments referable to the Mayor committed to the following investments:

- Combined heat and power (CHP) plant able to produce 25MW of electricity and a similar amount of heat, broadly equivalent to the amount required to supply 50,000 homes
- Heat network infrastructure for circa 41,000 communally heated dwellings
- Renewable energy equipment, to provide circa 71,000m<sup>2</sup> of photovoltaic panels, equating to circa 7MW of new electrical capacity, equivalent to the average demand of circa 14,000 homes<sup>247</sup>.

6.2.22 The London Infrastructure Plan highlights the importance of reducing energy demand through improving the energy performance of buildings to help minimise London's infrastructure costs.<sup>248</sup> London has some of the oldest, most energy inefficient building stock in Europe, and retrofitting these buildings to meet the current needs of their occupants is a huge challenge<sup>249</sup>. It is important, therefore, that the homes built today are of a quality and energy efficiency standard that will minimise the need for future costly refit. The London Plan standards push development in London to maximise energy standards and consider them as an integral part of building design, thus contributing to this aim.

6.2.23 Fuel poverty is also a serious issue, with around 8.9 per cent of London households currently living in fuel poverty.<sup>250</sup> Whilst addressing fuel poverty requires coordinated action across a number of sectors, thermal comfort, energy efficiency and built

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<sup>244</sup> City of London, 2014. *The Future of London's Power Supply*, pp. 1

<sup>245</sup> Mayor of London, 2014. *London Infrastructure Plan 2050*

<sup>246</sup> Mayor of London, 2014, *Enabling Infrastructure: Green, Energy, Water & Waste Infrastructure to 2050*, p15

<sup>247</sup> Mayor of London, 2014. *Energy Planning Monitoring the implementation of London Plan energy policies in 2013*

<sup>248</sup> Mayor of London, 2014, *Enabling Infrastructure: Green, Energy, Water & Waste Infrastructure to 2050*, p22

<sup>249</sup> Buildings Performance Institute Europe, 2011. *Europe's buildings under the microscope: a country-by-country review of the energy performance of buildings*

<sup>250</sup> DECC sub-regional fuel poverty data: low income high costs indicator 2012

environment measures are crucial elements of the Mayor's fuel poverty strategy.<sup>251</sup> Reducing energy demand will result in lower fuel bills for occupants and can contribute to tackling fuel poverty in addition to the carbon saving benefits.

- 6.2.24 The high energy standards in the London Plan help address this issue through ensuring that new development has high levels of energy efficiency and incorporates low carbon heat networks (where appropriate) and renewable technology. The targets also ensure that the demand for cooling systems is minimised through passive design and that, where installed, these are as energy efficient as possible, thus minimising the additional burden on the electricity network both now and in a future, warming climate.
- 6.2.25 Although there are challenges, there are also many opportunities. Higher property and land values together with the continued demand for new homes in London mean that development is more viable than in many parts of the country.
- 6.2.26 Since the introduction of the targets in Policy 5.2, annual reports have been produced by the GLA to monitor the impact of the implementation of the London Plan energy policies.<sup>252</sup> These demonstrate a continued commitment from developers to maximising carbon dioxide emission reductions, with developments in 2013 achieving an average of 36 per cent reduction beyond Part L 2010 of the Building Regulations. This is a significant step beyond the 25 per cent target which applied to the majority of developments considered by the Mayor in 2013 and clearly demonstrates that the challenging targets set in London are achievable and are not a limiting factor in the delivery of housing.
- 6.2.27 As reflected by the figures in paragraph 6.2.21 above, the scale and density of development in London opens up significant opportunities for the development of low carbon infrastructure. The Mayor has a defined intention to generate more power through local, decentralised energy, with programmes assisting in the target to supply 25 per cent of London's energy from local sources by 2025, with a substantial contribution to achieving this target from the development of area-wide district heat networks<sup>253</sup>. London has emerged as a UK "exemplar" of how to bring together clear leadership and a supportive strategic framework for decentralised energy, with the London Plan noted in establishing targets for new development incorporating carbon reduction and renewable technologies.<sup>254</sup>

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<sup>251</sup> London Civic Forum and LSx, 2012. *London Assembly Investigation into fuel poverty in London – Joint Submission from London Civic Forum and London Sustainability Exchange*

<sup>252</sup> Annual reports from 2010 to 2013 are available from <https://www.london.gov.uk/priorities/environment/energy/building-better-new-developments-energy-planning>

