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Fit for Renting:an Investigation into Space Standards of Irish Housing

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Recommended Citation

Roche, J. (2014). Chapter in Renting in Ireland: the social, voluntary and private rented sectors. *Institute of Public Administration (IPA) Dublin*. doi:10.21427/n51s-y533

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Fit for Renting

an investigation into space standards of Irish Housing

© Noel Brady and Jim Roche 2015

Published in

Renting in Ireland: the social, voluntary and private rented sectors

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ISBN: 978-1-910393-01-7

Editor Dr. Lorcan Sirr

The Urban Pattern

Housing is the mainstay of the city forming the fabric that binds us to our place. Without housing's consistent character most cities would be a simple geometrical organisation. Since the earliest of urban settlements, through Hippodamus (498 – 408 BCE), King Charles II of Spain (*Laws of the Indies* - 1680) to the Royal Commission on Housing in Britain (1885), there has been a search for a set of codes that would establish an equitable means of distributing space amongst their citizens. However, not all citizens are, it seems, created equal as the use of such codes varies considerably from their stated aspirations to their enactment. Over time, the provision of housing has to the modern world become a reactive measure following periods of conflict, social turbulence or even disaster. By the interwar years many local administrators had established architectural and planning objectives based on the provision of suitable housing for citizen workers. In concert with the new industrial ideology, a 'New Objectivity' permeated much of European theoretical debate. For example, Article 155 of the Weimar Constitution (1919) sought to secure healthy housing to all German families, especially those with many children. This would give rise to the *Existenzminimum* (the Minimal Dwelling), documented as what would become known as the Frankfurt experiment in 1927 at CIAM II (Congress International Architectural Moderne). It was at this congress the Frankfurt Kitchen was debuted before the world, the forerunner to every kitchen design that followed, with its adherence to Taylorised thinking, industrialised processes and modular components.¹

The Beginning of Standards

¹ For a more detailed explanation see Karel Teige's, *The Minimal Dwelling*, 1932

In Britain the work of the Royal Commission in 1885 had some impact in improving conditions for housing workers (the poor were condemned to workhouses and slums) but defective accommodation still persisted. The conditions were so poor as to require the formation of the Tudor Walters Committee after the Great War. Their recommendations included state subsidised housing with standards and densities based on the Garden Cities, initiated by Ebenezer Howard. The resulting 1919 Housing Act, known as the '*Homes fit for Heroes*' programme, enacted the Tudor Walters recommendations, giving local authorities subsidies and the responsibility to develop council housing for rent to certain specified space standards.² In Ireland, Legion Terrace in Longford and The Middle Third in Killester, Dublin are two such schemes (see also Lorcan Sirt; *an ideology of renting*). The Tudor Walters standards would eventually find their way into local authority codes in Ireland. Though independent since 1922, much of Ireland's building standards are borrowed from UK codes. The markets however differ considerably as the UK housing market has a greater proportion of housing dedicated specifically to the rental market. Where housing has been purposefully designed for rental in Ireland it has been in the social arena. From the 1950's private housing, owned and operated by individual landlords augmenting their income or providing for their private pensions, became available for rent. In more recent years units built in larger apartment schemes, designed for owner-occupation, or pure speculation, have in practice been rented. There has been little variation in either category (private or social) with most comprising either semi-detached houses or two and three bedroom apartments. To illustrate the difference between the Irish and UK situation the 1949 book '*Planning: The Architects' Handbook*'³ outlined

² Article 155 of the Weimar Constitution also provides for special consideration for war veterans.

³ Pierce, S. Cutbush, P. and Williams, A. (1949) *Planning: The Architects Handbook* Iliffe books Ltd.: London

performance criteria for three levels of rental accommodation: High, Medium and Low

Income Rentals outlining the recommended areas for each constituent.

Table 1: Space standards from *The Architects' Handbook*

	Living Room	Dining Room	Kitchens	Bedroom <i>Small</i>	Bedroom <i>Large</i>
High (income) Rentals	30.2 sqm	25.1 sqm	16.3 sqm	11.1 sqm	25.1 sqm
Medium (income) Rentals	27.9 sqm	20.9 sqm	13.9 sqm	10.2 sqm	20.4 sqm
Low (income) Rentals	14.9 sqm	16.7 sqm ⁴	8.4 sqm	6.5 sqm	10.2 sqm
Note: Data captured and translated into metric equivalents.					

