ONE HUNDRED YEARS OF HOUSING SPACE STANDARDS

What now?

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SUMMARY

Part history, part insight and part opinion, this is perhaps the most detailed and contextual analysis of housing space standards that exists, and certainly the most current. Written by Julia Park, architect and Head of Housing Research at Levitt Bernstein, the account begins with a summary of the evolution, or perhaps more accurately, the comings and goings, of the various space standards that have been applied to new housing in England.

Reflecting on what history tells us, the book examines the role of space standards in the context of the current housing crisis and explores how themes such as under–occupancy, overcrowding, density, mix, land value, viability and politics are all part of the story. The final section offers informed thoughts about the way forward.

The chronology reveals that housing space standards can be traced back almost exactly a century to the Tudor Walters report of 1918.[1] This ambitious document was produced as the First World War drew to an end. Relief that the fighting was over and optimism about the future were accompanied by some harsh realities. Wars are all consuming. As the soldiers returned it was obvious that general living conditions had become very poor, quite apart from the widespread bomb damage. A huge housebuilding programme became a social and political priority.

The Housing Act of 1935 defined minimum bedroom areas as a means to control overcrowding. Seen then as just a starting point, it still holds today. It was not until the 1960s that we got our first set of comprehensive, evidence–based space standards. If not aspirational, then certainly 'decent', the 'Parker Morris' standards are probably still the best–known space standards in England; perhaps even internationally.[2] They were widely lauded and held for two decades before being abolished in 1980 by Margaret Thatcher, who considered them an unnecessary barrier to development.

The historic account pays particular attention to the last ten years; a decade which seems certain to go down in history as one of the most interesting in the evolution of space standards. In 2012, the Mayor of London set a bold precedent by officially extending his new housing space standards to all tenures.[3] Three years later, concerned by the uncontrolled proliferation of 'local housing standards', the government initiated a major review of housing standards. The introduction of the Nationally Described Space Standard in 2015 was one of the chief outcomes. Cross–country and cross–tenure, it is now the only space standard that can be applied by any local authority in England. Despite being 'optional' (subject to need and viability testing), it is arguably the closest we have ever come to a national, universally applicable space standard.[4] All the more remarkable given that the review was part of a cost–cutting, deregulatory exercise.

One year on, it is unclear how many authorities will adopt the new space standard, and it will be many more years before we understand the impact it will have. This informed account reflects on a process that saw the pros and cons of space standards rigorously debated by a pan–industry, expert working group. After fierce, initial opposition from the housebuilders, the mood changed and the new space standard eventually received an overwhelming mandate through public consultation.

Space is likely to remain a highly contentious issue. Many people believed then, and still believe now, that it would be simpler, better and fairer for the space standard to be regulated. This evidence–based report reopens the debate in the context of the housing market as a whole. It concludes that the benefits of regulation are likely to significantly outweigh any disadvantages, and could be a catalyst for far–reaching, positive changes in the way we live.

PREFACE

Since its inception almost fifty years ago, Levitt Bernstein has been recognised for its active role in housing policy and standards. Some of us, David Levitt and I among them, find space standards uniquely compelling.

Our latest space mission began in earnest about ten years ago and was motivated more by frustration than evangelism. The only space standard that existed back then was enshrined in the Housing Corporation's funding standards. While we understood the need for minimum standards for what were likely to be fully occupied homes (and often not provided for philanthropic reasons), the figures set out in Design and Quality Standards (D&QS)[5] and the Housing Quality Indicators (HQIs)[6], were out of step with our practical experience. For most dwelling types, the minimum internal floor areas required to gain grant were on the small side. For some, particularly the family houses, they seemed substantially below the space needed to achieve the functional criteria required by other parts of the HQIs. They also lacked any obvious rationale.

We decided to look at living space in a different way. Based on a range of tried and tested house plans, we listed the floor areas of layouts that worked in practice, and analysed them to discover the underlying pattern that we were convinced must lie behind them. Our patience was rewarded and in 2009, we took our proposals, and our evidence, to the policymakers.

The timing was fortuitous. The Housing Corporation had just committed to the merger with English Partnerships to form the Homes and Communities Agency (HCA). In joining forces, they had undertaken to reconcile their respective housing standards, including those for space. Although it never became a national funding standard, Lifetime Homes[7] (which had been embraced by English Partnerships), was also gaining traction. It was clear that the 16 criteria, designed to make home–life easier for everyone (but older and disabled people in particular), had a small, but measurable, spatial implication and needed to be factored into the work. The space standards and 'test plans' that we produced became the basis of the HCA's proposed new space standard, published in 2010.[8]

Disappointingly, the consultation failed for political reasons, but by this time, the Greater London Authority (GLA) was consulting on a new set of housing standards, including space standards. We had been collaborating with Andrew Drury of HATC and Alex Ely of MAE Architects and using different methodologies, were all reaching similar conclusions. We aligned to a set of figures that became the basis of the 2010 GLA standards, and then four years later, the new Nationally Described Space Standard (NDSS); achieved through the Housing Standards Review. I was very fortunate to be seconded to the Department of Communities and Local Government (DCLG) to help with the review –a robust process that, necessarily, involved fresh scrutiny of what a space standard sets out to do.[9]

Published in March 2015, in many ways against all the odds, the NDSS will take its place in the relatively short history of space standards in England. While it's tempting to see this as a rewarding conclusion to our space endeavour, history warns us not to take anything for granted. Housing has always been an intensely political issue and this has never been more evident than it is now; in the middle of one of the biggest housing crises the UK has ever faced, and in the wake of the far–reaching Housing and Planning Act, 2016.[10]

My concern is that history may be about to repeat itself. There is no doubt that we need to build many more homes but it is a mistake to believe that focussing on numbers at the expense of space and quality, serves anyone well. This approach rarely works in the beginning, and it never works in the end.

Only a very small minority of new housing in England is as functional, durable or beautiful as it could be. It is not that we don't know how to do it; but for complex reasons, and as a result of conflicting motives, we allow ourselves to settle for less.

The Housing Standards Review provoked the debate we needed. As part of a deregulatory exercise, it seemed very unlikely to herald a breakthrough in terms of the size or quality of new homes – but in some ways; that's just what it did. While I recall widespread criticism of a number of individual rules and procedures, I don't remember anyone saying that new homes should be smaller or worse. The review revealed that the 'industry' (including housebuilders, who were, if anything, over–represented) value consistency and stability and is willing to do better. Just as importantly, there was a strong feeling that if politicians were prepared to believe us, the cost of doing better would come out of land value.

That was less than two years ago. As we attempt to build one million new homes over the coming decade it feels important to reflect on what was learned during the review. Whether or not you find the arguments within this book compelling, or agree with the conclusions, I hope it offers food for thought.

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WHAT NOW?

1

INTRODUCTION

WHY SPACE?

For a small but vocal minority of housing professionals, the concept of a space standard remains uniquely divisive. Strongly held opinions are guaranteed to spark fierce debate. This is intriguing given that space itself is such a simple, everyday thing–quite literally everywhere, though more and more of it is being boxed up and sold off. While few members of the public mind about 'space standards', almost everyone has a view about space itself–especially space in the home – and above all, the space in their own home.

Most of us want as much space as we can get, or think we do. That's part of the problem. The amount of space we own has become a measure of our social standing. Hardly surprising therefore, that we are still not keen to give it up, despite the very good reasons for downsizing as we get older.[11] It is because it is in finite supply and we all like it, that space is so expensive. A decent double bed costs in the region of £500. In London, the 3m^2 of floorspace it occupies now costs about £22,000.[12] With a couple of exceptions, most recently the crash of 2007– 8, owning space makes us money too. Based on recent research about soaring prices in the capital, a particularly memorable headline in a 2014 edition of the London Metro read, 'Your house earns more than you do'.[13] Alongside all of this, our homes are getting smaller. One of the paradoxes of housing is that as we have grown richer as a society, our homes have shrunk.[14]

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The controversy that has always surrounded space standards is part of their allure. Some people literally find it hard to say these two 's' words calmly, but when a balanced and informed debate does take place, it is engrossing. The government's 2012 – 2015 review of housing standards provided an opportunity for searching and thoughtful discourse across a range of themes – space among them.[15] Over this three–year period, the arguments for and against space standards were picked apart by the diverse members of an expert working group, and eventually pieced back together to reach a conclusion.

The review was prompted by concern that housebuilding had failed to recover from the 2007– 8 recession.[16] Having been told by developers that the cumulative effect of the ever–increasing amount of housing standards being imposed by planning authorities was contributing to the problem, the government decided to act. It began by inviting 'industry' to address the problem.

Looking back, while none of it was easy, the hardest part was not the numbers, or even the reconciliation of apparently opposite views, it was simply getting space on the agenda. Over the course of a year, the 'Local Housing Standards Delivery Group', led by the National House Building Council (NHBC) made great strides in some areas but seemed incapable of discussing space at all.[17] It was quickly dumped in the 'not today pile' and failed to re–surface.

To the credit of the civil servants involved, when DCLG took back the reins in 2012, they were not afraid to tackle the 's' words. The Royal Institute of British Architects (RIBA) had recently produced 'A Case for Space'[18], and the participants who wanted to talk about it outnumbered those who did not. Space was duly placed firmly on the agenda.

In the ensuing debate, all the arguments, for and against, were played out. The final degree of consensus was probably higher than anyone would have dared to imagine when the review began. Three years later, overwhelming public support made a national space standard a reality.[19]

WHY A STANDARD?

The view that there is no need to look for a solution unless you have identified a problem (and preferably one you can solve) was one of the early messages of the Housing Standards Review (HSR). Admittedly this advice came from stretched civil servants under orders to reduce regulation, not add to it. As general rules go, it's not a bad one, if a little negative; standards can be a positive force for good, not just a way to avoid disaster.

London's first Mayor, Ken Livingstone, assumed responsibility for the city's housing in 2000. A few years into his second term, he decided to commission new housing standards. Internal space was a central theme. The housing crisis of 2007–8 proved to be a wake–up call. Thousands of small flats built in the boom before the bust suddenly became impossible to sell. Developers turned to housing associations but, despite ongoing need for affordable housing, many were put off because the flats were simply too small for the couples and families on the local authorities' waiting lists. When Boris Johnson took over as Mayor in 2008, the work on standards stalled for a while, before he too, vowed to raise housing quality and put an end to so–called 'Hobbit Homes'.

Due process required a public consultation on the first edition of the London Housing Design Guide, and an Examination in Public of the strategic policies of the London Plan.[20] In what proved to be a dress rehearsal for the HSR, the arguments for and against housing standards – space in particular – were played out. Having presided over heated debate, the Inspector finally ruled that the proposed standards, including those for space, were justified. Initially intended for affordable housing, they were soon extended to all tenures – as the GLA had hinted they would be.

Shortly after that, and following the failure of the Local Standards Delivery Group[21] to include it in their remit, 'space', the hottest hot potato of all, was placed back on the agenda when the task of simplifying locally applied housing standards returned to government. No stone was left unturned as the 'space working group' considered whether there was any need, or any justification, for a national standard. Once again, there was no early consensus. It will always be hard to argue that a lack of space could ever be life–threatening, though plausible that it could be life–limiting. Even so, most homes are only too small, if 'too many people' live in them and trying to control actual occupancy is almost

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impossible. People tend to buy as much space as they can afford in the place they choose to live. For the vast majority of households, that means at least one spare bedroom – and for many, that's the extra space that makes their home workable.[22]

Fired up by the RIBA's Case for Space, and taking the GLA standards as a benchmark, the 'pro lobby' argued that homes were still too small and that we lagged behind our European counterparts.[23] It cited evidence that consumers value space highly and wanted more. These assertions were strongly contested by the 'anti lobby', which argued that London was a special case, and that other surveys demonstrated high levels of customer satisfaction with new homes.

One thing that united the group was that affordable housing needed protection. Ministers had made it clear that the HSR had a cross–tenure remit and that they intended to abolish national funding standards on the basis that what was 'good enough for sale, was good enough for (affordable) rent'. This worried everyone. Long before the 'Bedroom Tax'[24] was conceived, affordable housing had been expected to be fully occupied; certainly at the point of allocation, and often by vulnerable people. Seen as a 'burden' when procured through Section 106 agreements, it is inherently 'unviable'. But the group recognised that unlike homebuyers, tenants often have little voice and little choice. Space, therefore, had at least, to form part of the discussion.


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CHRONOLOGY

OVERVIEW

What follows is a brief, two–part history of English space standards. The first part deals with significant documents produced in the period up to 2006 and the second, with those of the last decade. As a backdrop to the discussion that follows, this chronology attempts to gather up the various different types of documents that have set or proposed space standards, or significantly influenced their development. They are organised simply by date, not by status or remit.

Inevitably, most of the early chronology has been drawn from published sources. The work of Andrew Drury of HATC, and UCL for the Commission for Architecture and the Built Environment (CABE), is particularly informative.[25] Sources occasionally conflict when it comes to the finer detail so it is difficult to claim complete accuracy, but the dates, facts, figures and outcomes are believed to be reliable. It is also difficult to get a sense of the status and remit of some of the historic standards and the extent to which they were actually applied in practice. Only regulation implies mandatory, universal application. As the vast majority of space standards have only applied to public sector housing, their overall impact has to be seen in that light.

It is difficult to pin down exactly when we started to formally quantify living space. Anyone who has ever built, bought, or lived in a home, will have made conscious or subconscious decisions about the space they need, but the idea of creating a space standard only emerged about 100 years ago, when the Tudor Walters Report was published in 1918. Prior to that, the focus had been on public health issues. The Great Fire of London in 1666 was devastating, particularly as it happened barely a year after the Great Plague, which had killed 100,000 people. London had become a very densely populated city and the fire destroyed 13,000 homes as well as most of the civic buildings. The first London Building Act (the precursor to the Building Regulations) was drawn up primarily to ensure that a similar tragedy could not happen again, but it also included qualitative issues, such as the height of rooms and the size of gardens.

Although this marked the start of public concern about ‘living standards’, it was another two centuries before housing and planning became the subjects of national policy. In Georgian and Victorian times, most homes were rented and occupied by at least two families. Overcrowding was a serious and growing problem. Many of the major ‘breakthroughs’ in housing standards were prompted by major events; it was the First World War that led to the Tudor Walters Report.

The Parker Morris standards remain the best known – possibly of all time. They became synonymous with a great era of council house building. During the1960s, there was a huge programme of slum clearance and the public sector built many more homes than the private sector. Like most minimum standards, they were rarely exceeded, but that created parity, and they were widely felt to be ‘good enough’. Many of those who can still recall their days in a Parker Morris flat, say simply, ‘you knew it would be big enough in those days’. We know now, of course, that many other housing ideas put forward in the 60s were far less successful.

It is possible to relate the events of the last decade with more authority, and in greater detail. Recent developments are arguably more relevant too, though the chronology reveals both remarkable coincidences and recurring themes. The last ten years will earn a lasting place in any subsequent account of the history of space standards in England.

THE YEARS UP TO 2006

1667

LONDON BUILDING ACT

The first Building Regulations in the UK stem from the London Building Act of 1667; established following the Great Fire of London. This specified that all houses were to be built in brick or stone, and prescribed the number of storeys, thickness of walls, and width of streets that would be allowed within the walled City of London.

Little has been written about the next hundred years, but the London Buildings Acts of the 19th century are seen as significant. As well as street widths and the wall thickness, they set out specific provisions for new housing, including minimum room heights, a minimum size for back gardens and rules governing the placement and design of chimneys, fireplaces and drains.

1875

PUBLIC HEALTH ACT 1875

Planning and housing policy originated towards the end of the 19th century. It stemmed from the public health movement and a concern that public intervention, through both regulatory standards and direct public sector development, were necessary if overcrowding and disease were to be overcome.

The Public Health Act of 1875 had a direct influence on the type of housing built. It required local authorities to implement regulations, or 'bye–laws', that each house should be self–contained with its own sanitation and water.

By 1880, and influenced by the philanthropic movement, most towns had similar bye–laws; a minimum street width of 36 feet (11m), at least 150 square feet (14m^2) of 'un–built' space at the rear of each house, a minimum room height of 8 feet (2.4m), a lavatory and drainage, and windows of a certain size in relation to rooms were all required under the Act.[26] By the end of the 19th century, the dominant form of housing in the UK became the 'bye–law terraced house'. 2.5 million (equivalent to 62,500 a year) were built between 1870 and 1910.[27]

1912

'NOTHING TO BE GAINED BY OVERCROWDING': RAYMOND UNWIN

In 1912, Raymond Unwin, of 'Garden City fame', published a pamphlet titled, 'Nothing to be Gained by Overcrowding.' In the same year, the Local Government Board recommended that new homes should have:

- Three bedrooms
- A large living room
- A scullery fitted with a bath
- A separate WC to each house with access under cover.

They published five model plans. Two had an additional ‘parlour’, four were terraced and one was semi–detached. The floor areas were between 820 square feet (76 m^2) and 1,230 square feet (114m^2).[28]

1918

‘HOMES FIT FOR HEROES’: LLOYD GEORGE

In the years leading up to the First World War, almost all new housing was provided by private builders. Building ground to a halt when the war began, and by 1918, it had become clear that Britain faced a very serious housing shortage. The war had also revealed that young, urban recruits were in poor physical health. As peace returned, there was huge demand for working class housing. These factors led to a national campaign, spear–headed by the British Prime Minister, Lloyd George, who promised the soldiers returning from battle, ‘Homes fit for heroes’.

‘TUDOR WALTERS REPORT’: TUDOR WALTERS COMMITTEE

Chaired by Tudor Walters, the Tudor Walters Committee of the United Kingdom Parliament, produced a report named after its chairman. Unwin played a major role on the committee, which aimed to:

> *‘Profoundly influence the general standard of housing in this country and to encourage the building of houses of such quality that they would remain above the acceptable minimum standards for at least sixty years’.*

The Tudor Walters Report was an extremely important step in the evolution of housing standards – perhaps the first time that housing quality was formally acknowledged to be a matter of national importance. The committee considered the following to be essential features of each house:

- A minimum of three rooms on the ground floor (living–room, parlour and scullery)
- Three bedrooms above, two of these capable of containing two beds
- A larder and a bathroom.

They recommended a (back to back) spacing of 70 feet (21m) and a density of 12 dwellings per acre (30 dw/ha) in towns, or 8 per acre (20 dw/ha) elsewhere to allow the penetration of sunlight even in winter. The living room needed to be a ‘light room’; ideally a 'through room' (dual aspect). A Tudor Walters house had an average frontage of 22 feet 6 inches (6.86m).[29]

Based on cost and where meals were cooked, criteria were established for three house types:

- A living room with range where most of the cooking would be done, a scullery with copper to heat the water, a bath and a gas cooker for occasional use

- A separate bathroom, cooking done in the scullery and the living room fire suitable only for occasional cooking
- A separated upstairs bathroom, cooking done exclusively in the scullery, and meals to be eaten in the living room.[30]

'Superior houses' were to have an extra room referred to as a 'parlour' - defined as, 'a quiet room for reading, writing, a sick relative or formal entertaining of non-family visitors'.

The committee also defined the first real set of minimum space standards. Remarkably generous, even by today's standards, they included:

- 855 square feet (79.4m^2) for a non–parlour house
- 1,055 square feet (98m$^{2)}$ for a parlour house
- Bedrooms of 150 square feet (14m^2), 100 square feet (9.3m^2) and 65 square feet (6.0m^2)
- A parlour of 120 square feet (11.15m^2).

1919

THE HOUSING AND TOWN PLANNING ACT 1919 ('ADDISON ACT'): MINISTRY FOR HEALTH

In 1919, acting on the Tudor Walters report, parliament passed an ambitious Housing Act which promised government subsidies to help finance the construction of 500,000 houses within three years (167,000 a year). Often known as the 'Addison Act' after its author, Dr. Christopher Addison, the Minister of Health, it too was a very significant step forward in housing provision.

The Act made housing a national responsibility, and local authorities were given the task of developing new housing, including rented accommodation, 'where it was needed by working people'. In broad terms, it also enacted the Tudor Walters' recommendations but was passed only as a temporary measure because it was assumed that the private sector would take back the role of housebuilding when the economy recovered.[31]

In reality, only 200,000 homes were built during the following three years, but the interwar period from 1920 to 1938 saw the overall housing stock grow by 52% compared with 1911. It was then decided that the interaction between the Tudor Walters space standards and the way in which public housing was financed, had led council housing to become unaffordable to many working class families, so standards were gradually relaxed. Far fewer homes had a parlour, the bathroom was sometimes sacrificed to a bath in the kitchen, and minimum room dimensions were eased. These reductions in standards reportedly reduced costs and led to cheaper rents. Private developers soon followed suit; making owner–occupation possible for lower income groups.