<sup>253</sup> <https://www.london.gov.uk/priorities/environment/energy/energy-supply>

<sup>254</sup> TCPA, 2008. *Community Energy: Urban Planning for a Low Carbon Future*

- 6.2.28 Large-scale heat networks are well established in other European countries to transport renewable and low carbon heat as part of a wider decentralised energy approach. Whilst accepting that there are social and economic barriers to the wide-scale implementation of heat networks across the UK, results from DECC modelling indicate that heat networks could supply up to 20 per cent of UK domestic heat demand by 2030, with a particular focus on urban areas<sup>255</sup>. The density of development in the capital lends itself to the use of decentralised systems, both at a development and wider-community scale. The provision of heat from these networks delivers a high level of carbon savings,<sup>256</sup> thus evidencing the need for a challenging carbon reduction target to drive the establishment of, and connection to, these networks. This supports the aims of DECC's *The Future of Heating* strategy which highlights the use of heat networks in urban areas to deliver low-carbon energy.<sup>257</sup>
- 6.2.29 There is a significant policy commitment from Government to the establishment of district heat networks, which have the ability to heat small communities, reducing bills and the risk of increased fuel poverty, as well as cutting carbon<sup>258</sup>. Expanding the use of heat networks in urban areas is a key part of the Government's framework, *The Future of Heating*, which outlines a pathway to deliver low carbon heating across the UK.<sup>259</sup>
- 6.2.30 London has over half of the heat networks currently operational in the UK, and is leading the way in the development of further networks.<sup>260</sup> Although heat networks are likely to be supplied by CHP plant initially, to provide an efficient use of gas, they have the flexibility to accommodate heat from a variety of sources<sup>261</sup> and there is a longer term intention to transition to waste or renewable heat sources. The Mayor set up his Decentralised Energy Programme Delivery Unit (DEPDU) to focus on delivering decentralised energy at scale to maximise market competitiveness and CO<sub>2</sub> reductions and help overcome some of the barriers to delivery of heat networks.<sup>262</sup>
- 6.2.31 New development plays an important role in delivering London and national ambitions around decentralised energy networks, both through providing an opportunity for new heat networks to be established and by providing smaller heat loads to support the delivery of area-wide networks involving multiple buildings and developments.<sup>263</sup> Large

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<sup>255</sup> DECC, 2013. *The Future of Heating: Meeting the challenge*

<sup>256</sup> Greater London Authority, 2014, *Energy Planning: Monitoring the implementation of London Plan energy policies in 2013*, pp16-17

<sup>257</sup> Department of Energy and Climate Change, 2013. *The Future of Heating: Meeting the challenge*

<sup>258</sup> <http://www.carbontrust.com/news/2013/01/decentralised-energy-powering-a-sustainable-future>

<sup>259</sup> DECC, 2013. *The Future of Heating: Meeting the challenge*

<sup>260</sup> DECC, 2013. *Summary evidence on District Heating Networks in the UK*

<sup>261</sup> Pöyry Energy, 2009. *The Potential and Costs of District Heating Networks*

<sup>262</sup> Greater London Authority, 2014. *London Heat Network Manual*

<sup>263</sup> Greater London Authority, 2014. *Monitoring the implementation of London Plan energy policies in 2013*

areas of redevelopment, such as the Kings Cross area, provide the opportunity to establish a new area-wide heat network with key elements of the infrastructure required secured through the implementation of the Mayor's London Plan energy hierarchy during the planning process. In addition some existing heat providers are looking to expand (for example, the SELCHP energy to waste plant, and the Bunhill network in Islington) through linking to existing and planned new development – the London Plan carbon dioxide targets play an important role in encouraging development to connect to these low carbon sources of heat.