⁴ Kitchen / Living Room

Low Expectations

In 1944 the UK published the first 'Housing Manual', which was amended in 1949. The post-war period was significant in the development of our contemporary standards. The population expansion that followed hostilities coupled with major rebuilding programmes necessitated new visions of urban dwelling. The optimism of the era also fuelled speculation and experimentation in housing that until then was merely theoretical. Housing became the symbol and representation of a new outwardly relaxed society. Newly forged industrial techniques in construction fulfilled part of this promise even if the space standards were slow to accommodate this new society. In America the house building boom that laid the foundation for the modern suburb was itself founded upon cheap federal loans for returning GI soldiers. This was in contrast to the mass housing response to urban slums epitomised by the failure of the Pruitt Igoe housing development (1954–1976) in St. Louis, Missouri.⁵ It was in the midst of these very public failures that the Parker Morris Committee drew up its 1961 report on housing space standards in '*Homes for Today and Tomorrow*'. This influential report became the base standard against which much public and private housing was measured. Even though the standards represented a major step forward especially for public (social) housing, they were not overly generous.

A closer examination of the guidelines in the Architects' Handbook illustrates the nearness to the earlier guide and also the economy of means.

⁵ Completed in 1954 Pruitt Igoe became the ignominious poster boy for the failure of modern housing. It was demolished between 1972 and 1976.

Table 2: A comparison of The Architects' Handbook and Parker Morris Standards.

Year	Source	1 Bed Apt. 2 Person	2 Bed Apt. 3 Person	2 Bed Apt. 4 Person (1 storey)	3 Bed Apt. 5 Person (1 storey)
1949	The Architects' Handbook <i>Homes for rent - Low Rental</i>	46.5 sqm ⁶	56.7 sqm ⁷		
1961	Parker Morris <i>Homes for Today and Tomorrow</i>	45.5 sqm ⁸	57.8 sqm	71.1 sqm	80.7 sqm

If setting benchmarks is about more than ambition, it requires commitment and regulation to assure delivery, which unfortunately is often lacking, even in Britain as the *Guardian* newspaper highlighted in a review of a history of British housing exhibition at the Royal Institute of Architects in Britain (RIBA) in 2002 which identified that the average new home 'falls short of even the minimum standard of size'.⁹ In addition a report by HATC Limited for the Greater London Authority published in August 2006 claimed that Parker Morris standards were 'a benchmark that neither the public nor private sectors seek to achieve.'¹⁰ As the report noted:

Space standards in the UK are below the European average; indeed UK standards appear to be near the bottom of the range. There is also some evidence that the differences between space standards in public and private provision are greater in the UK than elsewhere in Europe...(HATC, 2006)

⁶ Planning, The Architects Handbook Low Rentals extrapolated from 1 bed Low Rental not including circulation

⁷ Planning, The Architects Handbook Low Rentals extrapolated from 2 bed Low Rental not including circulation

⁸ Including circulation

⁹ <http://www.theguardian.com/lifeandstyle/house-and-homes-blog/2012/feb/22/history-british-housing>

¹⁰ HATC Ltd, (2006) *Housing Space Standards*, Report for the Greater London Authority

There is ongoing debate about the application of space standards in Britain. For example, a recently published, government-endorsed set of guidelines strongly advocates flexibility in the application of minimum standards in the private rental sector, noting that ‘the good practice principle should be to design to ergonomic and functional space standards of activities but not necessarily minimum dwelling areas’, as ‘specifying the minimum total dwelling size undermines creativity, ignores local distinctiveness, density and tenure.’ This argument for the ‘build to rent’ challenges us to consider space standards within a wider contextual framework of for example, location, scale, the exterior, the public and private interior, management and maintenance, servicing etc.¹¹

An interesting study by Alessandro Rigolon, entitled *European Housing Standards* that compared and contrasted statutory building regulations of space and environmental standards in housing in four different European countries, noted that:

Minimum standards, when present, vary to a large extent from one country to another. For example, in Italy, the minimum area for a room defined as habitable is 9 square metres; in France, it drops to 7 square metres (and until 2006 it was 6 square metres), while in the Netherlands it goes as low as 5 square metres. There are no minimum standards in England and Wales, and as a result functional space is dictated by market trends. Guidelines exist at local levels, however, and are based on the analysis of current trends.¹²

¹¹ Urban Land Institute UK Residential Council (2014) *Build to Rent: a best practice guide*. inside rear cover, p. 52

¹² Rigolon, A, (2013) *European Housing Standards*. Published online in www.academia.edu. This study compared and contrasted statutory building regulations of space and environmental standards in housing in four different European countries.