1935

HOUSING ACT 1935

The 1935 Housing Act was the next important milestone. Section 325 was a serious attempt to deal with the overcrowded conditions that were rife in the private rented sector before the Second World War. It contained two standards that remain substantially unchanged today.

The first was a 'room standard'. This ruled that overcrowding occurs:

> *'…wherever there are so many people in a house that any two or more of those persons, being ten or more years old, and of opposite sexes, not being persons living together as husband and wife, have to sleep in the same room'.*[32]

The standard was not as stringent as it sounds because children under ten were disregarded and 'a room' meant any room normally used as either a bedroom or a living room. Even a kitchen could be considered to be 'a room' provided it was big enough to accommodate a bed.

The second standard involved calculating the maximum permitted number of people for a given dwelling in two ways. The lower of the numbers calculated became the permitted number of people for the dwelling. In both calculations, rooms of less than 50 square feet (4.6m^2) were disregarded.

One test was based on the number of 'living rooms' in the dwelling:

- One room = two persons
- Two rooms = three persons
- Three rooms = five persons
- Four rooms = seven and a half persons
- Five rooms or more = ten persons plus two for each room in excess of five rooms.

A child below the age of one was not counted and a child between the age of one and ten was counted as a 'half person'.

The other test was based on the size of each eligible room:

- 50 to less than 70 square feet = half a person
- 70 to less than 90 square feet = one person
- 90 to less than 110 square feet = one and a half persons
- 110 square feet or larger = two persons.

At the time, the standards were viewed as a basic threshold that could, and should, be strengthened:

> *'The standard laid down need not be regarded as the ultimate ideal to which we should work. It is one upon which it is possible to begin to get this reform underway'.*[33]

1944

'DUDLEY REPORT' AND 'HOUSING MANUAL' 1944

Towards the end of the Second World War, the government commissioned a number of reports to prepare for 'peace–time reconstruction'. One was the Dudley Report of 1944, which reviewed guidance on housing standards post–Tudor Walter. Responding once again to an extreme housing shortage, as well as a depleted labour force and a shortage of building materials, it called for radical solutions including prefabrication and non–traditional building. 'A separate house for every family that wishes to have one,' was one of the explicit aims.

Based on the Dudley Report, the 1944 Housing Manual provided guidance to local authorities on housing and estate design. It covered site layout, density, house types, size of rooms, flats, efficiency in building, new methods and materials, heat, insulation, etc. To address the particular needs of young families, it emphasised the provision of 'two bedroom temporary houses' ('pre–fabs'), and 'three bedroom permanent houses'. The latter were based on a 'norm' of 800 to 900 square feet (74.3 – 83.6 m^2).[34]

1949

'HOUSING MANUAL' 1949

The 1949 edition of the Housing Manual responded to the need for a long–term housing programme and called for a wider variety of dwelling types. Its designs were based on 900–950 square feet for a three bedroom house (instead of the 800–900 square feet in the 1944 Manual), and special attention was given to layout and grouping. The standard of housing was generally high and average space standards reportedly reached their all–time peak in 1949.[35]

Minimum space standards of the 1949 Housing Manual[36]
(metric equivalents)

No of bedrooms	No of persons	Internal floor area m^2
Two storey house* or maisonette		
2	4	69.7 – 74.3
3	5	83.6 – 88.3
3	6	91.1 – 95.7
4	6	92.9 – 101.3
4	7	102.2 – 109.2

* Three storey houses exceed two storey by 9.3m^2

No of bedrooms	No of persons	Internal floor area m²
Flats		
1	1	27.9
1	2	32.5
2	2	46.5
3	4	65.1
4	4	69.7
4	5	79.0
4	6	83.6
5	6	88.3
5	7	92.9
Dwellings for aged persons		
1	2	41.8 – 51.1
2	3	51.1 – 60.4

1958

'FLATS AND HOUSES: DESIGN AND ECONOMY': MINISTRY OF HOUSING AND LOCAL GOVERNMENT

A change of government–led to a change in housing policy. Harold Macmillan's 'People's House' was introduced in an effort to increase supply to meet demand. Space standards had steadily reduced throughout the 1950s; particularly allowances for storage and circulation space.

The Ministry of Housing and Local Government publication, 'Flats and Houses: Design and Economy' 1958 set significantly lower space standards for maisonettes and flats than those of 1949. Three further key developments during this period were:

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

1961

'HOMES FOR TODAY AND TOMORROW': SIR PARKER MORRIS, AND 'DESIGN BULLETIN 6: SPACE IN THE HOME': MINISTRY OF HOUSING

Arguably still the best known space standard of all time, 'Homes for Today and Tomorrow', was a seminal report that set new standards for public housing. Produced by a committee, chaired by Parker Morris (later knighted for his work) it took a functional and analytical approach to determining space in the home by considering the furniture that was appropriate for each room, and the amount of space needed to use and move around it in the course of normal household activity.

It highlighted the need for better storage space and called for all rooms to be heated. Expressed in terms of numbers of bedrooms (b) and occupants (p), the 'Parker Morris' standards, as they are still referred to, were developed by the Ministry of Housing and Local Government in the publication Design Bulletin 6 – Space in the Home (DB6), published in 1968.

DB6 began by scheduling a typical day in the life of a young family as a means to determine sensible room sizes and built these up to form dwelling areas. 'Time and Place of Activities' includes the following daily rituals:

'0710 *Breakfast has to be served quickly, the school children got ready and the other children looked after as they wake up.*

0830 *Father and school child are off. Mother gives the other children some food and has something herself. A place where food can be eaten near the work area is useful.*

1130 *Coming back from shopping loaded up, Mother needs space to put the pram and the shopping and elbow room to take off the children's outdoor clothes, and somewhere convenient to put them.*

1530 *Space in the tidy area of the house is needed for adult visitors, while the children of both families play within sight but not too close to the tea cups.*

1900 *When Father makes or repairs something, he needs to be out of Mother's way in the kitchen and where he will not disturb sleeping children.*

2200 *Mother may want to talk to visitors while she is preparing some snacks for them.*

2330 *The parents need to sleep near their young and children, so that they can attend to them easily.'*

Based on this paternalistic view of family life, sets of carefully dimensioned furniture and associated activity zones were produced for each room, and minimum overall floor areas defined.

Parker Morris dwelling space standards

Dwelling space (metric equivalents m^2)

Dwelling type	1p	2p	3p	4p	5p	6p
3 storey house					93.8	97.5
2 storey house (centre terrace)				74.3	84.5	92.0
2 storey house (semi/end terrace)				71.5	81.8	
Maisonette						
Flat	29.7	44.6	56.7	69.7	79.0	86.4
Single storey house	29.7	44.6	56.7	66.8	75.2	83.6

Storage

Houses	2.8	3.5	4.1	4.6	4.6	4.6
Flats and maisonettes	0.7(1.8)	0.9 (1.8)	1.1 (1.8)	1.4 (1.8)	1.4 (1.8)	1.4 (1.8)

Note:

Storage for flats and maisonettes denotes internal storage with additional external storage shown bracketed.

The minimum areas in the Parker Morris report quickly became maxima for public subsidy purposes in the government's Housing Cost Yardstick.[37] During the 60s, a considerable amount of other good practice guidance was published. This included the Greater London Council's (GLC) Generic House Plans and Housing Layout, and various publications by the Architectural Press. All were based on the Parker Morris standards.

In 1965, in a return to prefabrication, the National Building Agency published a bulletin of generic two and three storey house plans, designed to suit 'industrialised methods'. Two years later, a slightly altered version of the Parker Morris standards became mandatory for all housing built in new towns. This was extended to all council housing in 1969, but by then, many local councils had already adopted DB6. It remained in place until 1980, when it was abolished by the Prime Minister, Margaret Thatcher.

1964

HOUSING ACT 1964

The most significant element of the 1964 Housing Act was the instigation of the Housing Corporation, a non–departmental public body set up to fund new affordable housing and regulate housing associations in England. It also conferred powers and duties on local authorities to deal with substandard property let by private landlords. The 'standard amenities', considered essential under the Act, were basic. They included a fixed bath or shower (preferably, but not necessarily) in a bathroom and a WC (preferably, but not necessarily) within the curtilage of the dwelling.[38]

1977

'GLC PREFERRED DWELLING PLANS': DEPARTMENT OF ARCHITECTURE AND CIVIC DESIGN OF THE GREATER LONDON COUNCIL

During the 70s, the political focus switched from new development to the rehabilitation of existing houses via Housing Action Areas and General Improvement Areas. Under the right–wing government, there was also a growing political consensus that owner occupation should be the mainstream tenure, rather than public sector, rented housing.

As a result, there was little guidance in relation to new–build space standards, but the GLC published a new set of 'Preferred Dwelling Plans' with a view to cutting costs without cutting standards. Unlike previous versions of GLC standard dwelling types, the 'preferred plans' were fully detailed and dimensioned. Minimum room areas were also defined. Bedrooms were not generous but the layouts were practical, with good living, dining and kitchen space, and plenty of storage.

GLC room areas: (m^2)

Room description	1p	2p	3p	4p	5p	6p	7p
Main bedroom	8	11	11	11	11	11	11
Other double bedroom	-	10	10	10	10	10	10
Single bedroom	-	6.5	6.5	6.5	6.5	6.5	6.5
Dining kitchen	8	9	11	11	12	13	14
Galley kitchen	5.5	5.5	5.5	7	7	8.5	9
Living room (with kitchen/diner)	11	12	13	14	15	16	17
Living room (without kitchen/diner)	13	13	15	16	17.5	18.5	20

The 70s also saw significant progress in terms of accessibility: the Department of the Environment (DOE) published HDD Occasional paper 2/74 Mobility Housing (DOE 1974), and HDD Occasional Paper 2.75 Wheelchair housing (DOE 1975). These standards were the precursor to the Lifetime Home Standard developed by the Joseph Rowntree Foundation in 1991.[39]

1983

'DESIGN AND CONTRACT CRITERIA': HOUSING CORPORATION (HC)

During the 1980s, as local authority housebuilding significantly declined, housing associations became the main providers of new social housing. New homes were built to guidelines set out by the Housing Corporation in its 1983 document 'Design and Contract Criteria'.

These replaced the Parker Morris standards which had been abolished by the Local Government, Planning and Land Act 1980, brought in by Margaret Thatcher three years earlier. The aim was to reduce public expenditure. By 1987, as housing grant gradually decreased, cost efficiency was prioritised over quality, and housing standards were further relaxed.

Two other initiatives are worth mentioning because they attempted to broaden spatial requirements to private sector housing. 'Activities and Spaces, Dimensional Data for Housing Design', was produced by John Noble at the DOE in 1982. As the introduction explains:

> *(Activities and Spaces) '…does not confine itself to the recommended minimum sizes of Parker Morris and 'Space in the Home'. It ranges both up to the 'executive' dwelling and down to the tight spaces of the starter home'.*[40]

It did not include minimum space standards but featured typical furniture and activity zones in a range of sizes to suit different needs and demands, including recommendations for 'the elderly'. In a much bolder move in the early 1980s, the NHBC introduced new criteria for storage space in kitchens and minimum bedrooms size for housing built under NHBC warranty. Bedrooms of less than $9m^2$ were described as 'one–bed spaces' and bedrooms measuring over $9m^2$ were described as 'two–bed spaces' (as long as all rooms were at least 2.7m wide).[41]

Despite these standards, the private housebuilding industry continued to be criticised for building too many small 'starter homes'. Owners found their homes had significantly depreciated in value, and had become difficult to sell. The smallest proved to have a very short market life and builders soon abandoned them for more conventional designs. The NHBC space standards were discontinued after a few years; apparently because developers felt that this matter was 'more appropriately left to market forces'.

1985

HOUSING ACT 1985

Replicating the 1935 Housing Act, Part 10 of the 1985 Housing Act includes a section on space standards as a means by which to control overcrowding. The measures were essentially the same as those produced fifty years earlier, and despite many attempts by parliamentarians to improve them, they remain largely unchanged today.

The space standard (from paragraph 326 of the Housing Act 1985)

1. The space standard is contravened when the number of persons sleeping in a dwelling is in excess of the permitted number, having regard to the number and floor area of the rooms of the dwelling available as sleeping accommodation.
2. For this purpose—
   (a) no account shall be taken of a child under the age of one and a child aged one or over but under ten shall be reckoned as one–half of a unit, and
   (b) a room is available as sleeping accommodation if it is of a type normally used in the locality either as a living room or as a bedroom.
3. The permitted number of persons in relation to a dwelling is whichever is the less of—
   (a) the number specified in Table I in relation to the number of rooms in the dwelling available as sleeping accommodation, and
   (b) the aggregate for all such rooms in the dwelling of the numbers specified in column 2 of Table II in relation to each room of the floor area specified in column 1
   No account shall be taken for the purposes of either Table of a room having a floor area of less than 50 square feet (4.65m^2).

Table 1

No. of rooms	No. of people
1	2
2	3
3	5
4	7½
5 or more	2 for each room

Table 2

Floor area of room	No. of people
110 sq. ft. (10.22m^2)	2
90 – 110 sq. ft. (8.36 – 10.22m^2)	1½
70 – 90 sq. ft. (6.5 – 8.36m^2)	1
50 – 70 sq. ft. (4.65 – 6.5m^2)	½

A breach of the statutory overcrowding standard is now a criminal offence, and local authorities have the power to take action against landlords of overcrowded properties on a tenant's behalf. However, where a statutorily overcrowded household lives in council housing, the local authority landlord cannot take legal action against itself without the express consent of the Attorney General. Shelter has noted that the Attorney General has never agreed to let a case of overcrowding by a local authority proceed to court.[42]

In practice, local authorities have failed to use the powers afforded by Section 334 of the 1985 Act (equivalent to the 1935 provisions) to prepare and submit a report on the extent of overcrowding in their areas, and governments have similarly failed to use their powers to direct that such a report should be prepared. The statutory overcrowding standard was acknowledged to be very low when first introduced, and is even lower by contemporary standards. Despite overcrowding remaining a serious issue today, relatively few households 'pass the test' – a point acknowledged in research published by the Office of the Deputy Prime Minister (ODPM) in May 2004:

> *'Households that are statutorily overcrowded are so rare that a reliable estimate of numbers cannot be produced at a national (England) level even using data from the Survey of English Housing and the 2001 English House Condition Survey, which are relatively large surveys'.*[43]

However, although this aspect of the 1935 law is unchanged, it has not been the way in which overcrowding has been measured in practice for many years. Official statistics, collected annually through the English Homes Survey (EHS), are based on the 'bedroom standard' rather than the statutory overcrowding standard.

The glossary defines the 'bedroom standard' as follows:

> *'The bedroom standard is used by government as an indication of occupation density. A standard number of bedrooms are calculated for each household in accordance with its age/sex/marital status composition and the relationship of the members to one another. A separate bedroom is allocated to each married or cohabiting couple, any other person aged 21 or over, each pair of adolescents aged 10-20 of the same sex, and each pair of children under 10. Any unpaired person aged 10-20 is paired, if possible, with a child under 10 of the same sex, or, if that is not possible, he or she is given a separate bedroom, as is any unpaired child under 10.*
>
> *This notional standard is then compared with the actual number of bedrooms including bed-sitters available for the sole use of the household and differences are tabulated. Bedrooms converted to other uses are not counted as available unless they have been denoted as bedrooms by the informants; bedrooms not actually in use are counted unless uninhabitable.*

Households are said to be overcrowded if they have fewer bedrooms available than the notional number needed. Households are said to be under-occupying if they have two or more bedrooms more than the notional number needed'.[44]

1993

'SCHEME DEVELOPMENT STANDARDS' AND 'TOTAL COST INDICATORS': HOUSING CORPORATION (HC)

A number of high profile reports highlighted the decline in the standard of housing over the late 80s and early 90s. One, by Karn and Sheridan[45], looked at the size of homes built by housing associations and the private sector in 1991–1992. In both sectors the most frequently developed dwelling types were between 5% and 15% below Parker Morris standards. More than half of housing association stock fell into this category, and though the private sector built a wider variety of dwelling types, the smallest were even smaller.

In his 2006 report on space standards for the GLA[46], Drury noted that Karn and Sheridan had concluded that:

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

Aware of this downward trend, the Housing Corporation (HC) published its 'Scheme Development Standards' (SDS) in 1993. The core performance standards defined the minimum quality that was expected in a housing development funded through social housing grant. SDS was revised a number of times, and later editions drew heavily on the 1998 version of Standards and Quality in Development (S&Q). As the extract below reveals, most requirements were fairly general. The 2006 version required that:

'Internal environments should be comfortable, convenient, capable of sensibly accommodating the necessary furniture and equipment associated with specific room activities and be suitable for the particular needs of intended user groups. In assessing spatial and other features associated with achieving comfort and convenience, including necessary provisions for furniture, fittings,

equipment, services and controls, the HC will have regard to the internal environment section of Standards and Quality in Development.'

'SDS Tests of compliance – essential items

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

Total Cost Indicators (TCIs) formed the basis of the HC funding system. They aimed to achieve value for money in return for grant, and ensure that the correct level of grant was paid. TCIs were divided into 'unit type' and 'cost group area categories'. Its total floor area, and the cost group it fell into, determined the baseline TCI for a 'self–contained unit'. The tables provided a probable occupancy figure, but the 'actual' number of occupants was derived from the number of bedspaces provided. TCI guidelines for occupancy against floor area (m^2) were set out in such broad bands that they cannot be regarded as space standards.

TCI bands

Occupancy (or persons)	Dwelling area (m^2)
1	25 – 40
2	30 – 60
3	50 – 80
4	60 – 90
5	70 – 100
6	80 – 120
7	100 – 120
8	110 – 120

TCIs were superseded by the 'Housing Quality Indicators' in 1997. Ten years later SDS was replaced by 'Design and Quality Standards'; a new set of funding rules.

Meanwhile, the 1990s saw further awareness of the rights of people with disabilities. This was largely due to the work of the Joseph Rowntree Foundation (JRF) and the development of the Lifetime Homes standard, which aimed to ensure that new homes were designed to adapt to the changing needs of occupants; particularly in later life.

This concept was reinforced by the 1995 Disability Discrimination Act[47], and in 1999, Part M, Access to and Use of Buildings, was introduced into the Building Regulations. Some elements of the Lifetime Homes standard became part of this legislation, and in the 2004 London Plan, it was formally adopted for all new homes in London. 10% of new homes were expected to go further and be suitable, or potentially suitable, for wheelchair users. Although this had obvious implications for internal space, it was another seven years before the space standards that supported it were introduced.

1998

'STANDARDS AND QUALITY IN DEVELOPMENT': ANDREW DRURY, HATC, FOR THE NATIONAL HOUSING FEDERATION (NHF)

Standards and Quality in Development was written largely for housing associations. Comprehensive and informative, it differentiated between 'essential' and 'desirable' criteria. It included precise guidance on the size and type of furniture, and the associated space that should be allowed, but stopped short of setting space standards. Although it was only discretionary good practice guidance (not a funding requirement), it was widely used by housing associations, and heavily influenced subsequent versions of the Housing Corporation's Scheme Development Standards and the Housing Quality Indicators.

1999

'HOUSING QUALITY INDICATORS': HOUSING CORPORATION

In 1999, the Housing Corporation introduced the Housing Quality Indicators (HQIs) as a means by which to measure the design and performance of new housing against the criteria set out in Scheme Development Standards (SDS). HQIs replaced the Total Cost Indicators. SDS itself was revised in 1995, 1998, 2000 and 2003, before being replaced by Design and Quality Standards in 2007. Later versions of the HQIs included minimum space standards (see extract of 2007 version).

2005

'QUALITY STANDARDS': ENGLISH PARTNERSHIPS

English Partnerships (EP) was established as the national regeneration agency for England in 2005. Its standards, which were revised in 2007 and renamed, 'Places, Homes, People', deferred to existing standards, such as Building for Life, Lifetime Homes, the Code for Sustainable Homes and Secured by Design, as well as setting bespoke standards, including minimum internal floor areas.