- 6.2.32 District heat networks and low carbon technologies such as CHP offer the opportunity for high levels of carbon savings. Although developers are required to prioritise connection to these systems as part of the Mayor's energy hierarchy, with a lower carbon target there would be less incentive for them to do so. This could have an unintended negative impact on the carbon dioxide emission reductions achievable by non-domestic development in residential-led, mixed use developments, which make up around two-thirds of applications determined by the Mayor.<sup>264</sup>
- 6.2.33 Prior to the increase to the current London Plan target, the high level of savings achievable from the second element of the energy hierarchy actually had a detrimental effect on renewable technologies proposed for new developments. The number of developments exceeding the 25 per cent target (applied from 2010 to 2013) through the first two elements of the hierarchy alone and not incorporating renewable technologies in their energy strategy doubled from 2012 to 2013.<sup>265</sup> This demonstrates the need for the current (40 per cent) target, to ensure that all developments are taking advantage of the opportunities they have to maximise energy savings onsite, and contribute to local, national and international carbon reduction and energy generation requirements.
- 6.2.34 London's geography and growth offers challenges in reducing carbon dioxide emissions but also opportunities. To fully grasp these opportunities, there is a need for new development to contribute to strategic policies to deliver high quality, energy efficient homes, and secure a resilient, low-carbon energy supply that meets the needs of London both now and in the future.

#### **Practical implementation of energy standards**

- 6.2.35 London Plan targets were set to ensure a graceful transition to zero carbon standards, building capacity and encouraging innovation over a number of years to allow the industry to prepare for higher standards. Any reduction in carbon dioxide reduction

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<sup>264</sup> Ibid.

<sup>265</sup> Greater London Authority, 2014. *Monitoring the implementation of London Plan energy policies in 2013*

targets would send a mixed message to industry regarding the continued commitment of the Mayor to support zero carbon policies and negatively impact on the practical implementation of energy policies in London.

6.2.36 Changing the target now would mean further revisions to guidance and standards over a period of just 18 months. It has the potential to result in confusion for developers and borough officers in adapting to the changes, with a high likelihood of inconsistent application of energy targets across London due to the differing level of energy expertise within local planning authorities.

6.2.37 As the Housing Standards Review only relates to domestic buildings, the change in target will not apply to non-domestic development. In London the majority of applications referred to the Mayor are for mixed-use developments<sup>266</sup>. Energy strategies for these developments are developed with regard to the balance of heat loads and building uses. Having a single target applying across the whole site provides a simple approach to calculating and assessing carbon reductions and enables developers to balance out savings from different types of development. If the target for dwellings is reduced, this will necessitate the application of two different standards within a single application, resulting in additional work (and associated costs) for developers in preparing energy strategies and for borough and GLA officers in assessing these strategies.

6.2.38 In line with the provision of the NPPF to actively support energy efficiency improvements to existing buildings<sup>267</sup>, there is provision within the current London Plan target for developers to offset any remaining carbon emissions once on-site savings have been maximised through a cash-in-lieu contribution to the relevant local planning authority<sup>268</sup>. The Mayor has worked with boroughs since 2011 to encourage the setup of carbon offset funds and mechanisms to manage these payments from developers and use the money to invest in local carbon saving measures. This is a similar concept to the Government's proposed 'allowable solutions' mechanism (set to be introduced as part of zero carbon homes policies in 2016) and allows local authorities to work with developers and establish systems and processes ahead of the implementation of zero carbon. If the London Plan target is reduced, it would undermine the resources invested by the boroughs to set up funds and identify suitable offsetting projects. Payments into these funds will be much reduced, which would impact on individual borough projections and management of these funds to deliver local carbon saving projects.

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<sup>266</sup> Greater London Authority, 2014. Monitoring the implementation of London Plan energy policies in 2013

<sup>267</sup> Communities and Local Government, 2012. *National Planning Policy Framework*, para 95

<sup>268</sup> Mayor of London, *London Plan 2015. Consolidated with Alterations since 2011*, Policy 5.2E