The under-performance of housing stock is not of equal concern to all elements of the housing industry. In 2007 the Home Builders Federation (UK) were critical of the re-emergence of mandatory space standards being mooted by English Partnerships, concerned that it might hinder the process of delivering homes. *'English Partnerships, which owns 7,500ha of land, builds 10,000 homes a year...said it wanted to eliminate the trend for so-called microflats by introducing standards 10% more generous than those of Parker Morris'*¹³. For a standard to be effective it must be enforceable. When there are powerful private concerns or weak urban authorities, less than standard will be the norm and when the norm is the minimum the potential for disasters like Pruitt Igoe will be greater.

Ireland

Since the foundation of the state the favoured option has been to adopt and translate those space standards available in the UK. The lack of a national design standard for housing at least until 1995 meant it was the responsibility of local authorities to maintain and protect the inhabitant through their development plans. Outside of the major cities, local authorities have been slow to enshrine this protection in their plans for development. Dublin Corporation (now Dublin City Council) maintained the British system of building bye-laws and was one of the first Local Authorities to attempt a base line for housing. Data gathered from their development plans shows how the problem of housing standards has been approached at least in one city.

¹³ *Building Design Magazine*, Online Edition 02 November 2007, <http://www.bdonline.co.uk/news/agency-brings-back-space-standards/3098967.article>

Table 3 – Comparative Dublin City local authority space standards, data compiled by authors

Year	Source	1 Bed Apt. 2 Person	2 Bed Apt. 3 Person	3 Bed Apt. 5 Person (1 storey)
1961	Parker Morris <i>Homes for Today and Tomorrow</i> ¹⁴	45.5 sqm	57.8 sqm	80.7 sqm
1981	Section 23 Tax Incentive ¹⁵ <i>Introduced for tax incentive areas</i>			
1987	Development Plan Dublin City Council ¹⁶	32.3 sqm	37.3 sqm	
1991	Development Plan Dublin City Council ¹⁷	32.3 sqm	43.8 sqm	
1995	Department of Environment 1995 <i>Guidelines on residential development in urban renewal designated tax incentive areas</i>	38.0 sqm	55.0 sqm	70.0 sqm
1999	Development Plan Dublin City Council ¹⁸	38.0 sqm	55.0 sqm	70.0 sqm
2005	Development Plan Dublin City Council	45.0 sqm	65.0 sqm	80.0 sqm
2007	Department of Environment Sustainable Urban Housing	45.0 sqm	73.0 sqm	90.0 sqm
2011	Development Plan Dublin City Council	55.0 sqm	80.0 sqm (to 90 qm)	100.0 sqm

¹⁴ The metric areas are extrapolated from the original Parker Morris imperial area measurements.

¹⁵ “In general, section 23 relief is a tax relief that applies to rented residential property in a tax incentive area. It is available to a person who has incurred expenditure on the purchase, construction, conversion or refurbishment of a qualifying property and who lets that property, having complied with certain conditions. The meaning of the terms construction, conversion and refurbishment is set out in Appendix 1. Relief for expenditure incurred can be set against the rent received from that property and other Irish rental income so that the amount of a person’s taxable income is reduced. The term ‘property’ as used in this document refers to rented dwellings such as houses or apartments.” A Guide to Section 23 Relief Office of the Revenue Commissioners Direct Taxes Income & Capital Taxes Division January 2008 (Revised June 2010) P4.

¹⁶ This does not include for circulation and the kitchen space standard is as low as 2.8 sqm.

¹⁷ This does not include for circulation and the kitchen space standard is as low as 2.8 sqm.

¹⁸ Standards appropriated from the DOE 1995 Guidelines on residential development in urban renewal designated tax incentive areas

The chronological roll out since Parker Morris in 1961 has not been notable for its dramatic improvement in basic housing standards whether for purchase or renting. Table 3, above, extrapolates the individual space standards identified in successive development plans into apartment measurements. Apartments have been used for comparative purposes to illustrate the problem. Apartments have also been the main focus of private rental accommodation in recent years. From 1987 to 1991 performance criteria was confined to major rooms only so some interpretation has been introduced using later bedroom performance standards. The 1995 Department of the Environment (DOE) guidelines on residential development in urban renewal designated tax incentive areas was the stick to balance the carrot of major tax incentives. It should be noted that these were instigated fourteen years after the urban renewal incentives had already delivered severely underperforming units in certain developments. The only reference to space standards in Section 23 was that qualifying unit(s) should be no less than 38 sqm and no larger than 125 sqm, or 55 sqm and 160 sqm in the case of student accommodation; this is hardly a foundation to build a new sustainable urban environment. Instead, like water, the market found a low level, the minimum required to either meet the finance act (where relevant) or the local authority requirements.