EP space standard

Type	Floor area
1b2p	51m²
2b3p	66m²
2b4p	77m²
3b5p	93m²
4b6p	106m²

The EP space standard was unusual because it covered only five dwelling types and took no account of storey height (i.e. did not differentiate between flats and houses). The rationale for this was unclear, but was widely questioned because the 'usable' floor space in a house with the same floor area as a flat or bungalow with an equivalent number of bedrooms and bedspaces, would be considerably less because of the space taken up by stairs.

'WHAT HOME BUYERS WANT: ATTITUDES AND DECISION MAKING AMONG CUSTOMERS': CABE

This report set out to compare what homebuyers want with what they were being given. Findings were based on three strands of consumer research:

- An evidence review of 25 consumer surveys commissioned over the previous decade
- Qualitative research, based on six focus groups chosen to represent a cross section of home owners
- A quantitative study comprising 900 surveys of prospective home buyers.

Internal space was only one of many topics covered, but the findings were instructive. Among would–be purchasers, around a third of intending new homebuyers, and 40% of second–hand homebuyers, were 'put off' by an overall shortage of space in new homes. New homes were perceived as,

> *'having smaller rooms, very small bedrooms and no storage space compared with older houses. More living space was preferred, as were fewer but bigger bedrooms'.*

Criticism about lack of space was expressed by all groups of homebuyers, and inadequate storage was one of the specific elements cited by all groups.

2006

'HOUSING SPACE STANDARDS': ANDREW DRURY, HATC

The role of London Mayor had been created in 2000 and the first Mayor, Ken Livingstone, served two consecutive, four–year terms of office. During his second term, Livingstone commissioned housing experts HATC to look at feasibility of using the planning system to set space standards for London's new housing, and what these standards might be. As the GLA had explained in its brief, the initiative was prompted by concern that the size and quality of the capital's housing was falling:

> *'There has been growing concern that the internal space of new dwellings may be getting smaller. There is evidence that less family size housing is being provided. There is however concern that internal space within both family and non-family homes may also be reducing. This has implications for both accessibility and for sustainability and for quality of life including health…*
>
> *…The potential role of internal space standards for dwellings is to be considered within the forthcoming review of the London Plan and this project will form the basis for any revised policy. The GLA is currently anticipating presenting the draft report of the first review of the London Plan for Mayoral approval in spring 2006. The purpose of this study is to attain an understanding of the evolution, role, operation, and impact that space standards have had and may have in the future within London and to propose policy for incorporation in the London Plan and related guidance.'*

The report, which was in part an evidence base, found that,

> *'…space standards were below the European average; indeed UK standards appear to be near the bottom of the range'.*

It went on to note that the differences between space standards in public and private provision were greater than anywhere else in Europe.

A key aspect of the brief was to establish whether the planning system was, or could be, an appropriate regime through which to set and test standards. The report concluded that it was. Its main recommendations related to minimum room areas, rather than minimum dwelling areas, on the basis that the space in rooms matters more than the overall floor space and is what occupants actually experience.

Somewhat against the better judgement of Drury and his expert panel, the GLA was keen to have minimum floor areas as well as room areas, so these were included in the final version. Described as an 'early warning signal', they were acknowledged to be low because the minimum room areas were still intended to act as the primary safeguard.

Proposed baseline standards

1. The minimum floor area for the cooking, eating and living area is to be:

   1p 22m²
   2p 22m²
   3p 24m²
   4p 27m²
   5p 30m²
   6p 33m²
   7p 36m²

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

   a) Aggregate bedroom areas to be no less than 7m² per single bedroom and 12m² per double/ twin bedroom provided, AND

   b) Each bedroom to have a minimum floor area of 6.5m² for a 1 person bedroom and 10m² for a two person bedroom.

3. Storage cupboards:

   1m² floor area for 1p dwellings plus 0.25m² per additional person.

Notes:

1. In larger dwellings each bedroom does not have to be at least 7m² or 12m², the designer is free to distribute the total amount of space among the bedrooms as they see fit so long as the aggregate space equates to the minimum requirements stated AND the individual rooms meet the minimum requirement of 6.5m² and 10m² noted above.
2. Ensuite bathrooms or shower rooms do NOT count towards this minimum.
3. The floor space taken up by built–in wardrobes in bedrooms counts towards the bedroom floor areas.

Minimum suggested internal dwelling areas to be used as an indicator only:

1p 37m²
2p 44m²
3p 57m²
4p 67m²
5p 81m²
6p 92m²
7p 105m²

A set of additional, secondary standards for sleeping, living, eating and cooking areas was also proposed.

THE LAST DECADE

2007

'DESIGN AND QUALITY STANDARDS': HOUSING CORPORATION (HC)

In 2007, the Housing Corporations' Scheme Development Standards were replaced by 'Design and Quality Standards' (D&QS); measured by an updated version of the HQIs. D&QS comprised three 'core performance standards'. Contrary to popular belief, these did not include Lifetime Homes:

- Internal environment – with mandatory minimum scores for 'Unit size', 'Unit layout' and 'Unit services'
- Sustainability – to achieve at least Level 3 of the Code for Sustainable Homes (including full points for 'Security')
- Building for Life – to score at least 12 out of 20 (or 10 out of 20 for rural sites).

The space standards were set out in Version 4 of the HQIs. Organised by bedspaces and storey heights, the lower floor area in each band was the minimum floor area necessary to receive grant funding. A higher score was awarded for exceeding the upper figure by 1–10%, and higher still for exceeding it by more than 10%, though this was not directly linked to higher funding.

HQI Version 4: Minimum space bands

Bedspaces/storey heights	Floor area (m²)
1 bedspace	30 – 35
2 bedspaces	45 – 50
3 bedspaces	57 – 67
4 bedspaces	67 – 75
5 bedspaces 1 storey	75 – 85
5 bedspaces 2 storey	82 – 85
6 bedspaces 1 storey	85 – 95
6 bedspaces 2 storey	95 – 100
6 bedspaces 3 storey	100 – 105
7 bedspaces 2+ storey	108 – 115
For each additional bedspace add 10m²	

In 2008, the Housing Corporation merged with English Partnerships to become the Homes and Communities Agency (HCA). When it required the merger, the government also pledged to review funding standards, and in 2010, the HCA launched a consultation, 'Proposed core housing design and sustainability standards' which offered a new slimmed–down set of standards.[48]

This focused very largely on internal space as this was considered the most important test of fitness–for–purpose for affordable housing; then, as now, expected to be fully occupied. The draft standards also retained requirements to meet the Code for Sustainable Homes (but proposed increasing the minimum standard from Level 3 to Level 4) and retained a requirement to achieve a minimum score under the placemaking principles of Building for Life.

The proposed new space standard was the work of architectural practice, Levitt Bernstein. The work was self–initiated, motivated by a concern that the minimum floor areas in the HQIs were inadequate and lacked any logical rationale. The space standard had been offered to the HCA as a more robust and logical set of figures, generated by a simple calculator, and backed up by a set of 'model' floor plans for typical dwelling types; based on baseline, good practice and best practice approaches. Levitt Bernstein was only peripherally involved in the consultation proposals and the HCA chose to develop the space calculator into a complicated assessment tool, rather than the simple 'ready reckoner' originally intended.

By this time, recommended minimum floor areas had been published in a second edition of the NHF Standards and Quality in Development, and work on the new GLA space standards was also underway. These two sets of figures correlated extremely strongly with each other, and with the Levitt Bernstein standards, despite the fact that each had been derived by a slightly different methodology.

Although much slimmer than its existing funding standards (D&QS), the HCA's overall package of new standards was not only complicated, it was also more onerous, and therefore more costly. Housebuilding was still struggling to recover from the 2007–8 recession and the new Conservative/Liberal Democrat coalition government immediately decided not to proceed with the new standards, in part because of its plans to make drastic cuts to grant funding. D&QS and the HQIs remained in place until March 2014 when the government abolished them altogether, as part of its review of housing standards.[49]

Proposed HCA space standards, published for consultation in 2010

Dwelling Type	Flat or bungalow	2 storey house	3 storey house
1b2p	48	–	–
2b3p	61	–	–
2b4p	70	83	–
3b4p	74	87	93
3b5p	86	96	102
3b6p	95	105	111
4b5p	90	100	106
4b6p	99	109	115
4b7p	108	118	124
4b8p	117	127	133
5b6p	103	113	119
5b7p	112	122	128
5b8p	121	131	137

'STANDARDS AND QUALITY IN DEVELOPMENT' 2ND EDITION: ANDREW DRURY, HATC, FOR THE NATIONAL HOUSING FEDERATION (NHF)

Ten years after the first edition, 'Standards and Quality in Development' was updated and republished. As before, it was aimed at housing associations and the standards were intended to represent a good practice benchmark for affordable housing. Although they were differentiated as 'recommended' and 'essential', all standards were discretionary, as the document had no official status. It was, however, expected to inform the next version of the HCA's funding standards.

This time around, the section on the 'Internal Environment' included 'indicative minimum dwelling areas', referred to as 'IMDAs'. As grant subsidy was being reduced, the dwelling areas, which exceeded the existing HCA funding standards by some way, were never widely used. As noted earlier, they were very similar to the space standards in the 2010 HCA consultation, and the emerging GLA standards, which were being developed in parallel.

NHF Indicative Minimum Dwelling Areas (IMDAs)

Dwelling Type	Flat or bungalow	2 storey house	3 storey house
1b2p	50	–	–
2b3p	61	–	–
2b4p	70	82	–
3b5p	86	96	102
3b6p	95	–	–
4b6p	98	108	114
4b7p	107	117	123
5b7p	–	120	126

2009

'RESIDENT SATISFACTION WITH SPACE IN NEW HOMES: WHAT RESIDENTS THINK': HATC WITH IPSOS MORI FOR CABE AND EP, WITH RIBA

This research was jointly funded by CABE and English Partnerships who commissioned HATC to explore residents' views on the adequacy of space in their homes. HATC appointed Ipsos MORI to conduct a self–completed postal survey, asking residents in newly built, private sector homes about the space available to them for performing everyday activities. Questionnaires were sent out to 11,000 owners of homes built between 2003 and 2006 – either in London, or within one hour's travel distance of the capital. The summary of findings from the 2,249 returned questionnaires, included the following:

- *'Neutral' to 'Very Satisfied' that there is enough circulation space in the home*
- *'Mostly 'Neutral' to 'Satisfied' that there is sufficient space to entertain guests*
- *'Neutral' to 'Satisfied' about the location of the storage space provided*
- *'Mostly 'Neutral' to 'Satisfied' about the way the space in the home has been designed and laid out*
- *'Dissatisfied', 'Neutral' or 'Satisfied' that there is enough space in the home for privacy*
- *'Dissatisfied' to 'Neutral' about the amount of space in the home for the furniture, or enough space for more than one furniture layout*
- *'Dissatisfied' to 'Neutral' about the amount of storage space provided*
- *Mostly 'Very Dissatisfied' or 'Dissatisfied' with the space in the kitchen.'*

Based on the number of bedspaces in relation to the numbers of occupants (not on the official 'Bedroom Standard') only 10% of respondents were fully occupying their homes. 90% had either a spare bedspace or a spare bedroom. There were significant differences between the responses from those who were fully occupying and those who were not:

- *'51% (65% of fully occupied homes) said the amount of space in their home limited the choice of furniture layout in rooms*
- *57% (69% of fully occupied homes) said there was not enough storage for their possessions*
- *28% (48% of fully occupied homes) felt they couldn't get away from other people's noisy activities'*

CABE followed up with a summary report, 'Space in new homes: what residents think'. Their recommendations included a call for local authorities to:

- *'Introduce or apply existing minimum space standards through their planning departments.*
- *Recognise that adequate space in the home has an effect on health, diversity and community cohesion and that insufficient space provision in the local housing stock will impact local services'.*[50]

2010

'LONDON HOUSING DESIGN GUIDE - INTERIM EDITION': ALEX ELY OF MAE ARCHITECTS FOR DESIGN FOR LONDON.

Following the 2006 HATC report into space standards, the GLA commissioned new consultants to produce design standards for London's new housing. In 2009, after a pause caused by a mayoral election that saw Labour's Ken Livingstone replaced by his Conservative rival, Boris Johnson, the draft London Housing Design Guide (LHDG) was finally published for public consultation.

While its initial remit was limited to affordable housing and housing built on GLA–owned land, the introduction made it clear that it might be extended to all tenures, stating that:

> *'The Mayor would also like to use this consultation to open the debate on applying the standards consistently for all new housing whether publicly funded or not'.*

Following the consultation, the LHDG was modified and a new 'interim' version was published in August 2010. It was described as interim for two reasons. Firstly, because the Mayor had decided to proceed with extending its remit to all tenures which meant subjecting a 'Draft Replacement London Plan' to a public consultation and an Examination in Public (EiP). And secondly, because the consultation on the HCA's proposed new national standards was taking place simultaneously and an informal, but high level, agreement to align the two very similar space standards, had been reached.

The LHDG had always been conceived as a consolidation of existing standards, rather than a fresh start. Lifetime Homes had been embraced in the 2004 London Plan so these criteria were embedded in the new standards, as were key aspects of the Code for Sustainable Homes and some of the principles of Building for Life and Secured by Design.

The standards adopted a two–tier hierarchy. 'Priority 1' standards were mandatory for all projects and 'Priority 2' preferred, but only strictly required for housing that was supported by funding from the London Development Agency (LDA) or built on land it owned. The space standard was the major new element. The minimum gross internal floor areas for 16 typical dwelling types, minimum storage and private open space requirements (typically a balcony because by then almost 90% of new homes in London were flats rather than houses) were given Priority 1 status. Minimum floor areas and widths for habitable rooms were designated as Priority 2.

As with the Parker Morris standards, Standards and Quality in Development and the HCA funding standards, the minimum areas were based on functionality (an analysis of the space needed for typical furniture and activities), and took account of the number of bedrooms, bedspaces and storeys. Typical furnished room layouts had been produced for double and single bedrooms, living/dining/kitchen spaces and bathrooms, and these were used to generate the minimum room areas. Storage space and a percentage allowance for circulation and partitions were added to produce the overall floor areas.

London Housing Design Guide (interim version)
Minimum gross internal floor areas (GIAs) (m²)

Dwelling Type	1 storey dwelling	2 storey dwelling	3 storey dwelling
1b2p	50	–	–
2b3p	61	–	–
2b4p	70	83	–
3b4p	74	87	–
3b5p	86	96	102
3b6p	95	–	–
4b5p	90	100	106
4b6p	99	107	113

Note: For dwellings designed for more than 6p, add at least 10m² for each additional person

Other minimum space standards (m²)

Dwelling type by bedspace	2p	3p	4p	5p	6p
Minimum living/dining/kitchen area	23	25	27	29	31
Minimum built–in storage area	1.5	2.0	2.5	3.0	3.5
Minimum double/twin bedroom	8				
Minimum single bedroom	12				

As noted, this was very similar to the approach and conclusions of the 2008 version of Standards and Quality in Development, produced by HATC. Both were also very close to the figures generated by the Levitt Bernstein calculator; used for the abortive 2010 HCA consultation. Although the three 'standard–setters' had been working concurrently and compared notes, the fact that their methodologies had differed and each had approached the issue with an open mind, yet come up with almost identical answers, meant that there was considerable confidence in the figures.

As the Mayor intended to include the space standard in the London Plan, a process that would be subject to an Examination in Public, the GLA commissioned two further reports. The first of these, 'Room to swing a cat?: The amount and use of space in new dwellings in London & the South East, 2010', was produced by HATC.[51]

This reviewed the amount of space being provided in different dwelling types marketed for sale in late summer 2008 in the South East. The study sample was drawn from developments by 17 different housebuilders, and 89 dwellings were analysed and compared with the new draft benchmark sizes proposed by the HCA, and the Draft Replacement London Plan and interim LHDG.

It found that, on average, all dwelling types examined were smaller than the proposed new standards, and that nearly 60% of the one bedroom flats in London had no storage space at all. In the London sample, the average gross internal floor area of the one bedroom flats was 46.9m², compared with the minimum standards proposed by the HCA (48m²) and the draft London Plan (50 m²). The most noticeable shortfall was in the two bedroom flats, where 91% were below the HCA and draft London Plan benchmark levels – 10m² smaller on average.

Again in London, some of the flats marketed as 2b4p dwellings (i.e. those showing two bed spaces in each bedroom – either a double bed or two singles) were as small as 49m²; below the draft minimum standard for a 1b2p flat. This was of paramount concern because two–thirds of the total output in 2008/09 had been two bedroom flats and all were potentially family homes. The research also revealed that some housebuilders were marketing bedrooms of 8m² as doubles, and that some single bedrooms were as small as 4.6m²; only acceptable for a child under 10 under the Housing Act.

The second document, 'Housing Design Standards Evidence Summary' was written by Debbie Mathieson and published in July 2010.[52] This sought to bring together and summarise the evidence that supported the need for the Mayor's proposed housing design standards; specifically the space standard.

That same year, HCA London became a separate arm of the HCA, and incorporated the full set of LHDG standards in a new prospectus and pro–forma. In 2011, compliance became a condition of funding in the capital. HCA London was then absorbed into the GLA and became the HCA London Board, chaired by the Mayor. Two years later, London housing investment responsibilities were fully devolved to the Mayor, by which time the standards had been extended to all tenures.

'SPACE STANDARDS: THE BENEFITS': UCL FOR CABE
'THE CASE FOR SPACE: THE SIZE OF ENGLAND'S NEW HOMES': RIBA

The purpose of both of these high profile documents was not to set space standards, but to campaign for space to be taken more seriously, and suggest that homes in England needed to be bigger.

'Space Standards: the benefits', commissioned by CABE, included a thorough interrogation of English space standards to date. In conclusion, the authors set out the following justifications for setting a new space standard:

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

CABE went on to produce a number of other publications including, 'Improving the design of new housing'[53] and 'Simpler and Better.'[54] These recommended a minimum set of standards for all new housing, irrespective of tenure; split between planning and building regulations, and obviating the need for additional, funding standards.

The 'Case for Space: the Size of England's New Homes', was produced by the RIBA, as the start of its long–running 'Homewise Campaign'. It commissioned a YouGov poll to test perceptions and preferences about newly built homes. This revealed that:

> *'60% of those people who would not buy a new home, said that the small size of the rooms was the most important reason for them'.*

The RIBA also analysed the size of selected house types developed by the top eight volume housebuilders (based on turnover). Using online planning data for 80 sites, the research team selected ten randomly generated, regionally spread sites from each housebuilder. This amounted to 1,159 one bedroom flats and 3,418 three bedroom houses; drawn, as far as possible, from the private sector. The floor areas were compared with the emerging GLA Space Standards and found to be, on average, 92% of the minimum standards. Data comparisons revealed that homes were also getting smaller – the average UK home was 85m^2, compared with an average of 76m^2 for new homes.

Another branch of the same research compared the size of UK homes with those in other parts of Europe. It concluded that the UK lagged significantly behind. New homes were found to be 15% larger in Ireland, 53% larger in the Netherlands, and 80% larger in Denmark. Despite this, based on other data from 2004, it also noted that, on average across all homes in England, space per person was comparatively high; 44m^2 compared with 41m^2 in the Netherlands, and 35m^2 in Ireland.

As a 'starting point for a conversation' about the size of new homes, RIBA suggested that consumers (home buyers) should at least be better informed and that the newly introduced 'Energy Performance Certificates' (EPCs) that, by law, had to include the floor area, should be available as part of the marketing material for a new home, rather than being provided at, or after, the point of sale.[55]

This idea, referred to as 'space labelling' had been suggested earlier by the RIBA and others, and continues to be championed by organisations such as the Housing Forum, as a means by which to inform and empower consumers. This is often referred to as a 'pull factor', in contrast to the 'push factor' of imposed standards.