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## **Conclusion**

- 6.3.1 The Mayor has considered the Government's intentions regarding energy performance standards and its support for energy infrastructure and considers that the carbon dioxide reduction targets within the defined energy hierarchy are in line with this approach. The hierarchy encourages developers to make carbon savings on-site: firstly through demand reduction; then through low carbon infrastructure. The flexibility in the Mayor's approach recognises the high level of carbon savings that can be achieved by many London developments through connection to low carbon infrastructure, whilst ensuring that development is not constrained where genuine viability issues arise.
- 6.3.2 There is a clear case for retaining the current London Plan standards, summed up as follows:
- The London Plan targets ensure that new development makes every effort to reduce carbon dioxide emissions, minimising the additional impact new buildings could have on London's carbon emissions and energy consumption and helping to achieve national and international binding carbon reduction targets.
  - London Plan carbon dioxide reduction targets and the Mayor's energy hierarchy encourage development in London to reduce energy demand, maximise the use of low carbon technologies and, where possible, contribute to wider area decentralised energy plans, thus helping to ensure a secure, resilient energy supply for the future and preventing costly future retrofitting.
  - London has a number of challenges to address, including the additional burden of population growth on aging electricity infrastructure, fuel poverty and resilience of energy supply. Addressing these issues at the outset, through established targets for new development, particularly around energy demand reduction, can help avoid increased costs on electricity infrastructure down the line, increase resilience of energy supply and reduce the economic burden to bill payers.
  - The London Plan targets were set to pave the way to zero carbon standards, building capacity and encouraging innovation over a number of years to allow the industry to prepare for higher standards. A reduction in targets for domestic development at this late stage would negate this approach and would be contrary to the consistent messaging of the need to reduce carbon emissions through intermediate targets to zero carbon within the buildings sector.
  - A short term change in energy targets would result in additional cost and confusion for developers and local authority officers and replace the current single target with an unnecessarily complex approach. It would result in an uneven playing field

between developers delivering schemes that already have planning permission with the higher targets and those that would be approved under a lower target if policy 5.2 was to be weakened.

- There is greater scope for achieving higher levels of carbon reductions in London than elsewhere in the country. London's standards have been consistently applied over the past four years and are proven to be viable for development. Further evidence will be set out in the viability analysis of the policy position.

6.3.3 The evidence presented in this report highlights that there remains a need for the retention and implementation of such policies now, in order to maintain the momentum and progress that has been made by London as a frontrunner in driving energy reduction targets to meet the requirements of the Climate Change Act 2008. Retention of the current target within the framework of the energy hierarchy provides a clear, consistent approach for developers to follow which supports the Government's intended policies around zero carbon homes, in line with the NPPF.

## 7.0 SUMMARY AND CONCLUSIONS

7.1 A number of key findings emerge from the detailed review of relevant and available evidence. They point to the requirement to include the housing standards in London Plan policy. These can be summarised as follows:

### Optional national space standards

- There is significant pressure on the London housing market from substantial and rapid population growth, together with changing dwelling types, tenures and patterns of occupation which require additional flexibility and functionality;
- The increasing role of the private rented sector in meeting housing need, including that traditionally met by the social housing sector, means that there is a need for housing standards to apply to all tenures;
- High density development is required to deliver the significant housing numbers required in London, without standards this could result in pressures on the quality of housing being delivered;
- The vast majority of new build development in London is flatted development (85%), with limited access to private outdoor space – this increases the need for internal space standards to ensure a decent quality of life for future occupants, particularly families with children.
- Other countries apply more demanding national space standards than those proposed in London, in response to similar but arguably less acute issues to those faced in London, such as increasing proportion of smaller houses and concerns over the quality of development. They also deliver new build housing to much higher space standards to those achieved in London or the UK;
- Space standards enable greater flexibility in the use of space within homes, will enhance the sustainability of dwellings by being adaptable to changing needs over the lifetime of a home (eg. working or studying from home, caring for a child or older or more vulnerable adult);
- The implementation of optional space standards based on a bedroom/persons-bedspace basis would also help overcome problems of health and educational underachievement associated with overcrowding;
- Adequate storage space should be provided within modern homes and this issue should be given increased priority;
- Minimum floor to ceiling heights if set at the right level, can improve the overall quality of developments and help ensure appropriate daylight and ventilation to



units. This is particularly important in London due to the predominance of new high density flatted developments and the urban heat island effect;

- The proposed national standards are not significantly different from those already in place in London, where they have been set out in tested London Plan policy since 2011; and
- There is clear evidence that space standards directly improve the quality of life, health and wellbeing of residents – the evidence above identifies how additional space in homes may result in broad health, wellbeing and quality of life benefits.