Even as the minimum became the maximum, early urban projects also suffered from inadequate social spaces and over-densification while lacking in mixed tenancies. Dublin City Council embedded these new codes in their development plans of 1999 and in 2005 to upgrade standards which had barely kept pace with those set down a half a century earlier. The publication of the DOE's *Sustainable Urban Housing Code* in 2007 saw the first major review that brought the code above the Parker Morris datum even if the one-bedroom apartment fell a little short. The 2008 Housing (Standards for Rented Houses) Regulations makes no statement regarding space standards as it is more concerned with sanitary provision, ventilation, fire safety, food preparation and the like. These regulations were designed to ensure that landlords provide for the '*Existenzminimum*'. Dublin City's 2011 *Development Plan* has made a significant step forward towards a more sustainable product. Quantitative standards apart the most recent plans have also stressed the importance of qualitative standards about which, more later.

When we look to the history of modern housing in Ireland one project stands out for the scope of its vision and the breadth of its perceived failure. However not everything is as simple as it seems. The Ballymun development of 1966–1969 pushed the agenda of apartments for rent further than any project before or even one might argue since. Now almost fully demolished, it was originally designed and erected in a reactive move to address the then Dublin City housing crisis. In a novel (for the period) public-private partnership between a consortium of professionals and contractors for the newly formed Government body, the National Building Agency, the scheme was constructed between 1966 and 1970. The towers had one-bedroom units of 43 sqm, two-bedroom units of 67

sqm and three-bedroom units of 73 sqm, while the two-storey terraced three-bedroom houses measured a generous 133 square metres, which is well above the Parker Morris standard of 80.7 sqm for a five-person apartment. In addition the apartments had generous balconies, which were rare at the time. The failure of management and lack of maintenance that ensured Pruitt Igoe's demise could equally be targeted at Ballymun (though the failure to complete the whole of its programme should also be considered instrumental). Though the codes that guide a project's development are central, there are myriad other factors necessary to bring about successful housing. We have chosen to at least focus on this ingredient in advocating for a more rigorous quantitative and qualitative approach to provide us with the tools for a living city capable of being meaningfully inhabited, wherever one lives.

The Built Pattern

This quantitative and qualitative effort has been promoted in part by the Royal Institute of Architects in Ireland (RIAI) which sought submissions on housing practice and published these as *The New Housing* (2002) and *The New Housing 2* (2009). These publications provide an interesting lens through which to examine the state of housing design leading up to the recent economic crash. The two main categories that are easily identifiable are private housing for sale (or for rent) and public (social) housing (for rent). Within the private domain there appears to be little distinction between those for sale or rent. This alone confirms the observations above regarding the lack of variety in the market. A further analysis indicates that social housing seems to attract better space standards or at least have a more enlightened view in the application of these standards.

Performance

Parker Morris and newer housing standards addressed more issues than merely the minimum floor areas of dwellings. In fact the '*Homes for Today and Tomorrow*' programme, now over 50 years old, referred to aspect, storage and outdoor amenity space, family life cycle and many other issues pertinent to comfort within the home, thus recognising that a wide range of factors determines the quality of the internal environment of apartments. From the material available in both publications there appears to be reluctance among Irish housing providers to seriously address minimum space standards for purchase and especially renting. Schemes are portrayed with drawings and pictures along with a useful chart identifying height, housing mix, capacity, site area, density, floor area, bed spaces, site coverage, open space, car spaces and context. For the first time in *The New Housing* a comprehensive snapshot of the state of housing design was captured and documented in quite some detail designed to '*demonstrate that higher densities can mean better designed accommodation internally, as well as improved quality in the external environment of cities and towns*'.¹⁹ It is with regret that, as comprehensive as these publications are, that a more detailed analysis or comparison of the individual parts of the pattern was not carried out. An analysis of the internal environment of the schemes such as internal space standards, aspect (dual versus single), number and size of balconies and storage facilities would have yielded important data and a more accurate analysis of performance. Due to the small scale of the drawings and lack of specific detail in some it is not possible to carry out a detailed analysis of this kind in this paper. However it is still possible to extract sufficient material, on apartment typologies, especially aspect, the position of kitchens/bathrooms and the provision of storage and circulation systems. These

¹⁹ Toal O' Muire President RIAI, in *The New Housing* (2002) RIAI, p 9

are the essential elements that more often than not determine the real quality of the internal environment. For the purposes of this exercise eleven sample schemes were chosen to make comparisons. Due to published limitations information has been interpreted and extrapolated from both the written data and whatever drawings were provided.