In October 2012, the RIBA published 'The Future Homes Commission, Building the Homes and Communities Britain Needs', a report designed to capture the views of four housing experts – Sir John Banham, Kate Faulkner, Roger Graff and Dame Mavis McDonald.[56] By this time, the government's review of housing standards was underway. Recommendation 5 of the report read:

> *'The government must ensure its review of local housing standards sets minimum national standards for space, storage, noise insulation and natural light. These standards are essential for residents' quality of life, and should be incorporated into Building Regulations so they apply to housing of all tenures, across the UK'.*

The work of the Commission was informed by another research project carried out by Ipsos MORI for the RIBA in 2012. 'The Way we Live Now' looked at the needs and expectations people have for their home, how they use the space they have, and how they choose a new home.[57]

2011

‘LONDON PLAN 2011’ AND ‘LONDON HOUSING SPG 2012’: MAYOR OF LONDON

By the end of 2011, key standards from the London Housing Design Guide (LHDG), including the minimum floor areas for the 16 main dwelling types, had been incorporated in a new London Plan (following a public consultation and an Examination In Public) and become strategic policy for all new housing in London. The extension to all tenures happened quickly and was strongly opposed by many individuals and organisations, including the Home Builders Federation (HBF).

The GLA also published a new housing supplementary planning guidance document (Housing SPG 2012). This included the full set of standards from the Interim LHDG, retaining the two–tier status but renaming them ‘Baseline’ and ‘Good Practice’ standards. In practice this meant that while the minimum dwelling floor areas were Baseline requirements and applied to all new housing, some of the secondary space standards, such as minimum room areas, were not enforced for private housing. They were therefore not entirely consistent across all tenures.

The SPG also expanded the original table in the London Plan to cover a total of 77 flat and house types – significantly more than any previous standard. Levitt Bernstein’s ‘space calculator’ was used to generate the extra figures because of its ability to provide calibrated results for any dwelling type. With the exception of three minor anomalies in the original GLA space standard that could not be addressed without a revision of the London Plan, this effectively streamlined the three sets of space standards; produced separately for the NHF, HCA and GLA over the preceding few years, to a single set.

London Housing SPG 2012, minimum Gross Internal Floor Areas (m^2)

Bedspaces	Bedrooms	1 storey	2 storey	3 storey
1p	–	37/39*	–	–
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

* $37m^2$ where shower room provided, $39m^2$ where bathroom provided

Opposition to the GLA standards (including the space standard) soon weakened and the vast majority of designers and developers quickly conceded that having a single set of rules was better than having different requirements in every borough. Because dwelling 'footprints' were interchangeable in terms of tenure, it also meant that designs could remain fluid for longer.

2013

'LITTLE BOXES, FEWER HOMES, SETTING STANDARDS WILL GET MORE HOMES BUILT': SHELTER

As the title suggests, this policy briefing asserted that building larger homes would result in more homes being built by increasing public support. It sought to influence the outcome of the government's review of housing standards that had begun a year earlier by advocating that minimum standards for internal space should be taken into Building Regulations. Its research showed that 73% of people would support housing developments if homes were better designed and in keeping with the local area, and that the size of new homes was a major factor in local concerns about design. Shelter reported that:

> *'Nearly half (44%) of the public told us they were more likely to support new housing developments if the homes were larger, even if this means they take up more land. Only 23% said the same about developments with smaller homes on smaller sites…. Even those that did not see the need for more homes in their local area are more likely to support a development with larger homes, with minimum space standards, compared to one with smaller homes (40% versus 24%)'.*

It argued that any extra cost would be absorbed by a corresponding reduction in land value:

> *'The Building Regulations are non-negotiable: compliance with the regulations is required for most building work. If Building Regulations required mandatory space standards, the additional development cost would become a non-negotiable factor in land purchases, making it possible for developers to build the sort of homes that people want to see without threatening the viability of the development or reducing the affordability of the homes'.*

2014

'QUANTIFYING THE EXTENT OF SPACE SHORTAGES: ENGLISH DWELLINGS': MALCOLM MORGAN AND HEATHER CRUICKSHANK

This important and thoroughly researched paper, written by academics at the University of Cambridge, was published towards the end of the Housing Standards Review. Its headline findings featured in The Independent on 18 June 2014.[58]

The report summary read as follows:

> *'Lack of internal space is a problem in UK homes, and is often linked to a lack of space standards for housing in the UK. Although previous studies have examined new-build housing, this paper uses a new method to study 16 000 dwellings in the English Housing Survey (EHS) 2010 to examine existing housing and compare them with a modern space standard in an attempt to quantify the extent and magnitude of the problem.*
>
> *Dwellings in the survey were compared against a slightly modified version of the London Housing Design Guide 2010 internal space standard. It was found that between 21% and 55% of dwellings failed to meet the standard; and that flats and small terraced houses were most commonly below*

the standard. Dwellings were also frequently found to be under-occupied in comparison with the number of bedrooms.

This research hypothesised that this was a result of the lack of space. To illustrate the use of this new analysis method, a recent change to the Housing Benefit system (colloquially known as the 'Bedroom Tax') has been considered. Households receiving Housing Benefit were more likely to be undersized, suggesting that the policy to withdraw housing benefits from these households may be misguided.'

The paper provided a thorough overview of the evidence that insufficient space is detrimental to health and wellbeing. The link between under–occupancy and small homes, which the authors considered to be causal, is particularly important.

A table comparing selected European dwelling sizes (originally produced by Evans and Hartwich in 2005)[59] and also used by the RIBA, was included in the report.

Comparison of selected European dwelling sizes

	All dwellings			Newly built dwellings		
	Floor space m²	No. of rooms	Room size* m²	Floor space m²	No. of rooms	Room size* m²
UK	85	5.2	16.3	76	4.8	15.8
Italy	90.3	4.1	22	81.5	3.8	21.4
Portugal	83	4.3	19.3	82.2	4.7	17.5
Sweden	89.8	4.3	20.9	83	4	20.8
Finland	76.5	3.6	21.3	87.1	4	21.8
Ireland	88.3	5.3	16.7	87.7	5.2	16.9
Austria	90.6	3.4	26.6	96	3.7	25.9
Spain	85.3	4.8	17.8	96.6	5.1	18.9
Luxembourg	125	5.5	22.7	104.1	5.1	20.4
Germany	86.7	4.4	19.7	109.2	5.1	21.4
France	88	3.9	22.6	112.8	4.2	26.9
Netherlands	98	4.2	23.3	115.5	4.1	28.2
Belgium	86.3	4.3	20.1	119	5.8	20.5
Greece	79.6	3.8	20.9	126.4	3.2	39.5
Denmark	108.9	3.7	29.4	137	3.5	39.1

*Note that room size is the overall floor space divided by the number of rooms, not the actual size of rooms.

It reminded us that not only were new UK homes smaller than those of all other European countries included in the survey, they also had the 'smallest rooms' (meaning the least amount of overall floorspace per room).

Morgan and Cruikshank made the following policy recommendations:

- *'Require the internal area of homes to be clearly stated by estate agents when renting or buying a home*
- *All local governments to set minimum space standards in the way the GLA has done, reflecting the conclusions of the Housing Standards Review*
- *Consider the floor area per person rather than the number of bedrooms when assessing whether a benefit claimant has a larger home than they require*
- *Identify the small number of cases where people are living with a chronic lack of space due either to overcrowding or to small homes and rehouse these people*
- *Support work to identify the costs of poor housing incurred by the NHS and to wider civil society'.*

2015

'NATIONALLY DESCRIBED SPACE STANDARD, 2015': DEPARTMENT FOR COMMUNITIES AND LOCAL GOVERNMENT (DCLG)

The 'Nationally Described Space Standard' (NDSS) is one of the principal outcomes of the government's 2012–15 Housing Standards Review (HSR). The exercise, which initially began in 2010, under the Conservative/Liberal Democrat coalition, was motivated by a political desire to boost house building, and therefore the economy as a whole, following the 2007–8 recession; brought about by the global banking crisis.[60]

Developers had long argued that housing was being hindered by 'over–regulation', a complaint that centred largely on the growing burden and complexity of local planning policy requirements, as well as issues with highways, utilities, ecology etc. The problem was not just the quantity of rules, but also the countless local variations, even in technical areas such as accessibility, energy and internal space, none of which is affected by the geographical location of a home.

Housebuilders were particularly adversely affected by the local variations because they typically produce portfolios of standard house types. But they were not alone in their criticism. Many architects and other housing professionals agreed that 'local planning standards' had been allowed to proliferate to the point where they were causing confusion, slowing delivery and increasing cost.

This chaotic situation, referred to as 'plandemonium', resonated with the government's general desire to reduce regulation, but sat less comfortably with its 'localism' agenda. Grant Shapps, the Housing Minister at the time, proposed a menu of standards (referred to as a 'Local Housing Standards Framework'), but this was rejected by the housing sector. Keen for industry to come up with an alternative solution, the government established a pan–industry working group, the 'Local Housing Delivery Group', chaired by the NHBC, under the leadership of Sir John Harman.

The Minister was emphatic that the review was to have a cross–tenure remit on the basis that affordable housing should no longer be subject to higher standards than private housing. It was also intended that the standards on the menu would be the only 'technical standards' that could be imposed on developers by planning authorities. This 'take it or leave it' approach also barred local authorities from adding, taking away or changing any element of the standards.

2010-12: Initial review by the Local Housing Delivery Group

The Delivery Group tackled only a few of the topics identified for discussion. Space proved extremely contentious from the start and failed to make the shortlist. Progress was difficult because where it was agreed that rules were needed at all; the consensus was for these to be taken out of the planning system and into the Building Regulations.

The recommendations, published in a report in June 2012[61], were unpalatable for a political regime committed to deregulation, so work stalled before being taken back into the hands of the Department for Communities and Local Government (DCLG).

2012-14: First phase of the government – led Housing Standards Review

The Housing Standards Review was officially launched in October 2012. The process was overseen by a steering group comprising senior housing professionals from all sectors and critiqued by an independent 'Challenge Panel', which produced its own report.[62]

The topics selected for scrutiny were Energy, Water, Accessibility, Space and Security. DCLG managed the work and chaired the meetings with the five expert working groups; established to offer advice and proposals. The groups included representatives from the HBF, HCA, GLA, NHF, RIBA, Building Research Establishment (BRE), Association of Chief Police Officers (ACPO), Local Government Association (LGA), Planning Officers Society (POS), Local Authority Building Control (LABC) and the NHBC.

Across all topics, debate was robust and wide–ranging – none more than that involving space. The starting point was to interrogate the purpose of a space standard and the effects it might have on the housing market. Views were polarised but there was common ground; everyone felt that space standards were needed for affordable housing. (At the time, this meant housing, usually for rent; intended for households unable to afford market prices, and with protected status in perpetuity, or with an element of recycled subsidy).

The 'space group' was then asked to consider (if only hypothetically) what a 'good space standard would look like'. The recent London space standards were the obvious starting point but the HQIs, and many others, were also considered. There was general agreement that setting a minimum overall internal floor area (GIA) was the most useful approach but that secondary standards (for example minimum bedroom areas) might also be necessary. Recognising clear links between space and accessibility, these two working groups shared notes in order to come up with compatible proposals.

Two public consultations took place. The first of these was launched in August 2013.[63] It invited views on the principles of the streamlining exercise, and the general approach taken to the 'Indicative Technical Standards' that had been informed by the working groups.[64] For each topic apart from space, respondents were asked whether the draft requirements were appropriate and whether the new requirements should remain in the planning system as standards, or be taken into regulation – either initially, or as a second step. For space, the only choice was an 'optional planning standard'. Regulation was not on offer. Instead of, or as well as, a planning standard, respondents were invited to comment on the merits of a space labelling system. Potentially, this would have made it mandatory to disclose the GIA of a home, and other details, at the point of sale or rent.

Because of the interdependency between space and accessibility, the first consultation proposed a three–tier space standard to align with the three–tier accessibility standard that had emerged in parallel. The rationale was explained as follows:

> *'The inter-relationship between internal space and accessibility is widely accepted. This interdependency has been a fundamental part of the methodology used to develop…these standards.*
>
> *Across the full range of types and performance levels, the starting point for the Gross Internal Areas is the need for rooms to be able to accommodate a basic set of furniture and fittings appropriate to the function of each room.*
>
> *The required minimum Gross Internal Areas increase incrementally from Level 1 through to Level 3 to reflect the spatial implications of the larger bathrooms and WCs, and the increased circulation and activity zones that are required by the Accessibility Standard. This space is additional to that required to accommodate the generic furniture…*
>
> *Level 1 Space Standard provides enough space to accommodate the minimum amount of furniture, fittings, activity and circulation space considered necessary to carry out a typical range of daily activities and meet the basic requirements of Level 1 of the Accessibility Standard.'*

The Level 1 Accessibility Standard was intended to replace the existing requirements for new dwellings within Part M of the Building Regulations (Access to, and Use of Buildings) and would therefore become the new regulation.

The Level 2 Space Standard was defined in the same way but reflected the increased spatial implications of the Level 2 Accessibility Standard (broadly equivalent to the Lifetime Homes standard). The Level 3 Space Standard matched with Level 3 of accessibility (wheelchair housing) and was higher again. Although no equivalent requirements existed in regulation at that time, the option for Level 2 and Level 3 of accessibility to be introduced into Part M as new 'optional requirements' was tested in the consultation.

The proposition was that the three–tier space standard would operate independently of the three–tier accessibility standard, and that either, or both, could be invoked by a local authority, subject to their ability to demonstrate that there was local need, and that development viability would not be threatened as a result.

The space and accessibility standards were linked to the extent that, where the space standard applied at all, each level could only apply to dwellings meeting the corresponding level of the accessibility standard. The higher levels of accessibility were to be expressed as percentage requirements; whereby, for example, a local authority might require 40% of new dwellings to reach Level 2, and 5% to reach Level 3. Where the space standard had also been adopted, that same 40% of dwellings would meet Level 2 of the space standard, and the 5%, meet Level 3.

The three–tier space standard included secondary elements as well as minimum overall floor areas. The methodology used to generate the figures is described in the annex, and the standard itself, set out below:

Indicative three-tier space standard published in the 2013 HSR consultation

	1 storey			2 storey			3 storey		
	Level 1	Level 2	Level 3	Level 1	Level 2	Level 3	Level 1	Level 2	Level 3
1b1p	38	39	48	–	–	–	–	–	–
1b2p	47	48	58	–	–	–	–	–	–
2b3p	60	61	73	68	74	94	–	–	–
2b4p	69	70	87	77	83	104	–	–	–
3b4p	73	74	92	81	87	109	86	93	119
3b5p	84	86	103	90	96	120	95	102	130
3b6p	93	95	113	99	105	130	104	111	140
4b5p	88	90	108	94	100	125	99	106	135
4b6p	97	99	118	103	109	135	108	115	145
4b7p	106	108	128	112	118	145	117	124	155
4b8p	115	117	138	121	127	155	126	133	165
5b6p	101	103	123	107	113	140	112	119	150
5b7p	110	112	133	116	122	150	121	128	160
5b8p	119	121	143	125	131	160	130	137	170
6b7p	–	–	–	120	126	155	125	132	165
6b8p	–	–	–	129	135	165	134	141	175

The consultation package included a comprehensive impact assessment, which attempted to quantify the financial impact of applying the proposed space standard.[65] Responses were analysed and the results published in March 2014.[66]

Public support for the principle of a national space standard was extremely high. 80% of respondents agreed with Question 19 of the September 2013 consultation:

> *'Do you think a space standard is necessary (when linked to access standards), and would you support in principle the development of a national space standard for use by local authorities across England?'*

'Space and Light', a campaign led by the RIBA, received support from 2,847 of its members.[67] All signatories signed up to the drafted response to Question 19, saying,

> *'Yes – but it should go further.*
>
> *I believe that all homes in England should be required to meet minimum space standards and urge the government to take action through this consultation. Britain has the smallest homes*

in western Europe and a national space standard is necessary to ensure homes provide peace and privacy for children to study and play, room for families to grow and homes that are flexible enough to adapt to the needs of our ageing population.

Local authorities should be able to set space standards in order to improve new build homes in their communities. However, I believe that the most effective solution would be for a national space standard to be applied through Building Regulations so that it applies to all homes, in every location and type of housing.'

83% of those who expressed a view about the minimum Gross Internal (Floor) Areas (GIAs) proposed at each level felt they were either 'about right', or 'don't go far enough'. Support for the idea that government should work with industry to promote space labelling for new homes was even higher at 88%. 74% felt that this should not be instead of a space standard, but in addition to it.

Although the overall mandate for a space standard was unequivocal, the three–tier system for space was considered by many too complicated; particularly as the minimum GIAs at Level 1 and Level 2 were very similar, especially for flats. It was also conceded that there was insufficient evidence to be sure that the Level 3 standard was robust, as relatively few wheelchair dwellings had been built, and only a few local space standards had ever existed for this type of housing.

For accessibility, the three–tier system was supported and respondents voted overwhelmingly for the two higher levels to be taken into Building Regulations. There was a strong preference for the new standards for energy, water and security to be taken into regulation too, but, as noted previously, that choice was not offered for space.

Ministers broadly accepted the outcomes of the consultation, and a Written Ministerial Statement, released in January 2014, confirmed the action that the government intended to take.

2014-15: Second phase of the government–led Housing Standards Review

In March 2014, all national funding standards, including those for space, were withdrawn. Since that date, housing associations bidding under the National Affordable Housing Programme (NAHP) have only been asked to 'take account' of the emerging standards. The HCA's remit was restricted to 'benchmarking' against the draft Level 1 space standard. Although this exceeded the minimum floor areas of the HQIs, it had not been finalised or published and would lack mandatory status. This marked a major change. The space standards in the HQIs had been a minimum requirement for funding purposes, and had generally been applied to all schemes registered under the NAHP, including nil–grant Section 106 affordable housing. They had therefore offered guaranteed protection.

Later that month, the working groups were reconvened to advise on the technical detail of the final package. Responding to the many calls for simplicity, it was decided to create a single space standard, suitable for Level 2 of the accessibility requirements and by implication, comfortably enough for Level 1. In order to achieve this, it was agreed that for flats, the NDSS should mirror the Level 2 Space Standard published in the earlier consultation, with one exception. The 1b2p flat was increased from 48m² to 50m²; partly to appease the GLA, and partly to reflect the fact that one bedroom homes cannot offer a 'spare room' and are particularly suitable for older people who need larger rooms.

Arriving at a single level standard for two and three storey houses proved more difficult. The difference between Level 1 and Level 2 had been 6m² for most house types. Forensic review of the detail of every part of the methodology offered a potential solution. The GIAs were recalculated to allow for the space–saving winder stair that had always been permitted under Lifetime Homes, and was also permitted by the new Category 2 requirements. A couple of the figures were further reduced to allow for the smaller WC that was similarly considered acceptable in two bedroom houses. This allowed the floor areas for most houses types to be lowered by 3–4m², reducing the cost implications by bringing the areas closer to the Level 1 proposals, and to developer norms. Renamed the 'Nationally Described Space Standard' (NDSS), it was still intended to operate entirely through the planning system, at the discretion of each local authority.[68]

Alongside this, the three sets of accessibility requirements were redrafted in a format suitable for Building Regulations. Level 1 became regulation 'M4(1) Visitable dwellings' (or 'Category 1') and Level 2 was renamed 'optional requirement M4(2) Accessible and Adaptable Dwellings' (or 'Category 2'). At Level 3, the spatial requirements for the highest level of accessibility were incorporated into the new 'optional requirement M4(3) Wheelchair User Housing' (or 'Category 3').

Overall GIAs were not proscribed at Category 3. Instead, minimum room and storage areas were set out, together with detailed requirements for turning and access spaces in halls, kitchens and bathrooms. Optional requirement M4(3) included a furniture schedule, based on the London Housing Design Guide, and fully–furnished dwelling plans were required to demonstrate compliance through Building Control.

The re–worked package was issued for public consultation in September 2014[69] and, once again, received very strong support.[70] After another period of fine–tuning, during which the working groups were again recalled, the final package was published on 28 March 2015 – ten minutes before the start of Purdah for the General Election of 6 May 2015[71], which resulted in a narrow Conservative majority.

The only significant, and unexpected, change in the final version of the NDSS was the reduction of the minimum floor to ceiling height from 2.5m (the GLA standard at the time) to 2.3m. The final (and current) version of the NDSS, is set out below and includes additional notes added by DCLG in May 2016:

The Nationally Described Space Standard 2015: Technical requirements[72]

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 below
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 7.5m² 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 11.5m²
e. One double (or twin bedroom) is at least 2.75m wide 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 1m² 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% 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 0.72m² in a double bedroom and 0.36m² 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% of the Gross Internal Area.