#### Optional access requirements M4(2) and M4(3)

- The forecast growth in the number of older person households in London means that more specialist accommodation continues to be required, including accessible and adaptable homes and wheelchair accessible homes;
- Older people are living independently for longer and living with long-term disabilities and mobility issues for longer periods of their lives;
- 9 per cent of Londoner's over the age of 65 use a wheelchair, suggesting that approximately 74,500 Londoners in this age group are wheelchair users.
- 8 per cent of all households in London indicate that the disability of a household member requires the adaptation to their home – of these, around 10 per cent say that they need to move home to address this;
- The cost of retro-fitting a property is substantial, and ensuring compliance at the time of construction will save costs in the long-term;
- The provision of accessible and adaptable dwellings ensures built-in flexibility to ensure occupants can adapt their homes to meet their changing requirements throughout their lifetime;
- Accessible and adaptable dwellings and wheelchair user dwellings ensure homes accessible and adaptable for the lifetime of a building and not just for initial occupants;
- The provision of even a single step into buildings and dwellings will inhibit access for the great majority of wheelchair users - alternatives such as ramps or lifts must be provided. Step free access to all accessible and adaptable and wheelchair user dwellings will ensure wheelchair users and other disabled people can access these properties without needing to find alternative housing options;

- Cost pressures on hospitals and care services will be alleviated as more dwellings are built to accommodate those with specific needs;
- The provision of accessible homes for older people can play a significant role in encouraging older households to downsize from larger under occupied accommodation, thus helping to free up these properties to meet wider housing requirements for family sized homes in London;
- Whilst there is substantial unmet demand for specialist housing for older people in London, new build provision is not keeping pace with demand, meaning that the existing housing stock will need to continue to address the need to home elderly and vulnerable older people in London. Much of the existing stock of social rented specialist accommodation for older people is also not suitable for fit for purpose;
- The requirement for 90 per cent M4(2) compliant housing will ensure a continuation of a policy to build fully accessible new housing in London. There is already a current requirement to build all dwellings to Lifetime Homes Standards (tested London Plan policy since 2004). With the 10% requirement for M4(3) compliance all housing will continue to be built to highly accessible standards;
- Responses received from the housebuilding industry suggest that the continuation of the existing policy approach in London will have no detrimental effect on the delivery or viability of residential development.

#### Optional requirements for water efficiency

- London and the South East region is recognised as a seriously water-stressed area by Thames Water, Affinity Water and Essex and Suffolk Water, which is a problem that will intensify as London's population increases;
- The Mayor intends to encourage London's water companies to raise customer awareness of the economic benefits of water efficiency to help reduce water usage;
- There is a willingness from the London water suppliers and their customers to reduce water consumption and use water saving devices;
- There are clear social, environmental and economic benefits of reducing water consumption. Households save money on bills, there are improvements in effluent quality, reduction in pollution levels and less need for large scale infrastructure improvements;

- The proposed 105 litres/ person/ day water standard (excluding external water consumption) appears reasonable because it is based on Thames Water's own forecasts and is the same as current standards; and
- Respondents to the survey commissioned as part of the wider viability study have confirmed that the adoption of the water standard would have no discernible effect on the housebuilding sector.

#### Energy standards

- As the population and economy in London grows, energy demand will increase with the prospect of increased energy prices when levels of fuel poverty are already of concern;
- Investment in alternative forms of energy such as low carbon energy is an important step in protecting London's businesses and residents from the effects of rising global energy prices, providing some resilience in the energy supply infrastructure in addition to helping reduce carbon dioxide emissions;
- Building new high quality, energy efficient homes will help to minimise the additional impact of the need for new homes on London's carbon dioxide emissions and avoid the need for costly retrofitting of homes in the future;
- The retention of intermediate London Plan reductions in carbon dioxide emissions from new dwellings ahead of the move to zero carbon homes in 2016 will ensure that the progress that has been made continues, and London remains an exemplar in its contribution to Kyoto Protocol and EU objectives;
- The energy hierarchy and policies allow suitable flexibility by allowing off-site measures / contributions once on-site reductions have been maximised, paving the way for the Government's 'allowable solutions' policy. They also maximise the use of both low carbon and renewable technologies and, where possible, contribute to wider area decentralised energy plans, helping to secure a resilient energy supply for London;
- The proposed Minor Alterations to the London Plan will update the policy targets to take account of Part L 2013 of the Building Regulations and clarify the implementation of targets in the context of the housing standards review and zero carbon policies;
- A reduction in targets for domestic development at this late stage (in line with national guidance) would negate the substantial progress that has been made in

implementing London Plan energy policies and would be contrary to the consistent messaging on the need to reduce carbon dioxide emissions;

- A short term change in London Plan targets would result in additional cost and confusion for developers and local authorities;
- There is greater scope for achieving higher levels of carbon reductions in London than elsewhere in the country and there is a demonstrable need for the retained intermediate targets to carbon zero homes in 2016.

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