Table 4 – Comparison of space standards across 11 developments, 1996-2010, comparative data compiled by authors

	1	2	3	4	5	6	7	8	9	10	11
	Millennium Tower Charlotte Quay 1996 - 2000	Collins Sq. Benburb Street 1998 - 2001	Old Distillery Smithfield 1996-1999	Custom House Sq. Mayor Street 1997-2002	Smithfield Village 1996-2000	Pudding Row Essex Street, Temple Bar. 1997-2000	Upper Dominic Street 1999-2004	Hanover Quay. 2001-2006	Steelworks, Foley Street. 2001-2006	York Street 2004-2008	Séan Treacy House 2001-2010
Height	5-7	4-5	4-6	5-10	7	5	5	5-8	4-8	3-7	4-6
Density Unit per Ha	388	282	305	291	248	319	255	231	254	279	133
% Dual Aspect	6%	83%	32%	100% and 50%	43 into tight court	50	89	78	58	91	100
% Single Aspect	94%	27%	68%	0% and 50%	57%	50%	11%	22%	42%	9%	0%
% internal kitchens	100%	100%	95%	100% and 75%	90%	83%	11%	40%	96%	0%	0%
% internal bathrooms	100%	100%	100%	100%	90%	100%	11%	40%	100%	24%	0%
Apartments per core	6	3	4	4 and 13 (deck)	2 to 5	6	2	3-6	3-5	2	2
Comments	Tower excluded from analysis as plans not seen	3-bed duplexes are single aspect		2 types: Core and deck access	Part deck access. Only 63% residential	Very tight site	Shallow block. Duplexes lower levels.	Deep plan	Very dense.	Shallow block, some duplexes.	Shallow block, many duplexes.

The methodology employed could suggest a way of qualitatively assessing our housing stock. The apartment schemes are organised chronologically from 1996 to 2010. They have been chosen as representative of the type of schemes constructed during the specific period of the 'Celtic Tiger' years (1996–2010) with certain shared characteristics. In the main the schemes have city centre locations within the two canals that ring the inner city of Dublin. Some are located in the urban renewal area of the docklands, and they have broadly similar densities (greater than 230 units per hectare) with the exception of scheme 11 at 133 units per hectare. Dublin has lent itself to a particular urban form typology of dense blocks with shared courtyards maintaining street patterns of the Georgian or Victorian City. These are smaller in scale than many of the European city block models. In the Docklands considerably more flexibility in the street pattern is evidenced in the large pavilion blocks that dominate the waterfront, and similarly, designers were able to influence the final shape and form of the urban pattern. As is the pattern throughout most of Dublin the mix of tenure emphasises residential over commercial. In some the idea of mixed use does not appear at all. Instead there is mainly 80-100% residential usage except for schemes 5 and 7 which have only 63% and 75% residential use, respectively. Idiosyncratic schemes, tower schemes, bespoke projects or peculiar sites were omitted from this analysis in favour of the typical urban project.

Aspect

A good-sized apartment (say compliant with Parker Morris space standards) does not in itself guarantee quality of internal environment, for example if it is single aspect and faces across a noisy road or onto a large scale overshadowing building. Likewise a dual aspect apartment, if it is long and thin in a deep floor plate like in many of the schemes under review, with kitchens and bathrooms confined to the centre of the plan with no windows for natural light and ventilation, affords an internal environment of dubious quality.