Table 1 - Minimum gross internal floor areas and storage (m²)

Number of bedrooms	Number of bedspaces	1 storey dwellings	2 storey dwellings	3 storey dwellings	Built-in storage
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
	8p	125	132	138	

* Notes (added 19 May 2016)

1. Built–in storage areas are included within the overall GIAs and include an allowance of 0.5m² for fixed services or equipment such as a hot water cylinder, boiler or heat exchanger.
2. GIAs for one storey dwellings include enough space for one bathroom and one additional WC (or shower room) in dwellings with five or more bedspaces. GIAs for two and three storey dwellings include enough space for one bathroom and one additional WC (or shower room). Additional sanitary facilities may be included without increasing the GIA provided that all aspects of the space standard have been met.
3. Where a 1b1p has a shower room instead of a bathroom, the floor area may be reduced from 39m² to 37m², as shown bracketed.
4. Furnished layouts are not required to demonstrate compliance.

The NDSS and the other new measures took effect on 1 October 2015, six months after publication. It remains an optional planning standard, suitable for application to all tenures. In line with the initial objective, it is the only space standard that local authorities are currently entitled to impose through the planning system and, if applied, may not be varied. Notwithstanding its optional status, this principle of 'take it or leave it' is very significant.

Those authorities, which, like the GLA, already had a space standard within their Local Plan or Supplementary Guidance, prior to March 2015, were permitted to exchange that for the NDSS with no further justification. Those who did not (a significant majority) have been required to prove need and demonstrate that there would be no significant, adverse effect on viability before adopting the new standard.

It is worth noting that the NDSS includes a new definition of Gross Internal (floor) Area (GIA) which aligns with industry practice and is much simpler than the definition produced by the Royal Institute of Chartered Surveyors' (RICS) Code of Measuring Practice.[73] Although the RICS approach had been typically referenced as the formula for other recent space standards, it was conceived for valuation purposes, and had never been entirely appropriate as a functional measure. The NDSS definition of GIA, which is now used by the English Housing Survey, is as follows:

> *'The Gross Internal Area of a dwelling is defined as the total floorspace measured between the internal faces of perimeter walls that enclose the dwelling. This includes partitions, structural elements, cupboards, ducts, flights of stairs and voids above stairs. The Gross Internal Area should be measured and denoted in square metres (m^2)'.*

'SPACE STANDARDS FOR HOMES': RIBA

Later in 2015, the RIBA commissioned an updated analysis of the size of new homes. This completed its three–year Homewise campaign (launched in 2010 with The Case for Space). Primarily a campaigning document, Space Standards for Homes reported that half of all new homes remain 'too small' when measured against the minimum standards of the NDSS. It also cited significant regional differences, Yorkshire appearing to have the smallest homes.

The report highlighted the problems faced by local authorities seeking to adopt the NDSS. They must first substantiate that it is needed, and then prove that it will not jeopardise development viability. Based on research, it concluded that this twin–test required of local authorities is likely to be difficult and lengthy. As Local Plans are usually subject to public consultation, the adoption process could easily take two or three years to complete. Even if successfully incorporated, the standard is still liable to challenge by developers on a case–by–case basis. The report ended by recommending that the NDSS should be universally applied through the Building Regulations.

In April 2016, as the draft legislation of the Housing and Planning Bill was being debated by parliament, the RIBA lobbied for internal space to be regulated. This attempt failed although the government made a commitment to undertake a review of the NDSS by the end of 2017. The Housing and Planning Bill became the Housing and Planning Act on 12 May 2016 when Royal Assent was granted.[74] The review of the NDSS is still expected to take place before the end of 2017.

COMPARISON OF RECENT SPACE STANDARDS WITH PARKER MORRIS

	1 storey						2 storey						3 storey					
Dwelling types	**NDSS (2015 – now)**	GLA (2010 – 15)	NHF (2008 – 15)	HCA: HQI (2007 – 14)	English Partnerships (2005 – 7)	**Parker Morris (1961 – 80)**	**NDSS (2015 – now)**	GLA (2010 – 15)	NHF (2008 – 15)	HCA: HQI (2007 – 14)	English Partnerships (2005 – 7)	**Parker Morris (1961 – 80)**	**NDSS (2015 – now)**	GLA (2010 – 15)	NHF (2008 – 15)	HCA: HQI (2007 – 14)	English Partnerships (2005 – 7)	**Parker Morris (1961 – 80)**
1p	**37** **39**	37 39	–	–	–	**30**	–	–	–	–	–	–	–	–	–	–	–	–
1b2p	**50**	50	50	45	51	**45**	**58**	61	–	–	51	–	–	–	–	–	51	–
2b3p	**61**	61	61	57	66	**57**	**70**	74	–	–	66	–	–	–	–	–	66	–
2b4p	**70**	70	70	67	77	**70**	**79**	83	82	67	77	**72**	–	–	–	–	77	–
3b4p	**74**	74	–	–	–	–	**84**	87	–	–	–	–	90	93	–	–	–	–
3b5p	**86**	86	86	75	93	**79**	**93**	96	96	82	93	**85**	99	102	102	–	93	**94**
3b6p	**95**	95	95	85	–	**86**	**102**	105	–	95	–	**92**	108	111	–	100	–	**98**
4b5p	**90**	90	–	75	–	**79**	**97**	100	–	82	–	**85**	103	106	–	–	–	–
4b6p	**99**	99	98	85	106	**86**	**106**	107	108	95	106	**92**	112	113	114	100	106	**98**
4b7p	**108**	108	107	108	–	–	**115**	118	117	108	–	–	121	124	123	108	–	–
4b8p	**117**	117	–	–	–	–	**124**	127	–	–	–	–	130	133	–	–	–	–
5b6p	**103**	103	–	85	–	–	**110**	113	–	95	–	–	116	119	–	100	–	–
5b7p	**112**	112	–	108	–	–	**119**	122	120	108	–	–	125	128	126	108	–	–
5b8p	**121**	121	–	–	–	–	**128**	131	–	–	–	–	134	137	–	–	–	–
6b7p	**116**	116	–	108	–	–	**123**	126	–	108	–	–	129	133	–	108	–	–
6b8p	**125**	125	–	–	–	–	**132**	135	–	–	–	–	138	141	–	–	–	–

Note: Parker Morris areas have been rounded to the nearest whole number.

Highlights floor areas that correspond closely with the NDSS (lie within 4m^2)

Highlights floor areas that correspond closely with Parker Morris (lie within 4m^2)

WHAT HISTORY TELLS US

The most striking thing about this brief history of space standards is the inability of our policy makers to make up their minds. Throughout their one hundred year history, space standards have generally been by–products of national events, vulnerable to the state of the economy and the predilections of the government of the day.

As each of the two World Wars ended, an acute housing shortage was accompanied by a sense of relief and optimism, and a feeling that brave citizens were owed something. The drive for numbers was matched by a commitment to better living conditions.

Wars are a special case. Standards generally, and space standards in particular, have tended to weaken, or even fall away when we face a housing crisis. This has certainly been true in more recent times. The current race for numbers overrides concern for quality, and despite the post–war achievements, policymakers seem unable, or unwilling, to believe we can achieve both at the same time.

At a superficial level, this tension seems logical. If the primary aim is to build more homes more quickly, the smaller they are, and the fewer standards that are imposed, the more you get and the quicker you get them. Private developers often complain about systemic 'barriers' to house building, particularly when they come under pressure to deliver so it is understandable that politicians react by clearing away the rules that are blamed for slowing things down.

But it is evident that these national events and crises, and our reactions to them, are cyclical. While standards can be, and often are, abolished overnight, it takes much longer to reinstate them and claw back lost progress before beginning to embark on the gradual improvement we might expect. Space standards are obvious victims of these cyclical climb–downs, but history tells us that we gain little from short–term, reactive strategies. More often than not, standards were never the problem and there is little evidence that stripping them away improves supply or affordability for any length of time, if at all.

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Another striking factor is that the general trend has not always been upwards. The Tudor Walters standards of 1918 were very generous for their time. The quaint descriptions of a 'non–parlour house' and a 'parlour–house' make a strict comparison with our contemporary typologies (defined mainly by storey height and the number of bedrooms) rather difficult, but there are some remarkable parallels. Tudor Walters' 79.4m² for a 'non–parlour house' corresponds almost exactly with the 79m² required for a two storey 2b4p house under the NDSS. 98m² for a 'parlour house' is a close match to the NDSS 93m² for a two storey 3b5p and 99m² for a three storey. Nearly a century later we seem to be back to where we started.

The secondary elements of the various space standards are also intriguing. Tudor Walters' bedroom areas were 14m², 9.3m² and 6m². These are very similar to the bedroom areas in contemporary speculative housing in which space is diverted to the 'master bedroom' at the expense of others. In contrast, the Nationally Described Space Standard (NDSS), sets consistent values of 11.5m² for any double or twin bedroom, and 7.5m² for any single.

The paternalism of the activity schedule that underpins the Parker Morris standards, set out in Design Bulletin 6, is extraordinary. The suggestion that at 7pm, '..when Father makes or repairs something, he needs to be out of Mother's way in the kitchen and where he will not disturb sleeping children...', feels ridiculously sexist and out–dated for a time that many of us can still remember.

Today, both parents are much more likely to be juggling work with family life, sharing the bathing and bedding of children and the cooking. One, or both, is probably still travelling home from work at 7pm. We live less formally than we did fifty years ago and no longer expect a dedicated dining room. We eat at the kitchen table, a breakfast bar or in front of the TV. Friends 'drop–in', and an ensuite bathroom is routinely expected. We spend a great deal of time using our computers, tablets and phones, inside and outside the home.

The generic furniture has also changed. The 'refrigerator' is now a fridge/freezer and the 'dressing table', a desk. There is less of it – the 'upright piano, card table, playpen, trolley, record cabinet, radiogram', and many other things have gone, or are smaller, despite the fact that we have more 'stuff' overall. Other items remain exactly the same in current guidance. Two people are still expected to share a 750mm wide chest of drawers, and a double wardrobe is still 600 x 1200mm. The only thing that has changed about the 850 x 1850mm 'settee' in the 1978 metric edition of DB6, is its name. In the London Housing Design Guide it was called a sofa. Like the TV, most of todays' sofas and wardrobes are considerably larger than that, and a little more updating would have been welcome.

History also tells us that minimum standards tend, in practice, to become maximum standards. Often seen as a last resort, policy, particularly in the form of regulation, is usually only playing catch–up and still seems to happen painfully slowly. It only became a legal duty to provide a WC for a dwelling in 1964, and even then, it could still be outside. This is three years after the ground–breaking Parker Morris standards.

One of the biggest surprises is that the NDSS, our first, national, cross–tenure space standard, emerged when it did. The Housing Standards Review was a deregulatory exercise instigated by a Conservative – led, coalition government committed to boosting the economy through housebuilding following a global recession. At the time, only numbers mattered and that remains largely the case. Yes, it is optional, and that is very different from being mandatory. But it was a long–shot that space would make it at all in light of the Ministerial brief and the strength of initial opposition from the housebuilders.

The unprecedented level of public support was undoubtedly a major factor in securing the new space standard. The fact that London had gone first, and was determined not to step back, was also very significant. History, of course, tells us that it would be unwise to take anything for granted. As we see in the next chapter, the hard–won, nearly–new NDSS is already coming under threat.


theBRUNSWICK

3

PRINCIPLES AND PRACTICE

STANDARDS VERSUS REGULATION

The word 'standard' is conveniently ambiguous and often used carelessly. To many of us, a 'rule is a rule' and the rest is semantics. Once a standard has been imposed, it might as well be a regulation.

The difference is important, however, for legal and practical reasons. By definition, only a regulation can be universally mandated, and only government can produce one. Building Regulations are typically interpreted through Approved Documents and responsibility for assessment and enforcement is devolved to Building Control Officers or Approved Inspectors.

The term 'standard' implies greater flexibility and fewer sanctions than regulation. The 'standard setter' can demand good practice and compromise where it proves too onerous in a given situation. The 'standard recipient' has more scope to negotiate and less cause to panic. In the housing world today, standards usually apply to more subjective issues and are invoked and assessed by planners.

The traditional role of Building Regulations has been to keep us 'safe and sound' when we use buildings. They aim to protect occupants and the visiting public from structural failure, the spread of fire, disease caused by poor sanitation, etc. This role has evolved over the last two decades. Energy consumption, sound transmission between dwellings, and accessibility are among the 'softer issues' – attributes that significantly affect wellbeing but are not directly life–threatening – that have been taken into regulation.

Watering down seems to be an inevitable price to pay for universal application.

Like most regulations, Building Regulations started life as standards. Most standards started life as good practice guidance; produced by housing experts, or philanthropic organisations. Each mutation is therefore a trade–off between stronger status on the one hand, and weaker requirements on the other. Watering down seems to be an inevitable price to pay for universal application.

In terms of subject matter, regulations and standards have gradually overlapped. The Housing Standards Review (HSR)[75] has addressed this to a point, but has also brought new complexity, not least in respect of terminology and application. Setting a new precedent in England, 'optional requirements' have been introduced for accessibility and water efficiency. Subject to their ability to demonstrate need and viability, any of the 326 English local planning authorities can now invoke these 'higher standards' through Local Plan policies. Once confirmed as Conditions in Planning Approvals, they effectively become regulation and fall within the remit of Building Control. Both regimes have an important role to play in making them work.

Not all standards enjoy equal status. National standards (standards that have been devised by, with, or on behalf of, government) inevitably carry considerably more weight than others. 'Eco–homes', and its successor, the Code for Sustainable Homes, are examples of standards that have been jointly owned by government and industry. As a solely government–owned housing standard with a cross–tenure remit, the Nationally Described Space Standard (NDSS) sets a new precedent.

Governments of all persuasions have been reluctant to 'interfere' with the housing market unless to kick–start the economy. As the coalition government (2010 –15) and the subsequent Conservative

government have been ideologically focussed on deregulation, the odds have been stacked against a national space standard – even an optional one. As we know, regulation was never offered in either consultation. As internal space had never been regulated in England before, it was inconceivable that new legislation (introduced under the Deregulatory Act 2015[76]), could add an entirely new set of rules, particularly in the most controversial subject area. Because of the way in which impact assessments are conducted, it would have appeared as a huge new cost; quite simply out of the question in a cost–cutting exercise.

Regulation also requires significant evidence – proof that there is a problem and proof that there is no other way to solve it. There is no doubt that space matters to almost everyone, but over the years it has not proved easy to substantiate, or quantify, the risks of insufficient space – the rather negative, back–to–front way that we are expected to assess 'need'. The chronology of the last chapter has touched on the growing body of expert evidence that a lack of internal space can contribute to mental ill health.[77] Intuitively, most of us know that it can affect personal wellbeing, exacerbate or trigger tensions between family members, and constrain many of the things we might wish to do. While a lack of space may not be 'life–threatening', it can easily become 'life–limiting'.

The same could be said of soundproofing and accessibility, but both are now legal requirements. For the time being, and despite being quantifiable, easy to measure, contained within a building and universally relevant (most of the criteria that apply to a Building Regulation), internal space remains unregulated.

NEED AND EXPECTATION

Cultural norms, the people we know, our personal and family background, our expectations, lifestyle, age and many other factors, all influence what any of us regards as 'enough space'. Here in England, most couples would consider a three bedroom house of 93m² very generous. This is not surprising because two spare bedrooms provide plenty of overflow space for hobbies, guests and storage. The NDSS seeks to ensure that homes like this are suitable for couples with three children – a very different proposition. While some families of five would be delighted with three bedrooms and a total floor area of 93m², many would consider it only adequate and others would find it intolerable. This disparity, even among 'right size households', illustrates very simply, that judgements are influenced by expectation as well as by need.

The English Housing Survey (EHS) has demonstrated that for many years, there has been little correlation between the amount of space we 'need' and the amount of space we have. Drawing on EHS statistics, the Intergenerational Foundation reported that England had over 25 million 'unused' bedrooms in 2011 and under–occupancy (households with at least two bedrooms more than are strictly needed) almost doubled between 2003 and 2008–9.[78]

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Fuelled by the way that homes are valued and marketed, the number of bedrooms we own has become a proxy for our social standing. We buy as much space as we can afford; for the vast majority, that means at least one spare bedroom. It is not surprising therefore, that having acquired them we are reluctant to give them up. Under–occupancy has increased steadily since 1995. In 2014–5, 8.2 million households were under–occupying, even by the very generous official definition of at least two spare rooms.[79]

Occupancy levels vary considerably by tenure. More than half of privately owned homes were under–occupied in 2014–15 and the trend is upwards. In contrast, only 9% of social renters and 14% of private renters were under–occupying, and levels are falling in both sectors. It also varies considerably by age. 61% of mortgage–free owner–occupied households in which the oldest member was 55 or more, were under–occupying in 2014–15. A further 30% had one bedroom 'too many'; meaning 91% had at least one spare bedroom. In contrast, only around half as many first time buyers (typically young people) were under–occupying. The fact that almost a fifth of people between 50 and 59 own a second home compounds the problem.[80]

Taken together, these statistics cast a rather different light on the current housing crisis. We have enough homes for every household, and enough bedrooms to have one each – not even one per couple. Despite the fact that the UK has smaller homes and smaller rooms than its European counterparts, the average space per person, across all homes in England, is higher than elsewhere.[81] The inconvenient truth is that almost all of us live in the 'wrong home'.

The inconvenient truth is that almost all of us live in the 'wrong home'.

Finding ways to use our housing stock more fairly and more efficiently should be a top priority. We return to this issue later because of the positive role that space standards could play in reducing under–occupancy.

THE POLICY FRAMEWORK

For 'public housing' (affordable and social rent), even politicians have traditionally considered space standards to be at least acceptable, if not essential. There has been a broad consensus that fully occupied homes must be 'big enough', and that public money should be well spent – not squandered on sub–standard housing. Until 2010, generous grant funding made it reasonably easy to deliver good quality housing of a reasonable size.

When the HCA attempted to increase its minimum space standards just as the government demanded substantial reductions in subsidy, there was a backlash from housing associations.[82] Concerned that higher standards and less money would leave them unable to compete with developers for land – 'you can't have your cake and eat it' – summed up the mood among many. In an increasingly commercial market, they were worried about being bound by standards that the private sector was not required to meet.

As we have seen however, the idea of imposing space standards on the private sector makes governments much more nervous. At the most basic level, space is something we all understand. Professionals, politicians and the public struggle with the intangibility of issues such as energy efficiency. The language is difficult, the acronyms confusing and the assessments require long, complex calculations. Space is highly visible, more intuitive to understand and far easier to measure than any other attribute, but it's complicated in a different way. Mired in controversy (though to be fair, energy is too) it propels you straight into arguments about affordability and viability. The housebuilders have traditionally exploited these Achilles' heels in their determination to resist what they have historically regarded as the least palatable of all standards.

Space is highly visible, more intuitive to understand and far easier to measure than any other attribute, but it's complicated in a different way.

Over half of all new housing in England is built by just eight major housebuilders.[83] Regardless of the desirability of this situation, it makes them a powerful force. Until the proliferation of 'local housing standards' was identified as a major barrier to building, successive governments ignored the issue, choosing instead to champion 'localism'.

Nonetheless, local authorities retain a longstanding statutory duty to meet the housing needs of their communities. This duty is supported in national policy documents, which also require homes and places to be of good quality and offer a range of attributes. The 'National Planning Policy Framework' (NPPF), is currently the most significant and carries considerable weight. Two paragraphs are particularly relevant, but they also highlight obvious tensions when considered together:

NPPF Paragraph 50: Delivering a wide choice of high quality homes

'To deliver a wide choice of high quality homes, widen opportunities for home ownership and create sustainable, inclusive and mixed communities, local planning authorities should:

- *plan for a mix of housing based on current and future demographic trends, market trends and the needs of different groups in the community (such as, but not limited to, families with children, older people, people with disabilities, service families and people wishing to build their own homes);*
- *identify the size, type, tenure and range of housing that is required in particular locations, reflecting local demand; and*
- *where they have identified that affordable housing is needed, set policies for meeting this need on site, unless off-site provision or a financial contribution of broadly equivalent value can be robustly justified (for example to improve or make more effective use of the existing housing stock) and the agreed approach contributes to the objective of creating mixed and balanced communities. Such policies should be sufficiently flexible to take account of changing market conditions over time'.*[84]

This endorsement of 'size' as a relevant consideration when assessing housing need and offering choice, proved a useful lever for the proponents of space standards during the HSR. However, in

promoting sustainable development, the NPPF also makes numerous references to another kind of 'need' – one that is felt to be even greater; that is the need to avoid anything that may undermine viability:

NPPF Paragraph 173: Ensuring viability and deliverability

> *'Pursuing sustainable development requires careful attention to viability and costs in plan-making and decision-taking. Plans should be deliverable. Therefore, the sites and the scale of development identified in the plan should not be subject to such a scale of obligations and policy burdens that their ability to be developed viably is threatened. To ensure viability, the costs of any requirements likely to be applied to development, such as requirements for affordable housing, standards, infrastructure contributions or other requirements should, when taking account of the normal cost of development and mitigation, provide competitive returns to a willing land owner and willing developer to enable the development to be deliverable.'*

As Peter Rees observed in the Guardian in 2014,

> *'The definition of sustainable (in the NPPF) has nothing to do with green issues or energy at all. It means one thing: commercially viable'.*[85]

Developers compete to buy land and have taken this as an invitation to negotiate on any issue that affects cost. This has led to a culture of routine bartering; attempts to reduce, through negotiation, the amount of affordable housing, or the number of standards, that can be offered without jeopardising viability.