However not all dual aspect apartments are the same and some clever unit planning can afford the efficiency model of thin units while achieving the higher environmental qualities of the wider unit. Another concern is the reliance on natural ventilation systems for deep thin plates since even shallow wide plates and houses may not fulfil the regulations. A study of natural ventilation in 22 homes of different types in the UK *'showed that all five apartments, and 40% of the houses, failed to achieve their recommended background ventilation'*²⁰ according to the relevant code for the units at the time of their construction. A reasonable balance of single and dual aspect apartments, of varied widths and depths, including some duplex types can work well in a housing scheme and provide good standards generally if the single aspect apartments are confined to wide-fronted one-bedroom apartments of southerly aspect, their percentage of the overall accommodation is limited and good balconies and other amenities are provided as compensation. The recently published *Build to Rent: a best practice guide* (2014) published by the Urban Land Institute, even suggests that a certain number of smaller north-facing units may be acceptable in a scheme provided they get plenty of daylight and

²⁰ Natural Ventilation: does it work? Passive house +, Issue 6 (Irish Edition) P.69

are compensated with good views and access to a sunny communal terrace.²¹ Attitudes and application of standards regarding aspect seem to vary from country to country.

Rigolon claims for example, that 'Italy is the only country where dwellings are required to have at least two exterior walls with openings' while other countries have a more liberal approach.²²

Kitchens and Bathrooms

Kitchens and Bathrooms are the engines of the home that are probably the least understood and developed of current housing. The essential issue with kitchens and bathrooms in apartment design is that if they are not on external walls with potential for natural daylight and ventilation then they will always need artificial light and ventilation and will thus use more energy. On the face of it this has serious implications for the running costs of the home. However there appears to be little concern for lifecycle costs in housing production in Ireland. Organising these elements to the external façade is seen as problematic from the perspective of open space access as both require equipment and furniture that take up over 40% of the wall area. These are also considered low value areas of the home because of the minimal time spent in these spaces (except for joint dining kitchen rooms). The key issue is that internal artificially lit and ventilated spaces should be avoided as they tend to not be pleasant rooms to be in and is energy demanding. Access to daylight and windows to the street and nature are important elements in making an inhabitable city. It is interesting to note that, in Rigolon's study referenced earlier,

²¹ Urban Land Institute UK Residential Council, *Build to Rent: a best practice guide*. 2014, p. 42

²² Rigolon, Alessandro, *European Housing Standards*, 2013, p. 48

'Italy is the only country in which it is generally mandatory to have natural lighting in at least one bathroom'.²³

Private Outdoor Space

British housing architect David Levitt notes shockingly that, as recently as 2010, flats were still being built in Britain '*without any sort of outside space*' but that pressure was on to provide '*some kind of private open space that is accessed directly from the flat, space that receives sunlight for some part of the day and is large enough for all members of the household to sit out and take a meal together*'.²⁴ He identifies required areas of at least 4 sq. metres for a couple and an extra 1 sq metre for each additional person, giving 6 sq. metres for a couple with two children. If Levitt's definition of an apartment balcony were to be applied strictly to all future apartment design in Ireland, especially the condition regarding sunlight, it would change entirely the quality of our inner city apartments and indeed that of the public realm. Interestingly this is contrary to the view expressed by the Urban Land Institute when it ponders '*whether stand-alone balcony provision is warranted on smaller dwellings for rental tenure*', further noting that: '*Many balconies provided in for-sale developments have questionable functionality and perceived value when considered against the cost of provision. An aggregated approach to communal space would appear much more cost effective and also drive more perceived value from residents choosing to rent, if the right amenity offer is provided.*'²⁵ All very fine, but it is clear that cost, and not amenity for the dwellers, is the primary consideration here.

²³ Rigolon, Alessandro, *European Housing Standards*, 2013, p. 50

²⁴ Levitt, D. (2010) *The Housing Design Handbook – A Guide to Good Practice* Routledge, p.98

²⁵ Urban Land Institute UK Residential Council, *Build to Rent: a best practice guide*. 2014, p. 51

As for internal space standards, it has been difficult to analyse the extent of private open space provided in the schemes noted as the table for each scheme in the RIAI books only notes the total external open space, which is often communal, although some schemes give the total private balcony space. In the main the development plans and even the national guidelines from the DOE have in the past provided significant leeway in the interpretation of the codes. This is changing, as can be seen by more recent Development Plans and guidelines from Dublin City Council and the DOE respectively, as outlined in the table below. Ironically as these are being rolled out, there are increased demands on housing design to address dramatic demographic and lifestyle changes.

Table 5 – Comparative data compiled by authors

Year	Source	Private Open space (Balcony)	Private Open Space (in development)	Public Open Space (in development)
1987	Development Plan Dublin City Council	No requirement	15 sqm per bed space	10% of total site area
1991	Development Plan Dublin City Council	No performance dimension given	15 sqm per bed space Where impossible due to density a balcony of suitable orientation and size is to be provided.	10% of total site area <i>(may be required)</i>
1995	Department of Environment 1995 <i>Guidelines on residential development in urban renewal designated tax incentive areas</i>	No performance dimension given	No performance dimension given	No performance dimension given
1999	Development Plan Dublin City Council ²⁶	Private open space can include courtyards, roof gardens and usable balconies 5 sqm per bed space – inner city 8 – 10 sqm per bed space – adjoining canal ring (including docklands) 12 – 15 sqm – outer suburbs		10% of total site area
2005	Development Plan Dublin City Council	Private open space can include courtyards, roof gardens and usable balconies 5 – 8 sqm per bed space (inner city) 12 – 15 sqm (suburbs)		10% of total site area
2007	Department of Environment, Community and Local Government Sustainable Urban Housing	Minimum depth of 1.5 metres 1 Bed Apt – 5.0 sqm 2 Bed Apt - 7.0 sqm 3 Bed Apt – 9.0 sqm		Children & Teenagers < 25 units as part of open space of individual units 25 - 150 units 85 – 100 sqm > 150 units 200–400 sqm
2011	Development Plan Dublin City Council	Minimum depth of 2 metres 1 Bed Apt – 6.0 sqm 2 Bed Apt - 8.0 sqm 3 Bed Apt – 10.0 sqm	Private open space can include courtyards, roof gardens and usable balconies 5 – 8 sqm per bed space (inner city) 12 – 15 sqm (suburbs)	100.0 sqm

²⁶ Standards appropriated from the DOE 1995 Guidelines on residential development in urban renewal designated tax incentive areas

Storage

It took until the presentation of the DOE guidelines in 1995 to begin to address the issue of storage in homes, which is an especially problematic issue for units designed for renting either in the social or private marketplace. As tenants become more mobile following new work patterns or continued learning opportunities the adaptability of their homes to changes in lifestyle necessitate storage. Any long-term flexibility in living arrangements must be planned in from the start. The design of storage is critical: it must be usable, flexible and spacious, all qualities that are often in short supply.

Table 6 – Space requirements for apartments in Dublin, comparative data compiled by authors

Year	Source	Storage 1 Bed Apt.	Storage 2 Bed Apt.	Storage 3 Bed Apt.
1987	Development Plan Dublin City Council	No stated requirement	No stated requirement	No stated requirement
1991	Development Plan Dublin City Council	No stated requirement	No stated requirement	No stated requirement
1995	DOE 1995 <i>Guidelines on residential development in urban renewal designated tax incentive areas</i>	1.5 sqm	2.5 sqm	3.5 sqm
1999	Development Plan Dublin City Council ²⁷	1.5 sqm	2.5 sqm	3.5 sqm
2005	Development Plan Dublin City Council	2.0 sqm	3.0 sqm	4.0 sqm
2007	DOE Sustainable Urban Housing	3.0 sqm	6.0 sqm	9.0 sqm
2011	Development Plan Dublin City Council	3.0 sqm	6.0 sqm	9.0 sqm

²⁷ Standards appropriated from the DOE 1995 Guidelines on residential development in urban renewal designated tax incentive areas

Observations

From the data in Table 4, above, there are a number of key observations that may provide a signpost for future developments. Densities have increased significantly since the 1980's when it was almost impossible to encourage the sort of urban renewal that we take now as commonplace not just in our cities, but in many towns across the country. In the dataset the densities in the earlier schemes is generally higher with the average for schemes 1-6 being 305 units per hectare and schemes 7-11 being 230. In scheme 1 this is because of the addition of a tower element. In scheme 4, the combined core and deck access contributes to the high density while the high number of apartments per circulation core is also a significant factor.

A similar shift can be seen from the perspective of aspect with the first six schemes (completed before 2002) having 58% single aspect units. The average for schemes 7 to 11 is only 17%. Three of the five latter schemes are public (social) housing and have an average as low as 7% single aspect units. This split between private and public housing is marked by a very significant statistic: internal kitchens and bathrooms are present in almost 100% of the private housing schemes whereas it is almost 0% across the public schemes. The main impact on the building form and execution is that dual aspect units without internal kitchen and bathrooms have greater numbers of cores which have significant cost implications which is, perhaps, another reason why the private sector avoids these investments. It is remarkable, however, that density is not predicated on layouts; schemes with high proportions of single aspect apartments and internal kitchens and bathrooms often have similar densities to dual aspect schemes. The key issue here would certainly point to cost.