'Often referred to as a 'dark art', viability allows for the protection of 'reasonable profit'. Too often it seems to mean manipulating figures to demonstrate a predetermined outcome; backed up by assumptions and calculations that are too complicated to challenge. These calculations have a significant impact on planning decisions but are rarely made public. Paradoxically, many developers admit that they would rather not be given the opportunity to negotiate because it creates uncertainty when bidding for land and delays the planning process. Aware that one or more of their competitors will inevitably challenge on the ground of viability; they have little choice but to do the same. This traps everyone in a vicious circle and creates a race to the bottom when it comes to the size and quality of new homes.[86]

The first target tends to be the affordable housing contribution. The GLA officially asks for 40% of new housing to be 'affordable' (a term that actually means very little because it has never related to the average wage). Developers often deliver less than 20%, sometimes none at all, and this picture is repeated across the country.[87] The bargaining often extends to housing standards too. Space standards are particularly vulnerable. Those local authorities that had not previously set space standards through local planning policy are only permitted to adopt the NDSS if they can demonstrate need and viability. National Planning Policy Guidance (NPPG) offers the following steer:

NPPG Paragraph 20: How should local planning authorities establish a need for internal space standards?

> *'Where a need for internal space standards is identified, local planning authorities should provide justification for requiring internal space policies. Local planning authorities should take account of the following areas:*

- *need – evidence should be provided on the size and type of dwellings currently being built in the area, to ensure the impacts of adopting space standards can be properly assessed, for example, to consider any potential impact on meeting demand for starter homes.*
- *viability – the impact of adopting the space standard should be considered as part of a plan's viability assessment with account taken of the impact of potentially larger dwellings on land supply. Local planning authorities will also need to consider impacts on affordability where a space standard is to be adopted.*
- *timing – there may need to be a reasonable transitional period following adoption of a new policy on space standards to enable developers to factor the cost of space standards into future land acquisitions."*[88]

Many authorities are currently struggling with these tests, partly because they are under–resourced, and partly because proving that space standards are 'needed' remains very difficult.[89] Despite its heading, the guidance above sheds very little light on how to identify need; the focus is biased towards ensuring that development is not hampered by local policies.

During the HSR, the government also consulted on the idea of 'space labelling' – a consumer focused initiative that would see the floor area of a new home, and potentially other data too, made available in marketing literature. There is already a legal obligation to provide an Energy Performance Certificate (EPC) for a new home, and this must include the overall internal floor area of the dwelling.[90] The EPC should be available at the time of marketing (when it could influence the buyers decision) but in practice is often not provided until the sale is complete.

Aside from that, the Consumer Protection from Unfair Trading Regulations 2008[91] and the Business Protection from Misleading Markets Regulations[92] (which replaced the Property Misdescriptions Act 1991[93] in October 2013), requires marketing information to be factually correct. There is also a Consumer Code for Home Builders[94], which aims to ensure that buyers are fairly treated and have access to an affordable dispute resolution scheme, and that a drawing showing the internal layout is available to purchasers of an unfinished home. None of these documents requires the floor area of a home to be disclosed and the Consumer Code is voluntary.

Despite strong public support for space labelling, nothing more has been said and it seems clear that the current government has no intention of pursuing it. Industry – led proposals, including the Home Performance Labelling scheme, developed by the Housing Forum[95], have emerged but support from developers has been limited. Such schemes can only be voluntary and are only likely to be adopted by developers who are confident they are performing well. An EPC is therefore the only current document that must, by law, include the internal floor area of a home.

BASIC PRINCIPLES

Judgements about space can only be made in the context of household size. Space standards are founded on the premise that a 'decent home' is one that is capable of functioning adequately when fully occupied. We have seen that owner–occupation and under–occupancy have become normal in Britain, but both are relatively new phenomena. At the end of the First World War, when there was little by way of state welfare provision, three quarters of households in England were private renters.[96] It was common for even small houses to be in multiple occupation; each floor of most two and three storey Victorian houses was home to a separate household.

We have come a long way since then – arguably too far. In January 2015, the London Borough of Westminster granted permission for a row of Georgian townhouses, opposite Hyde Park, to be turned into a 'mega–mansion' of 41,000 square feet (equivalent to 30 typical three bedroom houses).[97] This was valued at £300,000,000 (an eye–watering £70,000 per square metre).

Moral judgment aside, aspiring to a spare room is one thing; needing one – in order to live comfortably, is another.

Moral judgment aside, aspiring to a spare room is one thing; needing one – in order to live comfortably, is another. Like the space standards that pre–date it, the NDSS is based on the principle that a home should be big enough to work when fully occupied. This was reasonably explicit in the first public consultation of the HSR though not included in the final published standard. The editing was not due to a change in the rationale, but to a general desire (on the part of politicians) to say as little as possible, and a particular wish to avoid anything that could be viewed as controversial.

The next matter of principle is whether the space standard should apply to all new housing, or only to certain tenures. Historically, most have applied only to public housing. The GLA's decision to break rank by extending its housing standards to all tenures initially proved very controversial but settled down relatively quickly to the point where few now complain, except the proponents of 'micro–homes'. This set a useful precedent for the HSR though Grant Shapps, (the Housing Minister responsible for initiating the review) had always been adamant that it would have a cross–tenure remit.

It was easy to see that Shapps was not motivated by concern for the least well–off, but by a belief that there was no justification for affordable housing (seen as burden by the private sector) to be 'any better' than housing for market sale or rent. Space standards were probably not what he had in mind at the time, and he might have felt differently had he known that the average size of homes in outright ownership would be 107m² (compared with 66m² for homes in social rent) by the time the review concluded.[98] More by accident than design, this settled the very thorny issue of whether space standards should apply to the private sector. It also reinforced the first principal of any space standard; that whatever emerged had to be good enough for homes that we expect to be fully occupied, often by vulnerable people – and usually under affordable rent.

It soon became evident that the review would signal the end of the HCA national funding standards, including the minimum space standards set by the HQIs. Although not generous in comparison with the GLA standards they were regarded as much better than nothing. All participants agreed that without minimum safeguards, affordable housing – particularly that procured through Section 106 Agreements – would suffer badly. The clear expectation was that the vast majority of local authorities would adopt the NDSS. Worryingly, early evidence suggests otherwise.[99]

It was accepted too, that housing is no longer a choice between private sale and public rent, and that new forms of tenure are emerging all the time. It would be reasonable to assume that many of the planned new, discounted 'Starter Homes'[100], and many homes in shared ownership (part rent/part buy) will be fully occupied even at the outset. In London, the housing crisis has meant that more and more home–owning couples and families on lower and middle incomes are beginning to fully–occupy. The same is true in the private rental sector where overcrowding is rising rapidly.[101]

The tenure of a home also changes over time. Shared ownership is intended to help people 'staircase' towards full home ownership, and 'Right to Buy' allows tenants to buy their home at a substantial discount. Both involve a shift from rent to home–ownership. Developers in the institutional market rental sector are keeping open their options to switch to affordable rent or outright sale; in case demand shifts over time.

The move from ownership to rent has traditionally been less common but is now increasing rapidly with the sharp rise in private renting. Fuelled by the introduction of 'Buy to Let', the private rented sector has doubled to nine million in the last decade.[102] And, as we saw during the crash of 2007–8, developers tried to sell thousands of unsold flats to housing associations. Despite ongoing need for affordable housing, most of these homes were too small to work, even for couples. Memories are short. That was less than a decade ago.

Homes last much longer. Many have already endured for centuries and we should expect all new homes to last as least as long as we do – roughly 100 years. The longer they last, the more likely it is that the tenure will change, and it is reasonable to assume that most new homes will be fully occupied at some point. The cross–tenure principle is surely the only logical approach, and has to be a basic principle of any space standard.

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COMMON MISCONCEPTIONS

Before looking at where a good space standard should be pitched and what it should cover, it is worth looking at some common misconceptions. Most people assume that a space standard automatically leads to bigger homes. This is not without logic. It would be unnecessary to impose space standards if everyone felt their home was already big enough. Many people are content –some because they have modest expectations, some because they can afford a big home, a few because their home has been protected by a space standard, and the majority, because they under–occupy.

Most of this housing is 'old stock'. The evidence gathered by the RIBA, CABE, Drury, Mathieson, Morgan and Cruikshank, and others, suggests that there is particularly widespread dissatisfaction with the size of new homes; notably the speculative, mass–produced housing built by the major housebuilders. You don't need to live in one of these homes to feel concerned about this. CABE has pointed out that, as a society, we all suffer from poor housing[103] and Shelter suggests that the small size of many new homes is one reason for public resistance to new housing.[104]

Nonetheless, we must not overlook the fact that most new, private developments comprise a wide range of houses – possibly not in terms of style, but certainly in terms of size. Many three bedroom houses, and the vast majority of those with four bedrooms, are big by any standards; much bigger than funding standards have ever required. Any reasonable space standard is therefore only likely to affect the smaller of the house types that the private market currently builds; the larger types are already large enough to be fully occupied, though few are.

Assuming that space standards are defined by dwelling type (as has generally been the case throughout history), the mix of types in a given development has a far greater impact on the number of dwellings and the overall amount of floor space created, than whether or not they are built to a space standard. The same is true of other choices developers make, such as the physical proportions of the dwellings, the overall layout and the way in which parking is integrated. Any impact on numbers is naturally reflected in density too; at least when measured in dwellings per hectare (dph). Developers make these choices based on whether they add more to value than they cost to build.

Mix, density and space standards are all inter–related. In practice, space standards are only effective when they work in conjunction with control over housing mix. To work properly, mix may need to be controlled at the level of bedspaces, not just bedrooms. In housing shorthand, a '3b5p' home is one with three bedrooms and five bedspaces ('b' for bedrooms and 'p' for people').

In practice, space standards are only effective when they work in conjunction with control over housing mix.

The GLA space standard was devised to stem the tide of very small flats. Before the crash of 2007–8, one bedroom flats of 40–45m^2 were commonplace and two bedroom flats were typically 62–67m^2.[105] The GLA already regarded these homes as substandard and the trend was still downward; hence the need to set some limits. Under its space standard, it has always been possible to build fully compliant one bedroom flats of 37m^2 and two bedroom flats of 61m^2. These are considerably smaller than the flats that gave rise to the initial concern. The GLA took some time to understand that the reason for defining dwelling types with reference to the number of bedspaces (or potential occupancy) as well as the number of bedrooms, was to provide a mechanism for a finer control over dwelling mix. The SPG now includes guidance to this effect. Without it, flats could have become even smaller despite the imposition of what was felt to be a fairly demanding standard.

Prior to this, most of the boroughs who had chosen to set policies to control dwelling mix had done so by referring only to the number of bedrooms; typically setting a maximum percentage for homes with one bedroom, and a minimum percentage for those with of three or more. The more enlightened planners soon realised that for anything to change, they may have to require a proportion of one bedroom flats to meet the1b2p standard (50m²), and a proportion of two bedroom flats to meet the 2b4p standard (70m²). This increases the average size of one and two bedroom flats, while allowing for choice and different price points.

The same principle underpins the NDSS and the same reasoning had to be explained first to civil servants, and then to Ministers. From a planning perspective, the main benefit of typecasting by bedspace (or 'people'), as well as by bedroom, is to offer greater control, should that prove necessary. But it matters for other reasons too.

The 1935 Housing Act distinguished between rooms with two bedspaces and rooms with one. Tudor Walters had done the same. It is impossible to talk meaningfully about overcrowding (or under–occupancy) without this distinction. We can all understand this – a home with three single bedrooms would be very uncomfortable for a family of six, whereas a home with three double, or twin, rooms may well be enough. This makes no difference at all to density when expressed as

dwellings per hectare (dph), or even as habitable rooms per hectare (hr/ha), but it has an enormous impact on density when measured as bedspaces per hectare (bsp/ha).

Until very recently, public subsidy for affordable housing has been granted on a per–person basis, so the number of bedspaces has always been an important factor. In this sector, after the main double bedroom, twin rooms still tend to be favoured over singles as a more efficient way to house families, subject to the gender compatibility and age of the children.

In the private sector, the requirement to disclose bedspaces (now essential in order to assess homes against the NDSS) has always been unpopular. In the discussions that took place during the HSR, it was made clear that the 'p' for people is not seen as a measure of actual occupancy (though that remains the expectation for affordable rent) but as a measure of potential occupancy. Looked at from the perspective of overcrowding, it is the best way to assess the maximum number of people that are likely to be able to live comfortably in a given home. It is also the most useful way to understand housing capacity and to measure theoretical density.

As we have seen, the minimum bedroom sizes set out in the Housing Act are not generous. Nonetheless they are largely upheld in practice and many smaller private sector homes have bedrooms at, or just above, these minimum areas. This strongly suggests that without these safeguards, bedrooms might be even smaller. Sometimes, of course, they are; it is impractical to prevent homeowners from sub–dividing bedrooms and private landlords are rarely held to account.

As part of the Welfare Reform Act 2012[106], the government changed the rules for those receiving housing benefit. Since April 2013, housing benefit for claimants with one spare bedroom has been reduced by 14%, and for those with two or more spare bedrooms, by 25%. Subject to certain exemptions (for older people and some with disabilities), one bedroom is permitted for:

- Each couple
- Each person aged over 16
- Two children aged under 10
- Two children aged 10 –16 of the same sex
- An overnight carer.

This policy, officially known as the 'Spare Room Subsidy', but typically referred to as the 'Bedroom Tax', has proved extremely controversial. This is partly because the size of the 'surplus bedroom' is not taken into account for the purposes of the Welfare Act. Under the Act, a bedroom is simply any room that a landlord decides to call a bedroom. Inevitably, this has led to legal challenge about what we regard as an acceptable space, and the Housing Act and the NDSS (which sets a minimum area of 7.5m² for any bedroom) have been used as precedents. If all bedrooms were a decent size, the Bedroom Tax would at least be less punitive in practical terms.

STRIKING THE RIGHT BALANCE

Having accepted the principle of a cross–tenure space standard, designed to ensure that a home should be fit for purpose when fully occupied and based on bedspaces, we still need to confront what 'fit for purpose' actually implies. We also have to choose between the purist and the pragmatist when it comes to what 'minimum' means.

Among the estimated 22.5 million households in England,[107] no two will have exactly the same daily routine or make the same choices about how they use and furnish their home. Few designers ever meet the people who buy or rent the homes they design, let alone design for them, and they get little direct feedback. Although the growing support for custom build is encouraging[108], speculative housing is here to stay. Most people don't spend their lifetime in the same home, and, even if they did, their needs and wants would change over time. For the most part, therefore, design and standards can only be based on generic likelihoods.

This is not as unsatisfactory as it sounds. For all our differences, we have much in common. We all need space for sitting, cooking, eating, sleeping and bathing, and somewhere to store personal and household belongings. We may also want space to play, study, pray, exercise and entertain friends and family. Realistically, we are unlikely to want, or to be able, to do all of these things at the same time so we expect to use some of our space flexibly and this has always been the case.

Home–life does evolve, as witnessed by the contrast between the activity schedule that formed part of the 'evidence base' for the Parker Morris standards, and current living patterns. Nonetheless, aspects of that view of family life still ring true, and some may never change. 'The way we live now'[109], attempted to look at changing habits but we can only go so far in anticipating what the next 50 years might bring. Will robotic cleaners and carers become commonplace? If so, does that mean we need more space or less? The growth of the private rented sector is leading to more homes in multiple–occupation. What does that imply? Will it be a growing trend despite the current political drive for home ownership?

We probably have to trust that a well–designed, flexible home with good size rooms, designed for the activities and furniture that are typical today, will be able to accommodate a range of current and future lifestyles reasonably well. We are able to quantify the space needed to make a bed, store clothes and for a family of four to sit around a table and eat together fairly accurately. We can, and we should, look at this alongside anecdotal evidence and intuition, because both are informative.

Shown an empty room of 5m², (but without knowing its floor area) most people would instinctively say it was 'too small' to be a bedroom. They are probably picturing roughly the same things – a single bed, a bedside table, a chest of drawers, a small wardrobe – and realising it might just work for sleeping, and storing clothes but nothing else. Children use bedrooms for play and homework, and for teenagers, the bedroom is an important place of retreat, self–discovery and study. It may be the only space in which you can express your personality and enjoy privacy – either alone, or with friends.

The more recent NHF, HCA and GLA standards have all adopted a Parker Morris style approach to functionality. They have also taken account of accessibility. The 2008 NHF and GLA standards enshrined the Lifetime Homes principles; devised to ensure that 'ordinary housing' would (or could, through adaptation) allow a wide range of people to live reasonably well, and offer hospitality and

dignity to visiting wheelchair users. The ‘extra space’ this implies was factored in to these newer standards and, accounts in part, for the increase over and above the minimum space standards of the HQIs.

Most clients expect designers to work down to minimum standards. If the minimum GIA for a given type is based on the smallest plan that works, by implication, all other plans fail. This purist approach to minimum has obvious risks and potentially offers very few design options too. In practice, a little pragmatism is much more useful. If the minimum floor area allows the majority of efficient, well–planned layouts to ‘just pass’, you have effectively incentivised good, careful design while allowing for choice. This is essentially the approach taken to establish the minimum floor areas of the NDSS, set out in detail in the annex.

In addition to setting minimum overall dwelling areas, almost all space standards have included additional, secondary standards to ensure that the floor space is well distributed and that important elements are specifically protected. The NDSS is no exception. It defines minimum floor areas and widths for bedrooms, and minimum floor areas for general storage, because these are the spaces that continue to be squeezed in a large proportion of new homes. As the main selling point, living space is rarely compromised to the same extent. With a brief to impose as few rules as possible it was felt that there is just enough tolerance in the overall GIAs to deliver enough living space, as long as the design is sensible.

Even without minimum bedroom areas, one of the most useful things about a well–framed space standard is that you cannot simply squeeze in an extra bedroom. To do so would be counterproductive. The dwelling would be re–categorised to a different type with a larger minimum floor area. On the other hand, if you can meet the rules, and still find space for an ensuite or utility room, that is permissible. Similarly, the NDSS doesn’t require furnished layouts as a means to demonstrate compliance because that work has essentially been done through the way it was developed.

These finer points of detail are beyond what most people want, or need, to know. But they matter because the devil really can be in the detail, and a space standard without a robust rationale, will soon be discredited. Close scrutiny of the comparison table in the chronology reveals a number of anomalies in the HCA’s former space standard, set out in the HQIs.

Overall the NDSS strikes the right balance. There are just enough safeguards and just enough flexibility. It is relatively easy to demonstrate and check compliance, which frees up time for more creative work. Many designers will still want to test their layouts by showing furniture, and many clients will expect them to do so. By not demanding it as part of the test, overworked planners are spared the task of counting chairs and measuring wardrobes.

4

CARROT AND STICK

THE POTENTIAL TO LIVE MORE EFFICIENTLY

It may seem counter–intuitive, but one of most compelling arguments for a space standard is that it could lead us to live more efficiently. This is crucial because the scale of crisis we face is such that it will not be met solely by building new homes; important though that is. As we have seen, the level of under–occupancy in England is already extraordinarily high and rising faster than ever despite the housing shortage.