As the years passed it is obvious that changes to the performance codes began to have an impact. The provision of private open space becomes more commonplace and is particularly good in schemes 8 and 10. In the docklands alone the character of the housing has moved from being internalised with punched windows in brick and rendered facades to almost continuous ribbons of balconies which on sunny days are bedecked with residents enjoying some of the best waterfront environments in these islands.

Storage too improves with time but we can see that there are still improvements to be made. It is likely that in the coming years we may have to revisit some of the earlier apartment schemes built between 1980 and 2000 in order to reconfigure them to meet the new liveable city we are beginning to see. However this is a much bigger question for local authorities and government.

The way forward

In this search for a qualitative and quantitative set of standards our survey has shown that for all intents and purposes the work of the last 50 years has concentrated on the ‘*Existenzminimum*’. In more recent years it has been accepted that to build the city of the future, we must direct our work towards achieving quality standards and flexibility in our housing stock. We must also recognise that the experience of good quality dwelling is defined by a myriad of issues such as aspect, outdoor private space, adequate storage, quality construction, sensible urban design, a rich social mix, a workable long-term maintenance programme and neighbourhood amenities. To promote this necessary debate we propose that:

- Housing design, standards and implementation should be properly regulated;
- Space standards should be set within a legal framework (not guidelines) at state level based on context;
- Specific performance drawings should confirm compliance;
- There should be no difference in (minimum) standards for social, affordable and private housing;
- Social, affordable and private housing should be integrated and no differences between them be identifiable;
- The majority of dwellings should have dual aspect while allowing a small percentage to be single aspect as long as they are southerly or westerly in orientation with wide frontages;

- Storage should recognise the lives that people live and be designed to be as functional, flexible, varied and generous as other spaces in the home;
- Designs should accommodate and allow for changes in family size and structure;
- Balconies should be designed to accommodate life, in other words they should be able to take a table and two or four chairs comfortably and be located so as not to be constantly in shade. In the main balconies should be planned to be in direct sunlight for a minimum of two hours each day and be accessible from the living spaces;
- Bathrooms and kitchens should have direct access to natural ventilation and day-lighting;
- The social mix of each housing scheme should include a small percentage of starter homes for lower paid and key workers.¹⁸ The integration of a small percentage of smaller units in large mixed-use schemes will assure they are not ghettoised; and
- Lifetime Homes Standards and the issue of flexibility to allow future adaptability must be enshrined in guidelines and standards and properly regulated.

¹⁸ Camden Council have completed a number of schemes for key workers for example the recently converted Arlington House, a mixed-use scheme that includes accommodation for homeless people, an arts centre and 35 studio flats for letting at a reduced market rent of £144.08 per week. In 2003, Wells Coate's iconic Isokon Building in Hampstead, London (1933) was refurbished for Notting Hill Housing Association and is now primarily occupied by key workers under a co-ownership scheme.

Concluding reflections on sustainability

We have seen that though the codes are broadly similar in operation across the various housing schemes the outcomes are not and, by careful code design, real improvements can be enacted at this important scale of the city. There is much consideration given today to the necessity of carbon reduction and energy conservation. In addition we are encouraged to include energy generation systems as part of housing schemes (solar water and PV for instance). These are all worthwhile ambitions. However, the inclusion of family-friendly, mixed-use, and flexible liveable housing in highly serviced urban environments will likely provide more energy savings and better carbon reduction than the retrofitting of all of suburbia. The lesson that we must learn is that a little generosity in design codes at the beginning will allow for flexible, long term and sustainable solutions to the problems of living in the 21st century thus contributing to a more inclusive and sensible sustainable goal. This generosity is of greater importance as the demographic shift in Ireland is towards smaller, flexible family units with dwellers opting for renting rather than ownership. Flexibility was in the past tectonically investigated, giving rise to concepts like modular housing and prefabrication. However, flexibility today will involve less programming, more careful design and more choices. Design flexibility to allow future user adaptability must be addressed if we are to avoid what Till and Schneider call ‘designing for obsolescence’.¹⁹ A shell-and-core approach to housing provision may be the future greatly contributing to cheaper (less wasteful) infrastructure provision where internal layouts, finishes and furnishings will be the responsibility of the renter.

¹⁹ Schneider T., & Till, J. (2007) *Flexible Housing* Architectural Press. Interestingly, the ULI challenges the need for flexibility in the build-to-rent sector noting that “residents can move to alternative dwellings within the same development to meet their changing needs and still live in the same community.” (ULI, p.53)

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