We have considered many of the reasons for this. Our tendency to measure social standing by how many bedrooms we have is reinforced by the way that homes are currently valued for mortgage purposes. The number of bedrooms counts much more than the overall floor area, or the size of rooms. As a landlord, the more bedrooms you have, the more rent you can charge. Owning property makes us rich too. 'Your house earns more than you do', that staggering revelation reported in the London Metro in 2014, remains profoundly shocking.

When pressed, developers across all sectors generally accept that for bedrooms in regular use, 7.5m² is a reasonable minimum for any single bedroom, and 11.5m², for any double or twin. Why then, does the private sector build so many bedrooms that are smaller? A typical response is that, because a large proportion of second, third and fourth bedrooms are unlikely to be in regular use, they don't need to be bigger. While factually correct, it makes under–occupancy a self–fulfilling prophecy. As other rooms are often not generous either, and storage is lacking, couples and families find they need spare bedrooms, just to be comfortable. This is a hugely inefficient way to live.

It makes under-occupancy a self-fulfilling prophecy. As other rooms are often not generous either, and storage is lacking, couples and families find they need spare bedrooms, just to be comfortable. This is a hugely inefficient way to live.

We know that the tenure of a home is increasingly likely to change over its lifetime, and that, at some point, most homes are likely to be fully occupied. Building homes that can't be occupied to their full potential in reasonable comfort is perverse and wasteful. At certain points in the economic cycle this leaves developers with sub–standard homes that no one wants.

The work of Malcolm Morgan and Heather Cruikshank reinforces the theory that the link between under–sized homes and under–occupancy is causal.[110] It seems highly plausible that with adequate storage and good–sized bedrooms, we would have less cause to accumulate bedrooms. It is also reasonable to suggest that a rebalancing of space would encourage older people to downsize – or, as some prefer to call it, to 'rightsize'.

The high level of under–occupancy seen among older households is generally reflected in large, relatively inaccessible homes with rooms that are barely used and have become a burden to heat, clean and maintain. The few spaces that are used on a daily basis often fail to meet their practical needs and feel restrictive. We see our grandparents and parents make this mistake, and then repeat it ourselves.

The lack of attractive alternatives is part of the problem. Newer homes may be more accessible and will certainly be more energy efficient, but they fail in other ways. Smaller homes with larger rooms and good storage are hard to find because the market offers the reverse – a larger number of small rooms and no cupboards.

Newly built, two bedroom houses should be an obvious choice for the average, suburban, would–be–downsizer. But because almost all are narrow frontage and trimmed to the smallest possible floor area, there is only one workable layout. The WC is to one side of the front door – the tiny kitchen, to the other. The living/dining space sits across the back of the plan confronting a small garden, hemmed in by a close–boarded, timber fence.

Upstairs, an internal bathroom is sandwiched between the two 'double' bedrooms – one at the front and one at the back. If you are lucky, there will be two 'half cupboards'. The bottom half will be at the end of the hall, under the winder stairs, and the top half on the first floor, hovering over the lower steps of the same stair and housing the hot water cylinder. Nothing about this ubiquitous layout works for older people. The lack of space restricts the choice of layout and together this makes these homes suitable only for agile, young buyers with few possessions.

These houses typically have a total floor area of 62–68m^2. Under the Nationally Described Space Standard (NDSS), the minimum size for a two storey house with two bedrooms is 70m^2. With two double bedrooms, the starting point is 79m^2. That modest amount of extra space opens up a raft of other layout possibilities. With good storage guaranteed, this could make all the difference to an older couple contemplating a move, particularly if the home offers good accessibility too.

Although complicated, the first set of proposals published under the Housing Standards Review was extremely logical.[111] The three – tier space standard was directly related to the three–tier accessibility standard. The starting point for each tier of the space standard was the same basic set of furniture and activity space – the difference between them was entirely due to the additional accessibility requirements.

Unless they include, or are accompanied by, a matching space standard, accessibility standards achieve little. 'Compliance' can be achieved in a room of any size or shape. If we are serious about meeting the housing needs of an ageing population, reducing bed–blocking and cutting the cost of care, we have to recognise that accessibility and space must go together. The gains are potentially huge; people aged 65 and above currently have almost twice as much 'living space' as 16–44 year olds.[112] Even a modest redistribution of space would be enormously helpful to the housing market as a whole. Yet under the current rules, the space standard and the accessibility requirements operate independently.

Until very recently, mainstream developers have largely ignored the housing needs of older people.[113] A few have realised the latent demand, and the value of the 'grey pound'. Tony Pidgley, Chair of Berkeley Group Holdings, recently revealed that the 'downsizer product' is their second largest market.[114] For the vast majority, it remains too easy to concentrate on young first time buyers and families wishing to trade up. Housebuilders are culturally resistant to change, and most major development sites, including public land disposals, are simply sold to the highest bidder. From a commercial perspective, the safe option is to do what your competitors do, but do it cheaper so you can offer more for the land.

RENEWED PRESSURE TO BUILD SMALLER

When housing is in short supply, land value escalates whatever else is going on. If success is only measured in numbers (that is the number of homes built, not the number of people housed), smaller and cheaper will always win. The government estimates that we need 200,000 new homes a year, but that is widely felt to be a conservative figure.[115] Tough targets have been imposed on local authorities and, as these too are expressed only in terms of dwelling numbers, there is growing pressure to accept even smaller homes. Alex Morton, former policy advisor to David Cameron, explained this:

> *'…as the value of land rises homes become smaller and smaller, with developers trying to cram in as many new homes as possible or demolishing homes to make way for flats. The increase in the value of the land also reduces consumer choice, first time buyers are mostly just paying for land with planning permission. Developers can't build more attractive homes even if they want to, as once purchasers have paid for the land they have less to pay for attractive housing on top of it…*
>
> *…developers don't really care about the quality of their new homes above a basic minimum. Because their profits are largely related to their role as land speculators, they focus on this aspect rather than designing and building attractive homes…*
>
> *We have yet another failing cycle. Too few homes push up the value of land. This rise in the value of land means worse quality homes, which makes people resist new homes and even more interference by planners in how homes look, making it yet harder to build enough attractive homes. [116]*

The pressures in London are on a different scale; the capital needs at least 55,000 homes every year for the next decade.[117] The annual target for the last decade has been 40,000 but only one of those years has seen delivery of even half that number. It has a young population compared with the rest of the country, and single person households have been the fastest growing group for a number of years.

When he first coined the term 'Hobbit Homes', London Mayor, Boris Johnson, promised that no new home would be less than 50m^2 (the recommended size for two people). The first draft of the London Housing Design Guide, (then titled 'London Residential Design Guide') included a paragraph that read:

> *'The Mayor has found no basis on which to argue for space requirements for a single occupant to be lower than a space designed for two occupants. On inspection of the requirements of a two person dwelling it is difficult to see where space savings might arise for a one person dwelling.'*

Boris was clearly mistaken. If 50m^2 is a decent minimum for two people, it is, by implication, more space than a single person needs. Anyone who has lived alone before sharing with a partner will know that an extra person means a great deal of extra 'stuff' too. Clothes, shoes, sports equipment, books, tools and a bike are just the start. Many singles become couples, but those who don't, would have been forced to under–occupy. The space standard in the 2010 edition therefore included a single person (1p) standard of 39m^2 with a bath (37m^2 with a shower). These small flats and studios were intended to be a special case; built in low numbers in specific locations. Seven years later, they are becoming quite common. Many are now occupied by couples, and some, by families.

Despite the fact that London has adopted the NDSS, even smaller homes are now being built. Anywhere between 15 and 30m², 'micro–homes' (tiny bedsits) are on the rise. Built for sale as well as for rent, and usually supported by shared spaces, they are typically classed as 'sui generis' for planning purposes. This is supposedly a category reserved for building types that do not obviously fit into any of the four main planning Use Classes. However, prisons, hostels, hotels, care homes, army barracks and even detention centres, all fall within 'Use Class C: Residential'.[118] So why not micro–homes?

It may be convenient for developers to give the impression that micro–homes are student housing (traditionally classed as sui generis), although this is not the reality. Most are intentionally built for young professionals, unable to afford any other type of self–contained accommodation. They are being counted in housing completion figures (along with genuine student housing), which suggests that the anomaly is convenient for policy makers too.

Broadly speaking, within a given geographical area, the smaller your home, the worse value you get. By commanding a higher price per square metre, going smaller raises land value even further and becomes part of the problem, as well as part of the solution.

As well as raising obvious concerns about quality of life, permitting them has unintended consequences for the market as a whole. Broadly speaking, within a given geographical area, the smaller your home, the worse value you get. By commanding a higher price per square metre, going smaller raises land value even further and becomes part of the problem, as well as part of the solution. That makes all homes more expensive.

'Build to Rent' (or 'Private Rental Sector' (PRS)) and 'Buy to Let' are also rapidly growing sectors. Over half of the one in eight households who move to London each year, now rent privately.[119] Shelter reported recently that nationally, one third of private renting households are families, and that the same proportion expects to be renting for the rest of their lives. Only 6% are renting from choice.[120]

The definition of a home in multiple occupation (HMO) under the 1964 Housing Act[121], and the fact that they are designed for sharers, means that most two and three bedroom PRS flats are effectively HMOs. For planning purposes, however, they are usually treated as 'family homes'. The census typically records the unrelated occupants as a single household too. This is misleading and obscures the full scale of the housing crisis.

Not exactly 'homeless', thousands of Londoners in shared, private rental accommodation are nonetheless 'without a home'. A shared house does not represent one happily housed household; it represents a group of individuals hoping for a home each. The authorities would rather not face up to this because they have no alternative solution to offer. Many of these people are stuck. In London, private renters now spend, on average, 60% of gross income on rent, making saving impossible.[122] Even so, across the country as a whole, 25% of adults under 35 are now still sleeping in their childhood bedroom.[123]

We need a civilised debate about whether, on balance, micro–homes make things better or worse. As a form of temporary housing, offered for rent on a strictly, not–for–profit basis for up to three years, they could offer singles and couples earning less than the average wage, a genuine opportunity to save for a deposit. But they should be assigned a distinct new planning subgroup, within Use Class C, protected by standards that ensure they are well designed, large enough for a finite period, and properly regulated.

We need a similar debate about HMOs and shared housing. They too, need clearer definition, formal planning status, greater protection and rent control. They must be properly managed and subject to decent living standards. Handled properly, these and micro–homes could form part of a more balanced and affordable overall housing mix that caters better for all sections of the population. If allowed to proliferate in an uncontrolled way, the situation will only worsen.

The recent spate of office to residential conversions provides further compelling evidence of what can happen without standards. Under Permitted Development (PD), these homes bypass planning altogether. Introduced in 2012 for a four–year trial period, the government regard it as a great success and have made this form of PD permanent.[124] Some of these converted flats are as small as 13.5m² – the size of a typical double bedroom. In areas of high demand and high prices, it is already clear that without minimum space standards, there is no limit to how small our homes might become; Hong Kong now offers 'living capsules' of 2.2m².

TRUSTING IN WHAT WE HAVE LEARNED

Space standards will always be controversial. In the end, the decision to support, or oppose them, will at least in part, be ideological. Hard evidence – irrefutable proof of necessity – may never be possible, but there are new, commonly agreed positions that provide a solid starting point.

We have seen that some key premises must be accepted before you can begin to formulate a space standard. We have touched on the fact that there is no single set of rules for calculating what they should be, even when you decide they are justified. But we also know that for most would–be buyers, the size of a home is one of the most important considerations and that many people feel that homes in England lack the space they need; particularly newer homes. This is borne out by evidence from CABE, RIBA and a number others.

Housing standards exist for a reason. They set a benchmark of decency and quality to guard against outcomes that are widely regarded as 'sub–standard'. In a properly functioning housing market in which supply keeps pace with demand, standards would be largely irrelevant because the market would be in a position to demand space and quality. New homes that fail to meet these expectations simply wouldn't sell.[125]

Shelter, Morton and others remind us that in England today, we are a very long way from that properly functioning market, and that we have been for a number of years.[126] In the South East in particular, the housing shortage is so acute and the affordability crisis so severe, that anything goes.

We are seeing the consequences of Permitted Development – offices converted to homes the size of a typical double bedroom and with no outdoor space. Others are reportedly without daylight; a

strong indication that without 'living standards', homes at the lower end of the market are likely to get smaller and worse. Some people will never be in a position to buy, and for as long as affordable housing is imposed on developers through Section 106 Agreements, the quality of these homes will be at risk without standards because tenants have very limited voice or choice. Many private renters are in a similar position because complaints often lead to eviction or a rent rise.

The Building Regulations ensure that few buildings fail catastrophically without warning. It is much more likely that cracks will appear soon after completion and gradually worsen for perhaps 30–50 years before a building needs substantial repair or replacement. In the context of housing, the cracks are not only physical. Poor housing also affects our wellbeing, our relationships with others, and our view of the world. The word 'our' is used deliberately. CABE was right. We all suffer from poor housing. Those who live in it suffer most, but we all feel let down by it, particularly when we know what good housing is and what a difference it can make.

If your badly designed home lacks the space you need, you have two problems. If your well designed home lacks the space you need, you still have a problem.

To say that any home is better that no home, is to accept defeat. Quantity does not have to come at the expense of quality, and, in the end, poor quality housing costs more.[127] Protagonists of space standards often suggest that space and quality are one and the same. We know that large homes can still be of very poor quality, and small homes of very good quality. But they are clearly related, and not mutually exclusive. If your badly designed home lacks the space you need, you have two problems. If your well designed home lacks the space you need, you still have a problem.

When it comes to space, other attributes can only provide limited compensation. Energy efficient fabric and good soundproofing are vital but neither diminishes the need for space. Space is also the best and simplest way to increase choice and flexibility – arguably the most valuable assets when it comes to building for a long life and an ageing population.

There can be little doubt that we need a better measure of overcrowding; one that befits a civilised, prosperous nation in the 21st century. The current statutory measure has been in place since 1935, and is so inadequate that it is hardly used.[128] Much better controls are also needed in the private rental sector, particularly now that a large proportion is occupied by sharers. The lines between private rent, shared housing and HMOs have become so blurred that they are obscuring important facts about how we really live.

Space standards must be part of any rational discussion about overcrowding too. Through debate, we have reached a national consensus about the amount of space needed to live reasonably comfortably in a range of homes defined by bedrooms, bedspaces and storey height.[129] It would be unrealistic to apply the NDSS retrospectively to existing homes, or to suggest that anything less is utterly intolerable or dangerous, but that benchmark of 'decency' now exists and should not be ignored when we consider what we mean by 'enough space', and certainly not brushed aside when people are being charged for space that is considered 'more than enough'.

WILLING DEVELOPERS

Throughout the Housing Standards Review, the housebuilders were unequivocal in their belief that space standards are necessary for affordable housing, and that they would 'fear for their own actions' if they ceased to exist. The review also revealed that their seemingly solid resistance to space standards for the private sector, had either never really existed, or if it had, things were changing.

It is significant and encouraging that the space standards themselves, and the methodology used to generate them, were examined but not challenged. Participants accepted the premise that homes should be fit for purpose when fully occupied, and on that basis, generally felt the bedroom and storage areas were also reasonable. Dissent on the numbers focussed mainly on the proposed minimum ceiling height of 2.5m; no doubt why it was reduced to 2.3m in the final standard. Developers also agreed that any impact on numbers or density was likely to be marginal, and that small adjustments to dwelling mix, could mitigate any overall effect.

The level of support for space standards in the first consultation was extremely high. 80% of respondents felt that a space standard was necessary and should be set nationally.[130] When it was clear that there would be some form of national space standard, albeit an optional one, the mood among the developers shifted from antagonistic to somewhere between constructive and enthusiastic. In response to another question, concerning the extent to which any extra cost could be recouped through higher sales values, the analysis of responses notes that:

80% of respondents felt that a space standard was necessary and should be set nationally.

> *'..the predominant opinion (83%) was that additional cost was likely to be reflected in changes to land value, particularly if space standards were introduced in a form which was non-negotiable.'*

This of course can only be achieved through regulation – a course of action that was never offered because of the deregulatory brief set by Ministers. It would have been a good question to ask, particularly as, in relation to another question, we are told:

> *'..there was strong support for a national approach, and many took the view that an option for government regulation should be offered.'*

While some local authorities may regret the loss of freedom to set their own local space standard, the sector as a whole feels that a single, national standard is preferable to numerous, different, local ones. From a functional point of view there is no logical reason why the minimum size of a 2b4p house should be one thing in Doncaster and another in Chelmsford.

The developers agree. Some are now open about their preference for space standards to be taken into regulation, and most are willing to confirm that given a lead–in period, any extra cost would come out of land value – the residual sum that remains after all other costs and profit are accounted for, and the sale value of the new homes has been calculated. This view is supported by CABE[131] and Shelter[132] as well as by those who responded to the HSR consultation. In London and the South East, few would regard a modest drop in land value as anything other than a good thing.

It is becoming clear that carrying out the needs and viability testing required before the NDSS can be applied is as difficult and time–consuming as many predicted. The guidance in the NPPG is vague and open to negotiation. Local Plans are subject to public consultation and may be subject to judicial review. This takes more time. At the end of this process, both the NPPF and the NPPG invite developers to negotiate their way out of such obligations if they are seen as 'barriers to development'.

Many developers openly admit that viability appraisals can be manipulated to demonstrate most predetermined outcomes. They would all prefer to know where they stand and permitted to negotiate only in exceptional circumstances. As the RIBA points out, they seek a 'level playing field' when bidding for land.[133] If even one competitor is likely to challenge on viability grounds, the rest have to follow. A downward spiral becomes inevitable and it is increasingly clear that negotiation over viability is a war of attrition that the local authority is very unlikely to win.

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WHERE THIS TAKES US

Overall, it seems clear that the role of a space standard is not only to prevent unacceptable outcomes – through a stick approach – but also to bring about positive change – by acting as a carrot. It's worth summarising what we know to be certain and what else we feel is likely.

First, the certainties:

We know that everyone understands space, that it matters to us all, and that it is unequally distributed – many believe unfairly so. We know that the tenure of a home is increasingly likely to change over time, that many will be fully occupied at some point, that this is the norm for affordable housing and that tenants of sub–market rented housing are now being charged for a 'surplus' bedroom – however small it is. We have understood for many years that overcrowding is a serious concern – it would not be dealt with under the Housing Act if that were not the case.

We also know that the legal definition of overcrowding is so out of step with current expectation that it has been replaced by the measure used for the English Homes Survey (EHS), and that this is still widely felt to be too harsh a test.[134] Statistics tell us that under–occupancy is higher than ever before, and while we like to have spare rooms, we know that it is an inefficient way to live. We know too, that space standards are necessary if accessibility standards are to work (it is impossible to define the space between objects that are not themselves defined) and that most new housing does nothing to incentivise downsizing.

We know that micro–homes, shared housing and HMOs are increasing and that we lack reliable data about the actual numbers. We know that where space and other housing standards are not in force (as is the case with micro–homes and offices converted to flats through Permitted Development),

homes that are between a third and a half of the minimum size considered suitable for one person, are appearing in London and elsewhere. We have on public record the fact that 80% of those who expressed a view in the first consultation felt that a space standard was necessary, and we all understand that space is the best way to offer choice and flexibility over a long life.

Next, the likelihoods:
It is likely that insufficient space has a negative impact on health and wellbeing – we have seen that evidence supports this. It is likely that there is widespread agreement about the space needed for various types of households to live reasonably comfortably in homes that are fully occupied – the dwelling areas of the NDSS would have been contested if not.

It is likely that small rooms are at least part of the reason for under–occupancy and that older people would be more likely to move to smaller homes if rooms were larger and there was more storage – these are commonly cited as reasons for not moving. It is likely that if space standards were taken into regulation, land values would adjust accordingly and need and viability testing would be largely unnecessary – discussion during the HRS confirmed this. We can be reasonably confident that increasing the size of smaller new homes (which is all we need to do) would increase public support for new development. It is likely that this would reduce overall demand for bigger homes and we could house more people on less land. And last, but by no means least, it is likely that developers would prefer space standards to be universally applied – that's what they say and we, and the politicians, should believe them.

5

WHAT NOW?

THE CASE FOR REGULATION

A good, optional space standard is considerably better than no space standard but there are obvious shortcomings. It fails to provide the nationwide consistency that developers and residents want, and even where it is invoked, the fact that it is optional, and must be justified, makes it vulnerable to ongoing challenge. It is clear that this is happening, and may continue throughout the planning process, and beyond – through appeal.

Perhaps the politicians feel that partial take–up is a useful way to test the practical impacts of applying the NDSS? In theory, it might be. It could allow us to compare changes in land value, affordability, mix, density and household in areas that have adopted it, with those in areas that have not. It might allow us see whether it has an impact on under–occupancy, stimulates downsizing, improves mental and physical health and wellbeing, supports family relationships, and leads to a more efficient use of land.

But in reality, no two areas are alike and the local housing market is subject to multiple influences at any given time. Land value could increase because of improved transport links, new businesses or schools, or reduce because of fracking, a new power station or a rubbish tip. Impacts on dwelling mix could be in response to demographic change, and affordability could worsen or improve for numerous different reasons. The government is also very unlikely to capture any of this data, or require local authorities to do so; and it would take years. Meanwhile, this piecemeal 'experiment' leaves us with more questions than answers and fresh social inequities. 'Postcode lottery' is a tiresome cliché but for many vulnerable households, the size of their home is currently being determined by where they live, not by what they need.

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Some simple examples may help to explain what this means. Picture a family of five who need a three bedroom house at an affordable (sub–market) rent. In an area where the NDSS applies, they could expect to be allocated a two storey, three bedroom house of 93m². In an area without space standards, this '3b5p' house might be 70m² or less – only suitable for three people under the NDSS. Furthermore, in either location, an established household of a similar size, living in a four bedroom house of 85m², would now be paying Bedroom Tax for a home that falls 8m² short of the space standard for five people. A family of eight, with even numbers of male and female children, could also be allocated that same 85m² home that the NDSS regards as 'too small' for a household of five.

Imagine another five–person household where one member uses a wheelchair. In an area where the NDSS and the 'optional requirement' for wheelchair housing has been invoked, their three bedroom Category 3 home is likely to be at least 120m² and have the larger WC and bathroom, the wider doors, and the home–lift, they need. If, on the other hand, the local planning authority has been unable to demonstrate viability for the NDSS and the 'optional requirement' for wheelchair housing, they too, could find themselves in the 70m² house. The disabled person would either need to be carried upstairs, or live on the ground floor and make–do without a bedroom or bathroom.

Added together, the justifications for taking the new national space standard into regulation feel compelling. Space Standards for Homes, the RIBA's most recent publication on the subject, ends as follows:

> *'The RIBA believes that the best solution would be to embed the national minimum space standard within the Building Regulations. This would mean that all new homes across the country would be covered. A regulatory approach would create a level playing field and a fair housing offer wherever you live, irrespective of tenure. As an additional benefit, moving the space standard to building regulations would also free up over stretched local planning teams to focus on other issues.*
>
> *Across all housing sectors, there is a desire for simplicity and consistency. When it comes to space, the Housing Standards Review has failed to deliver. During and since the review many house builders openly expressed a preference for space standards to go into the Building Regulations to give them the certainty they need when bidding for land'.*[135]

When you also consider the potential to make more efficient use of land by reducing under–occupancy, improve the lives of older people, cut the cost of health and social care, and increase public support for new housing, the case is stronger still and the risks of not doing so, even greater.

The government wants 1,000,000 new homes built by 2020. Unless we stop and think about the kind of homes we build, we could find that in real terms, we are housing many fewer people than we think. We also risk a legacy of poor housing. Building any new home is a huge responsibility; an opportunity that won't come around again for about a hundred years. We can't afford to waste it.

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Over the last century, variations of the original Tudor Walters standards have come and gone. Reversals have usually been politically motivated and often for the wrong reasons. As we have seen, debates on space tend to mushroom into debates on density, viability and affordability. This is partly what makes space so fascinating but it can also make the arguments for and against space standards feel circular and inconclusive. In some ways they are, and probably always will be. But while it is important to explore the wider housing issues, 'space' is really quite simple. It makes no sense to ignore our ageing population, to pretend that people don't have hoovers, ironing boards, coats and bags, or to build homes that can only be comfortable when under–occupied.

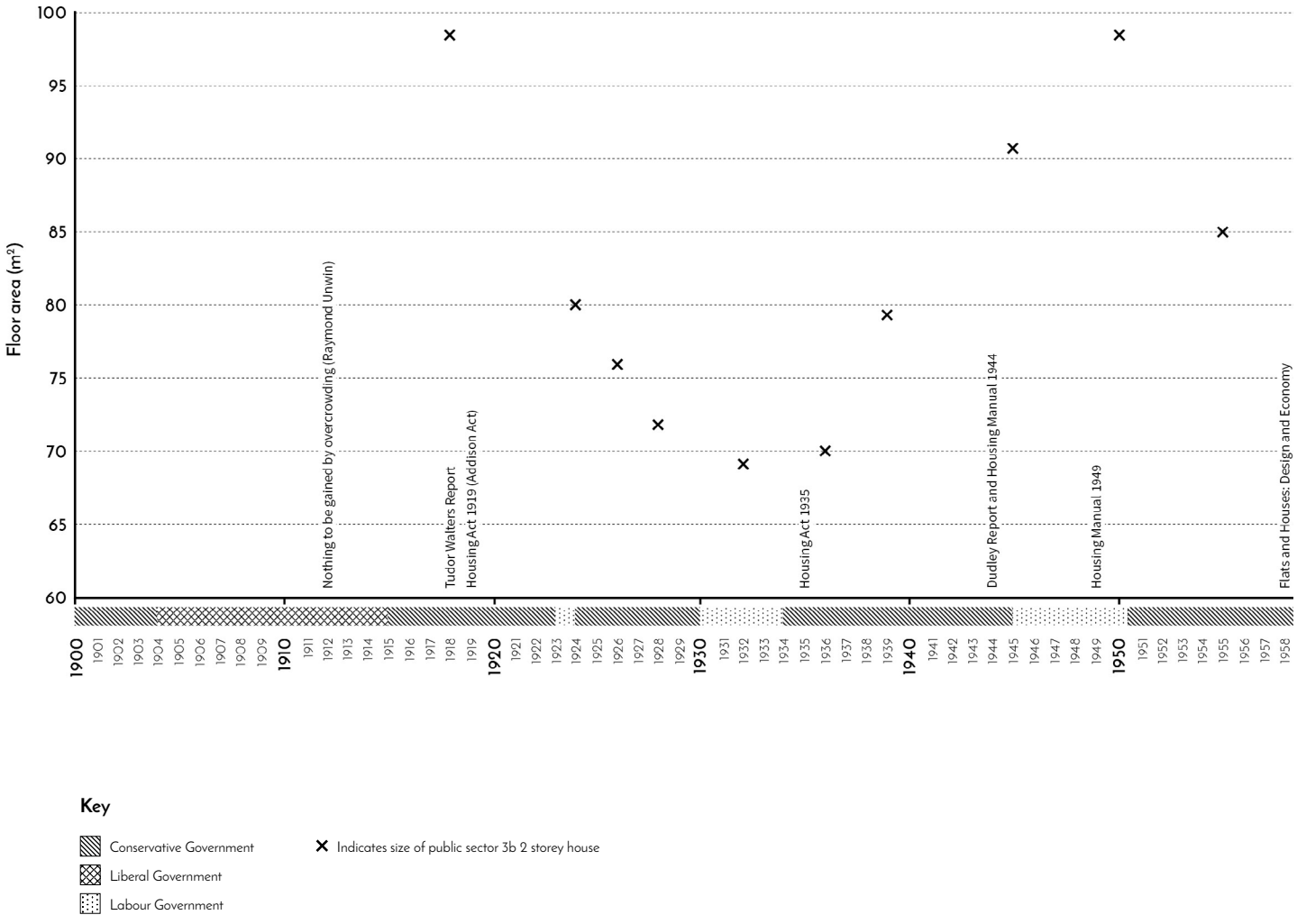
We have come a long way in the last ten years. The NDSS may not be perfect but it represents a major step forward. The debate held during the Housing Standards Review was open, honest and robust. It was the debate we needed. In the end, the arguments against a national space standard proved remarkably thin and ideologically based. When 80% of people vote 'yes' for something, (as they did when asked whether a space standards is necessary), you know it can't be a bad idea. There was an even higher level of consensus about the amount of space a home should provide, and that if taken into regulation, the 'cost of a space standard', would soon come out of land value. Though we may have been denied the right question we almost certainly know the right answer.

As we embark on another major housebuilding programme, let's make fairness, quality and a lasting legacy every bit as important as numbers. Let's move on from 'little boxes' to a rich mix of dwelling types and sizes, rooted in real places. In almost every other area – the car industry, digital technology, medicine, sports equipment – things are improving all the time. We can't say that about our housing; it is astonishing that second hand homes are still so sought after and often command much higher prices than new homes.

Good housing can make an enormous difference to our quality of life and to our life chances. Space standards have a vital role to play – from encouraging new housing models that attract older people to protecting vulnerable families from overcrowding. Our politicians are finally beginning to talk about housing as a moral issue. As a society we need to decide how we want to live and what that says about us as a nation. It starts by making fairer, more sensible choices about the homes we build. Instead of settling for the least we can get away with, we need to start aiming for the best we can do.

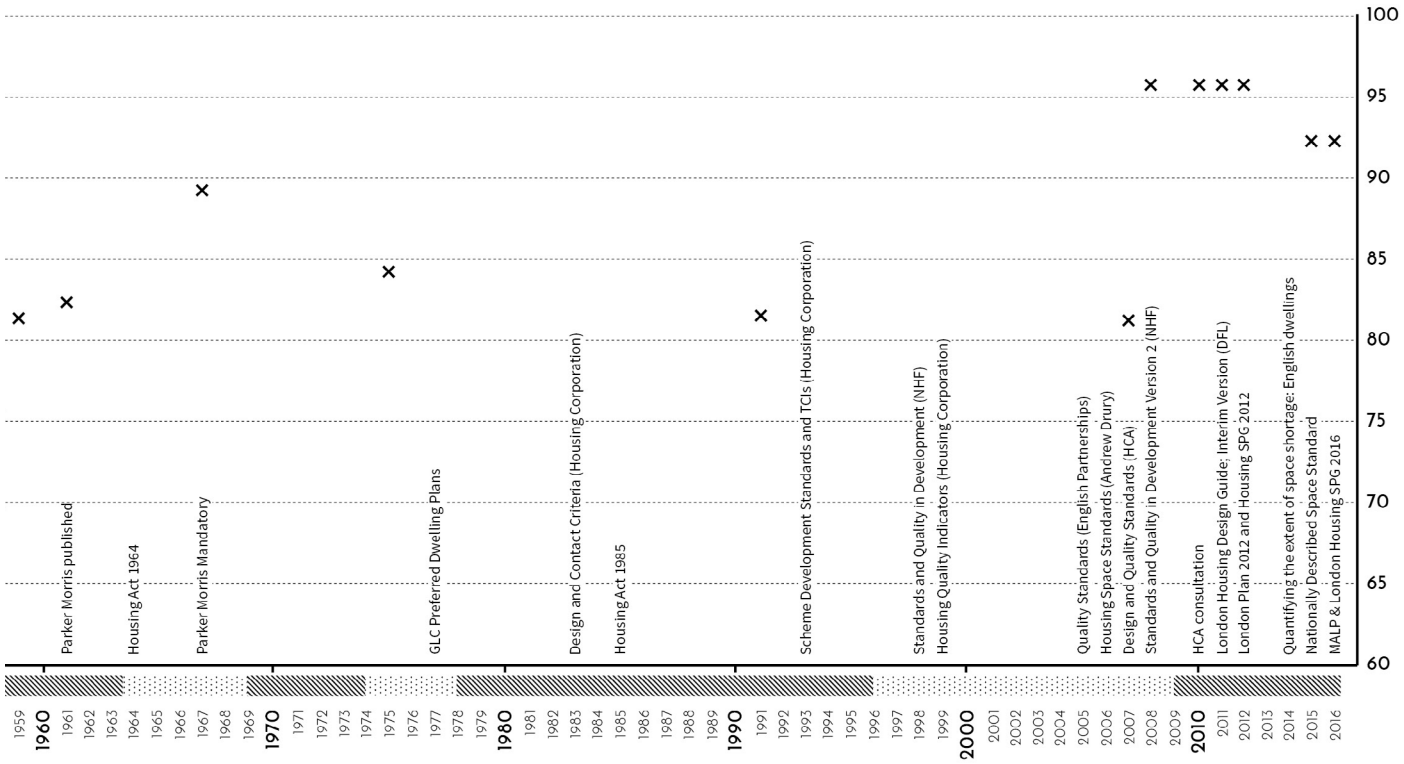
ANNEX

SUMMARY TIMELINE OF SPACE STANDARDS IN ENGLAND



Key

- Conservative Government
- Liberal Government
- Labour Government
- × Indicates size of public sector 3b 2 storey house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Parker Morris Mandatory
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THE METHODOLOGY BEHIND THE NATIONALLY DESCRIBED SPACE STANDARD

The extract below explains how the minimum floor areas of the NDSS were calculated. It was included in the first public consultation (2013) of the government's Housing Standards Review, 2012–15.[136]

> *'The minimum Gross Internal Areas in Table A are determined by a combination of the space needed to accommodate the furniture detailed in ANNEX 2A (which is derived from the Housing Quality Indicators and the London Housing Design Guide) and the additional requirements of the proposed Accessibility Standard. They reflect the individual room areas and the amount of general circulation and storage space needed to accommodate these cumulative requirements in a range of dwelling types and sizes.*
>
> *In simple terms, more people need more space. However, the relationship between increased occupancy and extra space is not precisely linear because of other variables which affect the amount of space needed but are not directly linked to occupancy'.*
> *The variables are as follows:*
>
> - *The number of bedspaces (or people)*
> - *The number of bedrooms*
> - *The number of bathrooms*
> - *The number of WC/cloakrooms (and/or shower rooms)*
> - *The number of storeys*
>
> *Each of these variables also has an impact of the amount of circulation space and the area taken up by internal partition walls within each dwelling type. By assigning a numerical value to each variable, the Gross Internal Areas can be generated by a simple calculator, which has an in-built 'starter figure'. At each Level, the starter figure varies for one, two and three storey homes to take account of any extra space needed for stairs and, where appropriate, for lifts. This effectively deals with variable 5. It also includes a basic allowance for living, dining and kitchen space, storage and general circulation and partitions.*
>
> *Using the appropriate version of the calculator, only the number of bedspaces, bedrooms, bathrooms and WC/cloakrooms need to be entered for any dwelling type. These values are added to the 'starter figure' to produce the required Gross Internal Areas.*
>
> *The calculator was first developed for Level 2. At this Level, each bedspace/person has a value of 9m². This is made up of 2m² of living/dining/kitchen space, 0.5m² of storage space and 4m² of bedroom space (the difference between the size of a single and a double or twin bedroom). The remaining 2.5m² is attributable to extra circulation and partitions.*
>
> *Each bedroom adds a further 4m². This allows the different spatial implications of various combinations of single and double/twin bedrooms to be reflected in the minimum Gross Internal Areas. Independently of the number of bathrooms, WCs or storeys, these two variables together generate a simple pattern.*

- *2b3p to 2b4p – add 9m²*
- *2b4p to 3b4p – add 4m²*
- *2b4p to 3b5p – add 13m² (9+4)*
- *3b5p to 3b6p – add 9m²*
- *3b6p to 4b6p – add 4m²*
- *3b5p to 4b6p – add 13m² (9+4)*

Each bathroom has an incremental value of 5m² and each WC/cloakrooms or shower, 3m². These, and the bedroom values, also include a small further allowance for the extra circulation and partitioning that is needed when any extra room is added.

The starter figures and, where necessary, the incremental values for the four variables, are adjusted downwards for the Level 1 Gross Internal Areas and upwards for the Level 3 Gross Internal Areas. As noted, the spatial variations between the three Levels are triggered by the differences in the corresponding accessibility requirements. This reflects the objectives of the higher Accessibility Standards that imply slightly more generous circulation space throughout the home; not just where specifically defined in the requirements for hallways, bathrooms and WCs.

The Gross Internal Areas for two and three storey homes at the higher levels also allow enough space for straight flights of stairs (as distinct from winder or dog-leg configurations). Although this is not a defined requirement at Level 2 of the Accessibility Standard (and is not required by the Lifetime Homes standards), straight flights are generally felt to be safer and more manageable for older people and others with mobility difficulties. The Gross Internal Areas at the higher Levels of the Space Standards therefore include a slightly greater allowance for stairs than those at Level 1.

The calculator based methodology described above was developed in 2009 by architects, Levitt Bernstein, who also developed the concept of a three tier accessibility standard directly linked to a three tier space standard. Although the methodology remains unchanged in principle, the numerical values incorporated into the calculator have been adjusted and refined to reflect the proposed Accessibility Standards as these have been developed through the review process.

The Gross Internal Areas at Level 2 are generally consistent with the London Mayor's housing design standards (which incorporate the Lifetime Homes standards) as published in the Housing Supplementary Planning Guide, 2012. Prior to the Housing Standards Review, Levitt Bernstein's methodology and results at Level 2 were made available to the Greater London Authority and used to inform their minimum Gross Internal Areas. The Level 2 figures remain fully aligned with the London areas for all except three dwelling typologies. In these three cases, which include 1b2p flats, the Mayor's figures depart slightly from the calculator methodology, which has been applied elsewhere. These minor discrepancies will be addressed and eliminated in due course, as necessary'.

Additional (unpublished) notes on how the areas were derived, are provided by Levitt Bernstein:

'Housing policy and standards have always interested us. Over a period of almost 50 years, David Levitt contributed to many publications. Space standards were a recurring theme, and in 2008 we began a new piece of work. This was prompted by concern that the minimum internal floor areas in the Housing Quality Indicators (HQIs) were not matching our practical experience and lacked any obvious rationale except for a strong correlation with a number of the 1961 Parker Morris Standards.

In our housing design work, we were finding that most dwelling types needed to be considerably larger than these sizes in order to comply with the other HQI requirements, and accommodate the required furniture. We were having particular difficulties with two and three storey homes, especially where the Lifetime Homes standard was also being applied through local planning policy. Some of the figures were unworkable.

This was during the economic recession and our clients were not keen to exceed the minimum areas (doing so earned them more 'points' but not more grant). They knew, however, that many of the homes they were building were very tight. Based on extensive experience across a range of projects, we made a list of what we considered to be the minimum reasonable floor areas for a typical range of dwelling types. Putting that aside, we produced three model sets of floor plans, based on the other HQI requirements and Lifetime Homes:

- *Baseline (the smallest we would be happy to put our name to)*
- *Good practice (where we'd like to be)*
- *Best practice (eventually maybe).*

We compared the size of the drawn footprints with the areas we had listed. We found not an exact correlation, but an extremely strong one – almost all of the listed areas were just above the baseline plans. A further comparison confirmed the full extent of the anomalies that we knew, or had suspected, within the HQIs:

- *Minimum floor areas for two bedroom houses were the same as those for two bedroom flats (though all other house types were larger than flats of the same type)*
- *For 6p flats and above, the floor area was the same, irrespective of the number of bedrooms (though up to 5p, the areas rose by bedroom, as well as bedspace)*
- *For 7p houses, the floor areas were the same for 2 and 3 storey dwellings (though for others, 3 storey areas were larger than 2 storey)*
- *In general, areas for flats were more workable than those for houses, and the mismatch was greatest in the bigger houses*

We were convinced that there must be an underlying pattern to the set of areas we considered to be 'right.' Listing them in increasing order of size, we analysed the incremental differences between consecutive dwelling types. A clear pattern emerged but not a simple one. We knew that adding stairs, extra bathrooms and WCs would affect floor area (each by a consistent amount irrespective of typology or storey height) and it was relatively easy to determine what these additions values were.

We also knew that adding an extra person to any house type meant considerably more floor area (not only the space for an extra bed, beside table and clothes storage, but also a spatial

impact across many other parts of the home - an extra armchair, a larger dining table, more kitchen storage, more general storage, and more circulation and partitions). It was clear too; that there was an additional impact when adding an extra person also meant adding a new (single) bedroom, rather than simply upgrading a single bedroom to a double. We worked out what these 'per person' and 'per bedroom' values were, by analysing the incremental uplifts in the same way. The final piece of the jigsaw was uncovering the 'starter figure'. Having done that, we began using the findings in our own projects. The work was offered to the HCA and GLA in 2009-10, and to DCLG in 2012-15'.

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